Dear friends,

Postgraduate studies at the University of Cyprus, come to compliment the basic undergraduate studies, offering a stepping stone to personal and professional development and improving one's employability. Due to the current intense competition for recognition in the professional arena, postgraduate studies are considered a valuable qualification for academic purposes if one wishes to continue on this trajectory, and an asset for easier "mobility" in the local and international job market.

The University of Cyprus is committed to the principles, ideas and values it has been pursuing since its founding in 1989 and has been established as an organisation with a wide range of programmes of studies, internationally recognised academic staff, modern buildings, top distinctions at the international level, by showing a steady growth in teaching and research. Scientific entities for the production of new applications and the development and expansion of knowledge, among others, the KIOS Research Centre of Excellence and the Research Centre of Excellence in Biobanking and Biomedical Research provide students with unique opportunities for interdisciplinary learning. Developing local, European and international synergies, with upgraded, ergonomic, modern and expanding building facilities of Faculties and Departments, our university offers postgraduate students the unique opportunity to specialise in various fields and gain practical skills for connecting education with research, innovation. University of Cyprus students are dynamically integrated into the job market, and are trained to be individually responsible as members of the society.

In addition, I must emphasise that the vast majority of graduates of the University of Cyprus, whose social recognition is apparent within Cyprus and abroad, manage to be absorbed as active working professionals in the local job market, while our higher education institution itself, very often proceeds to hiring alumni in research programmes or administrative positions. We consider our university, a university of the future. We train you to be life learners well equipped with essential knowledge and educational experiences in an ever-changing job market. We measure our own success, based on your success. We provide you with a variety of useful theoretical and practical tools to make your dreams come true.

Taking into consideration the needs that arise for specialised instruction and for thriving in a constant changing and volatile environment, the University of Cyprus takes all necessary measures to enrich and renew its programmes of study. Our institution offers a wide range of postgraduate programmes and doctoral programmes, while 42 of them are taught in English. Being recognised among the top universities worldwide according to all established world university rankings (QS top 368, TIMES best 401-500-2023, Shanghai top 501-600-2022), the University of Cyprus continues along with its polymorphic community (students, academics, researchers, administrative staff) a unique journey to excellence aiming to actively contribute to an impactful and positive change for the society and the world.

The Graduate School, as an integral part of the University of Cyprus, plays a crucial role in our strategic planning. In the global intercultural climate that is being formed, our institution always pursues strong international bonds, and aims to attract talented international students. The University of Cyprus provides a number of scholarships, for financial assistance, but also for personally motivating existing or prospective postgraduate students.

I invite you to explore and study the postgraduate programmes listed in this publication. There is a place at the University of Cyprus for every one of you to make your dreams come true.

Yours sincerely,

Professor Tasos Christofides
Rector
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The University of Cyprus was founded in 1989 as the first public university of the country, and admitted its first students in 1992. The University of Cyprus aspires to become a pioneering research institute of international recognition with competitive curricula, as well as a centre of excellence in the wider European area. The University’s main objectives are to promote education and knowledge through teaching and research and, at the same time, contribute to the socio-economic and cultural growth of Cyprus. The University is a vigorous community of academics engaged in the generation and diffusion of knowledge and has earned the respect of the international academic community and the appreciation of the Cypriot society.
Main Objectives
The main objectives of the University of Cyprus are twofold: the promotion of scholarship and education through teaching and research, and the enhancement of the cultural, social and economic development of Cyprus. In this context, the University believes that education must provide more than the simple accumulation of knowledge. It must also encourage students' active participation in the process of learning, as well as the acquisition of those values and life skills necessary for responsible and active involvement in the society. At the same time, the University sets high standards, through its research programmes, aiming for the foundation and growth of all branches of scholarship and their dynamic utilisation both at a local and an international level.

Research Activity
Research is one of the primary activities of the academic community. Undergraduate and postgraduate students, as well as research assistants, Ph.D. students and postdoctoral researchers may be involved in research projects.

The research projects of the University of Cyprus cover a wide range of topics in accordance to the already existing specialisations of the academic departments and research units. Some of these projects are funded by European framework programmes (such as the HORIZON 2020, HORIZON EUROPE incl. ERC and Marie Skłodowska-Curie Actions, ERASMUS+, INTERREG, LIFE+, COST, EEA GRANTS) and others by national competitive programmes (for example, the A. G. Leventis Foundation and the Research and Innovation Foundation). For the success of its academic community in research and innovation, the University of Cyprus has been nominated for international awards in various domains and it is placed in extremely honourable positions worldwide.

The University, within the framework of its social contribution, cooperates with various institutions in Cyprus on research projects aiming specifically at the needs of local industry and the economy in general.

Research Centres/Units
A number of research centres and units operate at the University of Cyprus as independent, entities committed to conduct rigorous and innovative research. The research centres and units aim at developing research at a local, European and international level in their specific scientific fields and they attract a large number of research projects funded by research and innovation funding organisations locally, at the EU and abroad. Research projects that apply directly to Cyprus are of vital importance, as they make a significant contribution to Cypriot economy and society by enabling the improvement of the economy and by tackling the major societal challenges that Cyprus is facing.

The following research centres/units operate at the University:
• Archaeological Research Unit
• Biomedical Engineering Research Centre BERC
• Centre for Applied Neuroscience
• Centre of Excellence in Biobanking and Biomedical Research, biobank.cy
• Centre for Medieval Arts and Rituals (CeMAR)
• Economics Research Centre
• Research Centre “EMPHASIS”
• KIOS Research and Innovation Centre of Excellence
• International Water Research Institute “NIREAS”
• Oceanography Centre
• FOSS Research Centre for Sustainable Energy
• Centre for Field Studies (UCFS)

The Academic Staff
The academic staff comprises of Cypriots, Greeks and international scholars that have been distinguished in renowned universities of Europe, the US and other parts of the world.

Governing Bodies
The University is a public corporate body. It is governed by its Council that takes decisions on strategic matters. The University is also responsible for the management of the administrative and the financial affairs of the University, as well as the Senate, that is the highest academic body of the University. The Faculties and Departments are administered by Councils; each Faculty is headed by a Dean and each Department is headed by a Chairperson.

Administrative Services
The Director of Administration and Finance is the head of the following administrative services:
• Academic Affairs and Student Welfare Service
• Financial Services
• Human Resources Services
• Information Applications Service
• Internal Audit Service
• International Relations Service
• IT Infrastructure Service
• Library
• Research Support and Innovation Service
• Technical Services
• University Development Service
The Administrative Services provide the infrastructure and support required for the implementation of the University Council’s and the Senate’s decisions and policies.

The Director of Administration and Finance is a non-voting member of the University Council and the Senate and ensures that their decisions are carried out.

UNIVERSITY BUILDINGS - MAPS

The University of Cyprus building premises are mainly located at the new University Campus in Athalassa and at the old Central Campus (Academia). Currently the University owns or rents other buildings throughout Nicosia in order to cover its housing needs until the full development of the Athalassa Campus. Upon completion based on current data, the University Campus will accommodate 10,000 students in total. The following link www.ucy.ac.cy/maps/en includes maps showing the University Buildings. All entities within the University (faculties/departments/services) may be located through the maps.

At the University of Cyprus campus in Athalassa, the following projects have been completed to date: Infrastructure of the University Campus, Services and Store Buildings, Campus Management Office, Student Residences Phase A, Faculty of Pure and Applied Sciences, Common Teaching Facilities 01, the University House “Anastasios G. Leventis” which houses the Management and most of the Administrative Services of the University, Sports Centre and sports fields, Faculty of Economics and Management, Common Teaching Facilities 02, Social Facilties Centre, the Learning Resource Centre-Library “Stelios Ioannou” and the Cancer Research Institute. The premises of the Faculty of Engineering, the Faculty of Medicine, the Department of Biological Sciences and the Common Teaching Facilities 03 are currently under construction.

CAMPUS SERVICES

A number of bank branches, shops, a book store, a hairdressing salon, restaurants, canteens and cafeteria operate within the UCY premises, which serve the University community as well as the visitors.

LIBRARY

The mission of the University of Cyprus Library is to support the University’s goals by providing high-quality scientific information in all its pursuits to achieve its strategic objectives in research, teaching, knowledge dissemination and contribution to society.

Premises

The Library is located at the Learning Resource Centre “Stelios Ioannou” in the University Campus. The building houses all Library functions, services and collections, which spread to five levels combining stacks, reading rooms, work stations, study areas, a 24-hour reading area, as well as a Children’s Section in a dedicated, specially designed area. The building has more than 900 seats for studying, including 31 four-seat and six-seat group study rooms.

The 24-hour reading area is located on the ground floor and it is open seven days a week, all year round.

The only Library branch that remains is the non-lending collection of the Archaeological Research Unit, located at 12 Gladstonos Street, Nicosia.

Information Sources

The Library has information sources in both print or other physical form (e.g. audiovisual material) and electronic form. Access to online resources is provided through paid subscriptions, either through the Library’s participation in the Cypriot Libraries Consortium or through individual purchases. The Library also provides access to open access information sources that are available on the World Wide Web. All Library material is searchable through its catalogues that are accessible from its website (http://library.ucy.ac.cy), while access to the full-text (e-books, e-journals, databases, etc.) is given to its members after authentication. More specifically, the Library collection includes:

Books

More than 400,000 volumes of print books, organized according to the Library of Congress classification system, all searchable through the online Library catalogue.

Electronic Books

More than 760,000 electronic books, accessible from the Library catalogue or website.

Databases

The Library has 83 current subscriptions that give access to 196 databases of varied content, including full-text and bibliographic databases, databases that give access to journal articles, ebooks, data, as well as statistical and economic databanks, etc.

Print Journals

More than 7,170 (90,000 volumes) titles of print journals, in Greek and in other languages, all current and non-current, searchable through the Library catalogue.

Electronic Journals

More than 30,000 titles of online journals, accessible from the Library website.

Digital Collections

These collections include digitized archives material (print, audio, photographic, video) and aim to preserve rare material and render it accessible to all academic community members, as well as to the broader society. They are accessible from the Library website through the digital repository of the Library "LEKYTHOS".
"GNOSIS" - Institutional Repository of the University of Cyprus

The University of Cyprus Library has created and is curating the Institutional Repository GNOSIS, for the hosting and provision of the research output of the academic and research community of the University. The Institutional repository is fully compliant with the infrastructure of the European Programme OpenAIRE ensuring the broader visibility of the research output of the University and fulfilling the necessary obligations of the European Union and National Open Access policies. The repository can be found at the following link https://gnosis.library.ucy.ac.cy.

Reference Material Collection

Beyond the online reference collections, the Library also provides print reference material (encyclopaedias, dictionaries, etc.) for use within the Library. This material is located on the ground floor and is searchable through the Library catalogue.

Audiovisual Material Collection

The collection includes CDs, DVDs, maps, audio cassettes, microfilm, microfiche, etc. The collection is searchable through the Library catalogue.

Services to Users

Library Use

All members of the University of Cyprus (students, academic, research and administration staff), as well as external members, can use the reading areas and material of the Library. Visitors may use the Library facilities, services and collections on-site after a registration procedure.

Lending Services

The Library provides its members automated services for the use of printed material, such as: checkouts, renewals, returns, reservations, recalls, handling of questions regarding circulation, fines management, etc. All university members may borrow material upon presentation of their valid university card.

For most services, users can serve themselves utilizing the self-checkout and self-check in stations located in the Library, as well as their library account (My Library), accessible through the online catalogue.

There are Self-Checkout Stations in all five levels of the Library for students to check out books themselves, as well as a Self-Return System near the Library entrance allowing students to return books on a 24-hour basis.

Inter-Library Loan Services

The services undertake the provision of books, journal articles, conference proceedings, conference presentations, etc. that are needed for research or teaching purposes and which are not included in its collection. For this purpose, the Library collaborates with several international library networks based in Greece, France, the United Kingdom, Germany, etc. In this framework, the Library also sends books and articles to other libraries in Cyprus and abroad.

Printing Services

There are copying machines in all five levels of the Library for students to print, copy and scan documents. For use of this equipment the university ID card is required, which can be credited either online or at the credit machine.

Lockers

There are lockers on the Ground Floor of Learning Resource Centre – “Stelios Ioannou” Library in which users can place, personal items, for a small fee. The university card is required for locker use.

Services Print-disabled Users

Since 2000, the Library has operated a dedicated workstation for print-disabled users. The Library converts, upon request, class material to digital or large-font form in order to facilitate the study for users who are print-disabled.

Research Assistance

Information Literacy

The Library holds educational seminars to familiarise users with its collections, resources and services. The seminars aim to help students and academics develop and enhance their information literacy skills so that they can benefit fully from the Library’s resources.

Bibliographic Management Tools (RefWorks, etc.)

Tools for the management of bibliographic references are available on the Library website. They allow users to directly import bibliographic references to a personal database from online databases and websites, to create and organise their bibliographies and, to format their bibliographic references (e.g. MLA, APA, Chicago Manual of Style), etc.

Ask a Librarian Service

The service is accessible from the Library website and is available to both the academic community of the University of Cyprus and external users.

• AskLive

Users can use the AskLive Service to ask brief and specific reference questions related to the collections, resources and services of UCY Library. Replies are sent via real-time chat.

• By Appointment

Users can schedule a research consultation appointment for personal assistance in a variety of areas: to find appropriate print and electronic information sources on a particular topic; to become
familiar with the Library catalogue and collections; to
learn how to use library resources and tools, including
library catalogues, databases, other electronic
resources, RefWorks, etc.

The service is available primarily to members of the
academic community of the University of Cyprus and,
as time permits, to external users.

European Documentation Centre (EDC)
The European Documentation Centre (EDC) of the
University of Cyprus was established in 2012, in order
to provide information about the European Union’s
legislation and institutions. It forms part of a network of
400 documentation centres that were established by
the European Commission after 1960.

The EDC of the University of Cyprus is open to members
of the Academic and the wider community during the
Library’s working hours. Its collection includes printed
material and online resources regarding the EU and its
policies, such as official publications, annual reports,
journals, statistical and economic databases,
bibliographies, textbooks, pamphlets, etc. Monographs
and print journals are searchable through the Library
catalogue.

Participation of the Library in European/
Research Programmes
From 2009 onwards the Library through its
participation in European research projects (OpenAire,
PASTEUR4OA, FOSTER, NI40S-Europe, Yufering, DIOS,
CeOS_Science) and international networks (LIBER, IFLA,
YERUN) has been following and promoting European
policies for the Open Science Aspects. At the same time,

Email and Collaboration Tools
All members of the University community have a
personal email address of the format
<surname>,<name>[,XX]@ucy.ac.cy. Access to the
e-mail service is provided via the www.office.com
portal using the username (username@ucy.ac.cy) and
password of their account. From the same portal,
students have access to collaboration tools such as 1TB
space on OneDrive, the Office package (Word, Excel,
PowerPoint, Outlook) which the student may install in up
to 5 computers and/or 5 mobile devices/tablets) and
many other collaboration tools such as Teams, OneNote,
Forms and Yammer. Electronic Storage and Tools
Services.

Open Access PC Labs
Labs and personal computers as well as printing
facilities are available for use by the University
community. These are equipped with a wide variety of
teaching software and are available for project work
and teaching purposes.

Multimedia and Videoconference
Specialised video conference systems are available for
communication, tele collaboration and research as
well as multimedia systems utilized for teaching and
research purposes. Audiovisual material production
and management are also provided for e-learning,
teaching and research and for audiovisual coverage of
events.

Network Services
High-speed network access to the internet and other
network services are provided.

Wireless Network
Wireless network is available in all buildings of the
University. It is used to support lectures, conferences,
seminars and many different events.

Residential Halls - Network Services
Network services are available in all rooms of the
residential halls.

Remote Access Service (VPN)
University staff and postgraduate students can access
the University’s internal network via the Internet. VPN
connection provides access to UCY’s resources that are
not available directly from the Internet.

Telephony Integrated Services
Integrated Services include telephony, electronic fax,
softphone and voice mail. An important telephone
service is the Call Centre, which provides callers with
up-to-date information on the University.
**Data Security and Protection Service**
The University network and core systems are monitored in order to detect anomalies and prevent security risks and malicious behaviour. It also investigates all security incidents.

**Helpdesk**
IT Infrastructure service provides remote support via telephone and other means during specified hours. The aim is to resolve issues relating to IT systems quickly and efficiently.

**INFORMATION APPLICATIONS SERVICE**

**E-Learning**
Students who register for courses using the e-learning system are able to access all course material using their personal accounts.

**Educational Services**
At the beginning of the academic year the Information Applications Service offers intensive educational seminars on the use of web applications and the e-learning system. Interested students may register online at [www.ucy.ac.cy/issrequests](http://www.ucy.ac.cy/issrequests).

**E-University**
E-University aims at providing automated and qualitative services to the University academic community, exterior contracting institutions and the wider society. These services are focused on the qualitative support of research and teaching through the use of information technology in order to establish a functioning Electronic University (e-University). This requires both the design of new processes and the adoption of a new working mentality. Users can access these services via the university portal at [https://my.ucy.ac.cy](http://https://my.ucy.ac.cy).

**INTERNATIONAL RELATIONS**
International Relations play an important role in the promotion of the University of Cyprus internationally and, as a result, it currently enjoys international recognition for its quality in teaching and research. Its international outlook has ranked the University of Cyprus 99 in the Top 200 World Universities under 50 years old Category of the Times Higher Education World University Rankings 2023.

The University of Cyprus is an active member in more than 60 university networks/associations worldwide, both at international and departmental levels, including the European University Association (EUA), the Association of Mediterranean Universities (UNIMED), the Network of Universities from the Capitals of Europe (UNICA), the International Association of Universities (IAU), the SGroup-Universities in Europe, the Euro-Mediterranean Universities Network TETHYS.

The University has also signed Bilateral Agreements of Cooperation with around 150 universities/research institutions in Europe, Australia, the Middle East, Asia, USA, Canada and Africa. These agreements facilitate student and academic staff exchanges, joint research projects, conferences and the exchange of teaching and research material.

Additionally, the University offers 5 joint degree programmes (at Masters’ and Ph.D. levels) in collaboration with other European institutions (e.g. the University of Athens - Greece, the University of Bremen, the University of Grasgow, etc.). Moreover, the University of Cyprus has signed a number of Cotutelle agreements with overseas institutions.

Student and staff mobility is a major tool of the internationalisation strategy of the Institution. The University has been participating in the Erasmus+ Programme since the academic year 1997/1998 and in the Erasmus+ International since 2015/2016. Exchanges can also take place within the framework of Bilateral Agreements of Cooperation.

Organising summer schools, with student participation from abroad and in collaboration with academics from partner institutions, contributes significantly to the internationalisation of the institution. Throughout the year, the University welcomes delegations from institutions/organisations from the international arena, diplomatic delegations of other countries to Cyprus, as well as Cypriot diplomats based abroad and student organisations of the Diaspora.

An important strategic development which demonstrates the impact of the University of Cyprus in the international arena, was the establishment of the Aula Cervantes on the University's premises in 2011 (as decided by the Headquarters of the Instituto Cervantes in Madrid). In addition to that, the Confucius Institute on the University's premises was also established in 2014, which is the first to be established in Cyprus and the first HSK (Hanyu Shuiping Kaoshi) Centre in Cyprus. Moreover, an important aspect of the University's efforts towards internationalisation, is the recruitment of international students. With a large number of postgraduate programmes offered in English, the University aims to increase its number of international students in the coming years.

Another important development for the University of Cyprus internationally, is its participation in the Young Universities for the Future of Europe (YUFE) Alliance. The Alliance is comprised of nine young universities and six associate partners from the higher education, non-governmental and private sector. Together, the YUFE partners will establish one of the first true European Universities, a single European University with various campuses across Europe offering a European University degree based on a combination of academic, professional and civic skills.
CULTURAL EVENTS/LECTURES
The University of Cyprus organizes a variety of public events and lectures that aim at illustrating the value of teaching, culture and science as well as the interaction of citizens with the first public institution of the country. Realizing the importance of life-long learning and in cooperation with municipalities, communities and other societal parties, the University designs and implements the lecture series of Free Universities.

The University also works closely with cultural institutions to promote culture and the arts in the academic and student community.

The dynamic participation the University has established in the cultural and intellectual life of Cyprus, while, at the same time, evolves alongside the development of the programmes of teaching and research of the academic institution.

PUBLICATIONS
In order to provide comprehensive information to the public, the students and to prospective students, as well as to the international academic community, the University of Cyprus produces a wide range of publications. For further information on the University’s publications, please visit the website at www.ucy.ac.cy/publications/en.

The Cyprus University’s input in the publishing activity is enhanced with the dynamic contribution of the Cyprus University Press (www.ucy.ac.cy/paneky). The main objective of the Cyprus University Press is to support and promote the writing activity, not only in Cyprus and in Greece, but internationally as well.

CULTURAL CENTRE "MICHALIS PIERIS"
The Cultural Centre "Michalis Pieris" of the University of Cyprus is located at the Axiothea Mansion, in the historic centre of Nicosia. It is an internationally acknowledged institution that promotes culture and the arts as part of academic education, celebrates cultural diversity, encourages the involvement of students, as well as alumni of the University, in cultural and artistic activities, cherishes the traditions of Cyprus and the wider Euro-Mediterranean region, and fosters the universal values of European civilisation.

With its activities, the Cultural Centre pursues the twofold mission of adding a holistic perspective to traditional academic education, and promoting Euro-Mediterranean culture as a common asset, which has been accumulated through centuries of interaction among nations. The first part of the mission is achieved through the Theatrical Workshop of the University of Cyprus (THEPAK), which complements academic education and literary research by involving students in the stage presentation of known or less familiar masterpieces of Greek literature that have as a common denominator the idiomatic language of peripheral Hellenism. By applying interactive approaches to literary research and re-enacting poetry, fiction and non-fiction as drama, THEPAK deepens students’ knowledge, understanding and appreciation of literature, while contributing to the general promotion and modern reception of valuable works of Greek literature in Cyprus and abroad.

The publishing activity of THEPAK and the Cultural Centre also fits within this context. A series of ten volumes dedicated to the plays staged by THEPAK and to their authors, have already been published. They contain the full text of each theatrical adaptation, biographical notes on the authors, and a rich selection of the most important research studies on their works. For further information on these publications, please visit the website at www.ucy.ac.cy/cucentre/en.

The second part of the Cultural Centre’s mission is achieved through the annual Cultural Festival of the University of Cyprus, which aims at promoting culture and the arts, and at encouraging the creative endeavours of certain established but primarily emerging non-commercial artists from Cyprus, Europe and the broader Mediterranean region, thus enriching the cultural agenda of Cyprus with high-quality performances that enhance the perception of the Euro-Mediterranean region as a common cultural area.
Postgraduate Studies
ATTENDANCE REGULATIONS

The postgraduate programmes of each department are supervised by a three-member Postgraduate Programmes Committee, chaired by a postgraduate programme coordinator. The coordinator may be the chairperson of the department or a member of the academic staff appointed by the chairperson. The other members of the Committee are appointed by the Departmental Council and this is a two-year appointment.

For every student in a postgraduate programme, each Department appoints an academic supervisor, whereas at the research stage of the Ph.D., a research supervisor is appointed. Candidates select a member of the academic staff to act as their research supervisor and their choice is approved by the postgraduate programme coordinator. The research supervisor guides the students in their research and provides the necessary support and guidance.

The programmes of study of the University of Cyprus are based on the European Credit Transfer and Accumulation System (ECTS). An ECTS normally corresponds to a 25-30 hours workload per semester. Full-time status requires a course load of 18 ECTS per semester. Students carrying fewer ECTS are considered part-time.

Postgraduate programmes are taught in one of the official languages of the University of Cyprus (Greek and Turkish), as well as in other international languages.

Postgraduate studies are subject to the Postgraduate Studies Regulations. For more information, students must contact the Graduate School (tel.: +357 22894044) or visit the website at www.ucy.ac.cy/graduateschool.

Requirements for a Ph.D. Degree

• Attendance for a minimum of six semesters. The maximum period of study is 16 academic semesters.
• Successful completion of 240 ECTS ([60 ECTS at the postgraduate level (holders of a Master's or equivalent degree may be partially or fully exempted from this requirement. The research part of the programme comprises of 120 ECTS; the remaining ECTS are acquired through the comprehensive examination, the presentation of the dissertation proposal, the writing of the dissertation, etc.)]
• Success in a comprehensive examination by the seventh semester of studies.
• The presentation of the proposal can take place up to four semesters following success in the comprehensive examination. This deadline may be amended with the approval of the Chairperson of the department, provided that the maximum duration of completion of the Doctoral programme is not violated. A committee is proposed by the research advisor and the Postgraduate Programmes Committee of the Department. It is chaired by the research advisor and appointed by the Council of the Department.
• Submission of an original dissertation constituting an important contribution to the particular discipline.
• Defence of the dissertation before a five-member examining committee. The committee is appointed by the Council of the Department and is composed of three members of the departmental academic staff, one of whom is, in all cases, the student’s research supervisor; one member from another university or research centre and a member from another department of the University in a related discipline or from another university or research centre.
• The Chair of the Examining Committee is a member of the academic staff of the relevant department, but not the research supervisor.
• If the Examining Committee cannot recommend awarding a degree, the Ph.D. candidate may be allowed to resubmit the dissertation, after due modifications have been made in accordance with the Committee’s requirements, and repeat the entire process of defence once more.
• The Ph.D. candidate may not submit a dissertation until he/she has completed six semesters from the day of admission to the postgraduate programme and after the successful completion of the comprehensive examination and the required credit units.

Requirements for Master’s Degrees

• Attendance for a minimum of three semesters. The maximum period of study is eight academic semesters.
• Successful completion of 90-120 ECTS at the postgraduate level (or more than 90 or 120 ECTS if the programme includes practical exercise).
• Other criteria set by the department, which may include the submission of a dissertation etc.
• If a dissertation is rejected, the student is allowed to resubmit the dissertation once more. Each department is responsible for defining resubmission procedures.
Application Requirements

Applications must be submitted electronically to the University of Cyprus by the 31st of March for entry in the fall semester and by the 31st of October for entry in the spring semester. Applicants must have a University degree, awarded by an accredited institution in the country where it operates, or a degree evaluated as equivalent to a university degree by the Cyprus Council for the Recognition of Higher Education Qualifications (KYSATS). Individuals who will be awarded a University degree or Graduation certificate, fulfilling the criteria of the application requirements by the end of the week that precedes the registration week, will also be eligible to submit an application form.

The applications must include the following:

1. A Curriculum Vitae.
2. Certified copies of University degrees or confirmation of graduation (admitted candidates will need to submit copies of the certified degrees to the University of Cyprus before their registration).
3. Copies of Transcripts for all programmes of study.
4. A brief Personal Statement of personal goals and research interests (up to 2 pages).
5. Names and contact details of at least two referees (university professors) familiar with the candidate and his/her academic performance. Candidates are expected to request letters of recommendation which are submitted via the online application system. The Department may request additional confidential information from referees. For the Faculty of Engineering and the Department of Psychology, all recommendation letters need to be completed on a special form, that can be obtained from the website: www.ucy.ac.cy/graduateschool/postgraduate-programmes-places/?lang=en.

Some departments require three reference letters to be submitted along with the application, so before submitting your application, please visit the webpage of the relevant department in order to verify the number of reference letters required.

Fees for Master’s Degrees

Master’s Degrees: €5,125 per programme, with the exemptions as follows:

- Master in Business Administration (MBA): €10,250.
- Master in Natural Gas in Energy Transition: €8,000.
- Master in Business Economics (Technology, Innovation Management Entrepreneurship): €10,000.
- Master in Intelligent Critical Infrastructure Systems: €6,500.

For the Applied Programme in School Psychology a clinical practicum fee of €1,000 is charged. This amount covers the expenses for clinical supervision services provided by registered professional psychologists.

Fees for Doctoral Degrees (Ph.D.)

- Holders of a Master’s Degree: Total fees €4,000.
- For non-holders of a Master’s Degree: €6,500 (on the condition that students will complete the programme requirements and acquire their Ph.D. title within six years).
- Each year of study beyond the six years, with a maximum duration of eight years (16 semesters), corresponds to tuition fees of €1,250 per year (€625 per semester). Maximum tuition fees for a Ph.D. Degree are €9,000.
- For the Applied Ph.D. Programme in Clinical Psychology, a clinical practicum fee of €1,000 is charged in order to cover expenses for clinical supervision services provided by registered professional psychologists.

If students wish to suspend their studies, they must follow the relevant procedure of the Postgraduate Studies Regulations. For more information, students must contact the Graduate School (tel.: +357 22894044) or visit the website at www.ucy.ac.cy/graduateschool/en.

 Fees of students (with the exception of the MBA students) must be paid electronically prior to registration. The deposit of fees, which is paid in advance, is not refundable.

Postgraduate Students Funding

The University of Cyprus offers a number of scholarships to postgraduate students, based on academic merit. The scholarships are addressed to newcomers Ph.D. and Master’s students as well as to enrolled students. Apart from scholarships offered by the State and the University of Cyprus, the University of Cyprus may subsidize a postgraduate student who offers to work as an assistant in his/her department or other departments. Assistantships may involve assisting in teaching, tutorials, help with assignments, lab supervision, grading, etc. They do not apply to the research activity of the student nor to the research activity of the academic and research staff. Monthly earnings can amount to €342 or €683 for a maximum period of ten months.
STUDENT SERVICES

Information Office

The Information Office provides information on all student matters including studies, housing, welfare, counselling, career, sports, etc. The information is provided personally, by phone and by e-mail (aasw@ucy.ac.cy).

International Student and Staff Office

The Office (www.ucy.ac.cy/internationalsupport) provides information to the foreign students about studies at the University of Cyprus and support to all non-European students and staff seeking to immigration requirements and visa issues, such as entry visa, issuing and renewal of residence permits in Cyprus, medical examinations, etc.

Career Centre (CC)

The Career Centre is the link between the students and graduates and the labour market. The Career Centre guides and supports students and graduates through services and programmes designed to meet the requirements and special conditions of the current and future world of employment environment.

The Career Centre offers career guidance services that help young people gain self-awareness, discover and develop their talents and receive professional guidance for the next steps in their professional career or for postgraduate studies.

The Career Centre aims to develop and upgrade the skills of students and graduates, as well as to enhance their employability. The Career Academy programme, which is a rich and continuous training programme, with workshops and seminars designed to develop the professional skills and competences that are currently considered essential by employers (e.g. teamwork, communication, problem solving, presentation skills, etc.), as well as to develop useful tools for navigating the labour market (e.g. resume, job interview, LinkedIn, etc.). This programme is offered throughout the academic year.

Also, the Career Centre offers a wide range of employment and networking opportunities with businesses and organisations during and after the period of studies. During their studies, students have the opportunity to be placed in companies and organisations to gain work experience in the professional sector that interests them.

In addition, students and graduates gain access to a large number of jobs in companies and organisations both in Cyprus and abroad, with which the Career Centre is in close cooperation. A percentage of the positions are addressed exclusively to graduates of the University of Cyprus, demonstrating the preference and trust of employers.

The Career Centre, as a partner in the Eures Network (European Network of Employment Services), provides guidance and informs the university community about career mobility opportunities in 31 European countries through the Eures Portal. The Career Centre informs students about a limited number of positions in the University’s various services, in the form of part-time employment.

The connection with the labour market is empowered through the organisation of a wide range of programmes and initiatives throughout the academic year: Meet the Employers Programme, a series of presentations by companies on employment prospects in various professional sectors, the On Campus Recruitment Days, the ICAEW Business Challenge and the Career and Entrepreneurship Days.

For more information about the programmes and services of the Career Centre you can visit the website at www.ucy.ac.cy/careercentre/en.

Counselling and Psychological Support

The University of Cyprus provides free of charge psychological support and counselling services for all its students through the Mental Health Centre. The primary aim of this service is to contribute to the well-being of students, so as to enable them to maximise their experience during the course of their studies and after. Individual or group psychotherapy and counselling sessions are offered to the students.

Common concerns among students visiting the Centre include anxiety, stress, relationships, mood swings, problems to do with their academic life (difficulties in adjusting to their new way of life, etc.), a loss of a beloved one, as well as personal or career decisions that need to be taken.

The Centre also organizes presentations and workshops on issues relating to students’ psychological well-being. It launches prevention and sensitisation campaigns on topics related to psychological health and well-being in collaboration with student and youth groups, as well as with stakeholders and organisations in the broader community. Such activities can also be planned upon request by student groups or departments. It also periodically publishes and disseminates relevant informative material in print or through its website.

Financial Aid

The Social Support Office of the Academic Affairs and Student Welfare Service provides guidance on financial problems. Students with serious financial problems may be subsidized by the Student Welfare Fund. The Fund is supported financially by the University of Cyprus as well as external contributions and donations.

Services for Students with Disabilities

Students with disabilities are treated as equals to all other students, whilst every effort is made to offer
practical solutions to their specific problems, such as access to the University facilities, or assistance on academic issues.

Students with disabilities should contact the Social Support Office of the Academic Affairs and Student Welfare Service.

Student Accommodation and Catering

The University of Cyprus operates a number of student dormitories (208 bed spaces) on campus. For information regarding the cost and criteria for campus accommodation/other details, students may contact the Housing Office of the Academic Affairs and Student Welfare Service.

Due to the limited number of bed spaces available, the Housing Office maintains a list of flats and houses for rent. This list is available on a weekly basis, during the academic semesters. The Housing Office provides advice on matters related to campus accommodation. A number of informative leaflets are also produced by the Housing Office.

Health

General Health Scheme (GHS)

The General Health Scheme offers to Cypriot students Medical Care as long as they are registered in the Beneficiary Portal and have chosen a personal doctor. You can find related information at the following link: www.gesy.org.cy.

Cypriot students who are studying in EU countries are provided with the European Health Insurance Card (EHIC) through the General Health Care System. Related Information can be found at the following link: https://www.moh.gov.cy.

All EU Students, who are holders of the European Health Insurance Card (EHIC), are allowed access to free medical care at all public hospitals. The General Health Care System offers medical care to students on the condition that they obtain a residence permit and complete the necessary documents.

Non-EU students are obliged by the Migration Department regulations to obtain private health insurance coverage. The International Students and Staff Office may provide guidance and assistance regarding medical insurance companies and their costs.

Solidarity Fund Healthcare “Neophytos Chandriotis”

The Solidarity Fund Healthcare «Neophytos Chandriotis» has been in operation since September 2016. Related information can be found on the University’s website at www.ucy.ac.cy/tamioallilegiis.

STUDENT LIFE

Student Union

Every student, upon his/her registration to the University, will automatically become a member of the Student Union. The Student Union is represented in all bodies of the University (Council, Senate, Departmental and Faculty Councils). Its executive body is the Administrative Council, which consists of 21 members and is elected annually by the members of the Association. It has a record of rich and varied activity and its main objectives are:

• The promotion and resolution of student problems.
• The struggle for reunification of Cyprus and its people.
• Socio-political development and intervention in the wider society.
• The promotion of cultural activity through the operation of student clubs.

Sports

Sports has very rightly been called the greatest social phenomenon of the 20th century. It is in this spirit that the Sports Centre hopes to make its contribution to Cypriot society at every opportunity available. In order to encourage the university community to participate in sports activities, a wide variety of activities is offered and the opening hours of the sports facilities have been extended daily from 07:30 to 22:00 and on Saturdays from 08:30 - 14:30.

The Sports Programme is divided into the following categories:

Recreational Sports

This group of activities is for people who want to improve their overall level of physical fitness. The aim of the University is to make sports an inseparable part of university life.

Internal Championships

• Internal championships are open to the entire university community. Emphasis is placed on participation as much as winning. They offer a way to improve overall physical fitness, they develop skills and techniques in a variety of sports, and they are fun.
• International regulations apply to all matches/competitions. The University appends its own, stricter regulations related to discipline, since the Sports Centre respects and enforces Olympic principles.

Competitive Sports

This programme is designed for those who take sports more seriously and for those who wish to compete as members of the University teams. Experienced coaches
oversee the training of these teams. University teams participate in the following competitions:

- Cyprus Association of University Sports Championships
- International Tournaments in Cyprus and abroad
- Pan-Hellenic Championships (EATE)
- European Championships (EUSA)
- World Championships (FISU)

**Student Sports Clubs**

The University of Cyprus offers the following basic student sports clubs:

- Squash
- Futsal
- Table Tennis
- Skiing
- Scuba Diving

These programmes are offered exclusively to students.

**Elective Sports Courses**

- Volleyball
- Football
- Tennis
- Basketball
- Judo
- Lifelong Fitness
- Squash
- Badminton
- Handball
- "Terpsichorian" Music Group
- Theatre
- Fencing
- Sociology
- Chess Club
- Volunteer
- Greek Language and Foreign Civilisations
- Philosophy
- Handball
- Law

**Student Clubs**

There are 23 student clubs at the University of Cyprus, involved in educational, cultural, artistic and entertainment activities. Students wishing to form a club must draft a statute, which must then be approved by the University authorities. The “Club Evening” is a yearly event organized by the clubs’ coordination committee at which students have the opportunity to learn about the activities of the various clubs from their representatives and can register in the clubs of their preference.

The Student Life Office of the Academic Affairs and Student Welfare Service offers support in the formation and functioning of the clubs. There are also periodic workshops related to administrative and communication matters which aim to develop leadership abilities and improve communication and administrative skills.

**List of Clubs**

- Archaeological Club
- Art
- Cyprus Association for Special Education
- Dance
- Environmental
- International Students Club
- Film
- IEEE
- Journalists
- Orthodox and Hellenic Tradition
- Photoclub
- Psychology
- Sailing
- "Terpsichorian" Music Group
- Theatre
- Fencing
- Sociology
- Chess Club
- Volunteer
- Greek Language and Foreign Civilisations
- Philosophy
- Handball
- Law

**STUDENT MOBILITY**

**ERASMUS+ Programme (2021-2027)**

The Erasmus+ Programme offers opportunities to students to study for one or two semesters at another European university (Erasmus+ Studies) or work abroad in order to gain work experience (Erasmus+ Placements). They can also participate in Blended Intensive programmes (BIP’s) or in an exchange programme within the framework of Bilateral Cooperation Agreements concluded by the University with universities or networks in the international arena. Ph.D. students may also participate in short-term doctoral mobilities of 5-30 days.

Erasmus+ is the European Programme for Education, Training, Youth and Sport. It supports activities in all areas of Lifelong Learning (School Education, Higher Education, Vocational Education and Training and Adult Education), as well as in the fields of Youth and Sport. It is addressed to all European students, teachers, trainers, and young people. Erasmus+ exchanges are based on the European Credit Transfer and Accumulation System (ECTS).
For more information on Exchange Programmes and ECTS, students, can contact the Mobility Office (erasmus@ucy.ac.cy) of the International Relations Office.

RADIO STATION OF THE UNIVERSITY OF CYPRUS - UCY VOICE 95.2 FM

UCY Voice 95.2 FM, the Radio Station of the University of Cyprus, was established in order to promote the work of the Institution, to provide information to the members of the university community and to give voice to the students. It aims to:

- Develop students' creativity
- Cultivate free speech and thought
- The establishment of UCY Voice as a means of free expression.

All members of the university community can become radio producers at UCY Voice. UCY Voice organizes seminars and workshops for the training and education of radio producers on topics such as media ethics, human rights, cultural creativity, etc.

It broadcasts at 95.2 FM from the website at www.ucyvoice.ucy.ac.cy and from mobile app. UCY Voice broadcasts on a 24-hour basis and its programmes cover the spectrum of information and entertainment.

SCHOOL OF MODERN GREEK

The School of Modern Greek (SMG) has been operating since 1998. Its aim is to teach Modern Greek as a second or foreign language and Greek culture. Its programmes are primarily aimed at people whose native language is not Greek, both within and outside the university community.

In accordance with the Common European Framework of Reference for Languages, SMG offers programmes at six levels (A1, A2, B1, B2.a, B2.b, C1 and C2), which are divided into:

- intensive programmes (12 hours x 13 weeks), which are offered every semester,
- non-intensive programmes (6 hours x 26 weeks), which start in the winter semester,
- summer intensive programmes (25 hours x 6 weeks),
- online non-intensive programmes for levels A1, A2, B1, B2.a, B2.b (6 hours x 26 weeks), which start in the winter semester, and
- the A1 programme for Erasmus students (6 hours x 13 weeks), which is offered every semester.

On request, SMG offers special interest programmes of varying duration for specific target groups (Greeks and Cypriots living abroad, professional groups, etc.).

A certificate is issued upon successful completion of each programme. The C1 and C2 levels are recognized by the State of Cyprus as acceptable proof of a very good and an excellent knowledge of the Greek language, respectively. For Erasmus students, the programme has a credit value of 6 ECTS, while the other programmes have a credit value of 12 ECTS.

All SMG students have access to the University of Cyprus library, computer labs and sports facilities.

Further information is available on the SMG homepage: www.ucy.ac.cy/mogr/en.

PETRONDAS INSTITUTE OF MODERN GREEK STUDIES

Since 2012, the Modern Greek Studies Research Centre - Petrondas Institute at the University of Cyprus has been actively engaged in the promotion of Modern Greek scholarship. The Centre’s main goal is the organisation and implementation of research projects connected to the study of the Greek culture and the promotion of its research findings through events, talks, conferences, open lectures, film screenings and theatrical performances. Through its collaborations with other research centres, it has established itself as an academic space for the creative synergy between academics, students, researchers and writers. The Modern Greek Studies Research Centre is housed in an apartment donated by Christos and Eugenia Petrondas and is located at 30 Nikodimou Mylona Street (3rd floor).
Faculties, Departments, Research Units, Centres and Institutes

FACULTIES:

● The Faculty of Humanities - www.ucy.ac.cy/fhs/en
  with three departments and the Language Centre.

● The Faculty of Pure and Applied Sciences - www.ucy.ac.cy/fpas/en
  with five departments and the Oceanography Centre.

● Medical School - www.ucy.ac.cy/medical/en

● The Faculty of Social Sciences and Education - www.ucy.ac.cy/fsse/en
  with four departments and the Centre for Applied Neuroscience.

● The Graduate School - www.ucy.ac.cy/graduateschool/en

● The Faculty of Economics and Management - www.ucy.ac.cy/fem/en
  with three departments and the Economics Research Centre.

● The Faculty of Engineering - www.ucy.ac.cy/fae/en
  with four departments, the International Water Research Institute “NIREAS”, FOSS
  Research Centre for Sustainable Energy and the Research Centre “Emphasis”.

● The Faculty of Letters - www.ucy.ac.cy/fl/en
  with three departments, the School of Modern Greek, the Archaeological Research Unit
  and the Centre for Medieval Arts and Rituals (CeMAR).

CENTRES OF EXCELLENCE

● KOIOS Research and Innovation Centre of Excellence - www.kios.ucy.ac.cy

● Centre of Excellence in Biobanking and Biomedical Research, https://biobank.cy

INSTITUTES

● Aula Cervantes Nicosia - https://nicosia.cervantes.es

● Confucius Institute - www.ucy.ac.cy/confucius/en
### FACULTY OF ECONOMICS AND MANAGEMENT

#### DEPARTMENT OF ACCOUNTING AND FINANCE
- **MBA** Business Administration/MBA (Interdepartmental) (Part-time and Full-time in English, part-time in English)
- **M.Sc./Ph.D.** Finance

#### DEPARTMENT OF BUSINESS AND PUBLIC ADMINISTRATION
- **Ph.D.** Business Administration (in Greek and English)
- **MBA** Business Administration/MBA (Interdepartmental) (Part-time and Full-time in English, part-time in English)
- **M.Sc.** Human Resource Management (in English)
- **M.Sc.** Data Science/Business Analytics/Computer Science/Statistics (Interdepartmental) (in English)

#### DEPARTMENT OF ECONOMICS
- **M.Sc.** Business Economics (Technology Innovation Management and Entrepreneurship - TIME MBE) (Jointly with University of Crete) (in English)
- **M.Sc.** Economic Analysis (in English)
- **Ph.D.** Economics (in English)
- **M.Sc.** Monetary and Financial Economics (in English)
- **M.Sc.** Behavioural Economics (Interdepartmental) (in English)

### FACULTY OF ENGINEERING

#### DEPARTMENT OF ARCHITECTURE
- **M.Eng./M.Sc.** Energy Technologies and Sustainable Design (Interdepartmental)
- **M.Sc.** Conservation and Restoration of Historic Buildings and Sites (Interdepartmental)

#### DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING
- **Ph.D.** Civil Engineering (in English)
- **M.Eng./M.Sc.** Civil Engineering/Construction and Transport Infrastructure Management (in English)
- **M.Eng./M.Sc.** Civil Engineering/Earthquake Engineering & Structural Analysis (in English)
- **M.Eng./M.Sc.** Civil Engineering/Geotechnical Engineering (in English)
- **M.Eng./M.Sc.** Civil Engineering/Novel and Traditional Building Materials (in English)
- **M.Sc.** Conservation and Restoration of Historic Buildings and Sites (Interdepartmental)
- **M.Eng./M.Sc./Ph.D.** Environmental Engineering (in English)
- **M.Eng.** Natural Gas in Energy Transition (in English)

#### DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING
- **M.Eng./M.Sc./Ph.D.** Computer Engineering
- **M.Eng./M.Sc./Ph.D.** Electrical Engineering
- **M.Eng./M.Sc.** Energy Technologies and Sustainable Design (Interdepartmental)
- **M.Sc.** Intelligent Critical Infrastructure Systems (Jointly with KIOS Research and Innovation Centre of Excellence and Imperial College London) (in English)
- **M.Sc.** Artificial Intelligence (Interdepartmental) (in English)
### FACULTY OF LETTERS

#### DEPARTMENT OF BYZANTINE AND MODERN GREEK STUDIES
- M.A./Ph.D. Byzantine Studies and the Latin East (Interdepartmental)
- M.A./Ph.D. Modern Greek Studies

#### DEPARTMENT OF CLASSICS AND PHILOSOPHY
- M.A./Ph.D. Classical Studies
- M.A. European Master in Classical Cultures (Jointly with universities in Greece, Austria, Germany, France, Italy, Spain, Poland and Turkey)

#### DEPARTMENT OF HISTORY AND ARCHAEOLOGY
- M.A./Ph.D. Ancient History
- M.A./Ph.D. Byzantine Studies and the Latin East (Interdepartmental)
- M.Sc. Conservation and Restoration of Historic Buildings and Sites (Interdepartmental)
- M.A. Field Archaeology on Land and Under the Sea (in English)
- M.A./Ph.D. Mediterranean Archaeology from Prehistory to Late Antiquity
- M.A./Ph.D. Modern and Contemporary History (19th-20th Century)
- Ph.D. Traditional Culture (16th-20th Century)
- M.A./Ph.D. Digital Heritage and Landscape Archaeology (in English)
- M.A. Archaeology of the Mediterranean from Prehistory to the Byzantine Era

### FACULTY OF HUMANITIES

#### DEPARTMENT OF ENGLISH STUDIES
- Ph.D. English Literature and Comparative Cultural Studies
- Ph.D. Linguistics
- M.A. Teaching English to Speakers of other Languages (TESOL)
- M.A. Theoretical and Applied Linguistics
- Ph.D. Translation Studies

#### DEPARTMENT OF FRENCH AND EUROPEAN STUDIES
- Ph.D. French Studies
- M.A. Teaching French as a Foreign Language
- M.A./Ph.D. European Studies (in Greek, French and English)

#### DEPARTMENT OF TURKISH AND MIDDLE EASTERN STUDIES
- M.A./Ph.D. Turkish Studies

### FACULTY OF LETTERS

#### DEPARTMENT OF BYZANTINE AND MODERN GREEK STUDIES
- M.A./Ph.D. Byzantine Studies and the Latin East (Interdepartmental)
- M.A./Ph.D. Modern Greek Studies

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- M.A./Ph.D. Digital Heritage and Landscape Archaeology (in English)
- M.A. Archaeology of the Mediterranean from Prehistory to the Byzantine Era

### FACULTY OF PURE AND APPLIED SCIENCES

#### DEPARTMENT OF BIOLOGICAL SCIENCES
- M.Sc./Ph.D. Biodiversity and Ecology (in English)
- M.Sc./Ph.D. Biomedical Sciences (in English)
- M.Sc. Molecular Biology and Biomedicine (in English)
DEPARTMENT OF CHEMISTRY
M.Sc./Ph.D. Chemistry

DEPARTMENT OF COMPUTER SCIENCE
M.Sc. Advanced Information Technologies (Professional Programme)
M.Sc. Cognitive Systems (Jointly with the Department of Psychology and the Open University of Cyprus)
M.Sc./Ph.D. Computer Science
M.Sc. Data Science/Business Analytics/Computer Science/Statistics (Interdepartmental) (in English)
M.Sc. Artificial Intelligence (Interdepartmental) (in English)

DEPARTMENT OF MATHEMATICS AND STATISTICS
M.Sc. Mathematical Sciences
Ph.D. Statistics
Ph.D. Mathematics (Applied or Pure)
M.Sc. Data Science/Business Analytics/Computer Science/Statistics (Interdepartmental) (in English)

DEPARTMENT OF PHYSICS
M.Sc./Ph.D. Physics

FACULTY OF SOCIAL SCIENCES AND EDUCATION

DEPARTMENT OF EDUCATION
M.A./Ph.D. Curriculum Studies, Teaching and Comparative Education
M.A./Ph.D. Educational Administration and Evaluation
M.A./Ph.D. Gender Studies (Jointly with the Centre of Gender Studies and the Unesco Chair in Gender Equality) (in English and Greek)
Ph.D. Learning in Natural Sciences and Environment
M.A. Learning in Natural Sciences and Environment/Learning in Natural Sciences
M.A. Learning in Natural Sciences and Environment/Environmental and Sustainability Education
M.A./Ph.D. Mathematics Education
M.A./Ph.D. Pedagogical Sciences/Multiculturalism, Migration and Decolonial Education
M.A./Ph.D. Instructional Technology
Ph.D. Language Literacy and Education
M.A./Ph.D. Pedagogical Sciences/Preschool Education
Ph.D. Pedagogical Sciences/Religious Education
Ph.D. Pedagogical Sciences/Sociology of Education
M.A./Ph.D. Pedagogical Sciences/Sports Pedagogy
Ph.D. Pedagogical Sciences/Theory and Philosophy of Education
M.A./Ph.D. Special and Inclusive Education
M.A. Education Policies for Global Development (GLOBED) – ERASMUS+MUNDUS (Jointly with the Autonomous University of Barcelona, the University of Bremen and the University of Glasgow) (in English)
### DEPARTMENT OF LAW
- LL.M./Ph.D.  Law
- LL.M.  Law/Criminal Justice and Human Rights
- LL.M.  Law/European Commercial Law
- LL.M.  Law /European Public Law

### DEPARTMENT OF PSYCHOLOGY
- M.Sc.  Cognitive Systems (Jointly with the Department of Computer Science and the Open University of Cyprus)
- Ph.D.  Clinical Psychology
- Ph.D.  Psychology
- M.A.  School Counselling and Guidance (Jointly with the National and Kapodistrian University of Athens)
- M.A.  School Psychology (Applied Programme)
- M.A.  Social Developmental Psychology
- M.Sc.  Behavioural Economics (Interdepartmental) (in English)

### DEPARTMENT OF SOCIAL AND POLITICAL SCIENCES
- M.A.  Political Science/European Politics
- M.A.  Political Science/International Relations
- Ph.D.  Political Science
- Ph.D.  Sociology
- M.A.  European Master in Human Rights and Democratisation (Interdepartmental) (Jointly with 41 European Universities from EU Member States) (in English)
- M.A.  Peace, Conflict and Democracy (in English)

### MEDICAL SCHOOL
- M.Sc.  Precision Medicine in Clinical Practice (in English)
Faculty of ECONOMICS AND MANAGEMENT
DEPARTMENTS

Accounting and Finance
Business and Public Administration
Economics
Introduction

The business environment is rapidly changing. World markets are becoming increasingly global, organisations are merging, restrictions on trading transactions are being lifted and competition is ever more intense. Information technology creates an innovative environment that facilitates the delivery of a new range of services, the direct exchange of information, and the execution of transactions and agreements. In recent decades, developed countries have shifted their business focus from manufacturing to services, while less developed economies are also changing, as they attempt to fill in the resulting gap in the manufacturing industry. The recent economic crisis, which has affected the services sector and more severely so the financial services industry, is now rapidly changing the legal, business and economic environments of all affected countries.

In these challenging times, only those managers who can anticipate, understand and effectively adapt to the challenges and demands of today’s business environment will be able to lead their organisations to success. Those who fail to act on or respond to these changes will expose their organisations to risk, including their very survival. The ongoing economic crisis of the last decade has revealed the importance of redefining business values and adhering to strict ethical codes in order to regain investor confidence.

In response to the challenging environment facing organisations today, the Department of Accounting and Finance (AFN) offers programmes that will equip its graduate students with the skills and knowledge necessary to advance in their careers and eventually lead their organisations to financial success. The Department offers programmes that lead to Master (M.Sc.) and Doctoral (Ph.D.) degrees in Finance. In addition, in cooperation with the Department of Business and Public Administration, the Department offers a Master in Business Administration (MBA) and jointly with the Department of Economics, a Master in Financial Economics. The curricula for the above degree programmes are similar to those offered in top universities in Europe and North America. The Department will soon offer a new Master’s Programme in Accounting.

Graduate Programmes

M.Sc. Programme in Finance

In this one-and-a-half-year programme, students are offered an education in finance that is both theoretically anchored and practically oriented. They obtain rigorous skills and applied training in quantitative and empirical methods in finance in the following areas: corporate finance and capital investment analysis; capital and derivative markets and risk management; and investment management and security analysis. The programme, which is outlined below, requires the completion of 90 ECTS.

<table>
<thead>
<tr>
<th>First Year</th>
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<tbody>
<tr>
<td>ECTS</td>
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<tr>
<td><strong>Fall Semester</strong></td>
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<tr>
<td>AFN 515 Basic Accounting*</td>
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<tr>
<td>AFN 521 Financial Theory</td>
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<td>AFN 522 Investments</td>
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<tr>
<td>AFN 525 Options and Futures</td>
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<tr>
<td>AFN 626 Financial Analysis and Capital Market Research</td>
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<td><strong>Total:</strong></td>
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<td><strong>Spring Semester</strong></td>
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<td>18 ECTS from the following list of courses**:</td>
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<tr>
<td>AFN 520 Managerial Economics or another advanced course</td>
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<td>AFN 523 Advanced Quantitative Business Methods</td>
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<td>AFN 528 Advanced Capital Budgeting</td>
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<tr>
<td>At least 12 ECTS from the following list of courses:</td>
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<tr>
<td>AFN 524 Financial Modelling</td>
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<tr>
<td>AFN 627 Theory and Modelling Methodology in Finance &amp; Accounting</td>
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<td>AFN 529 Applications of Neural Networks in Business</td>
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<tr>
<td>AFN 530 Seminar on Cyprus Economy, Banking &amp; Financial Markets</td>
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<tr>
<td>AFN 531 International Financial Management</td>
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<td>AFN 532 Financial Optimisation and Decision Analysis</td>
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<td>AFN 533 Bank Financial Management</td>
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<td>AFN 534 Financial Risk Management</td>
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<td>AFN 535 Seminar on the Theory of Derivatives</td>
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<tr>
<td>AFN 536 Business Valuation</td>
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<td>AFN 537 Theoretical Topics in Finance</td>
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<tr>
<td>AFN 538 Applied Topics in Finance</td>
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<td>Other electives/advanced courses***</td>
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<td><strong>First Year: Total:</strong></td>
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</table>
During the third semester of the M.Sc. Programme, students must complete a 24 ECTS thesis. The following regulations and timeframe apply:

- Students select an academic thesis advisor, who must be approved by the Departmental Council before the end of the first academic year, by 15 June.
- By 15 September, the Departmental Council will approve a two-member Committee for the evaluation of the thesis. The Committee may include one academic member from outside the Department or the University.
- By 15 September, students must submit an extended thesis research proposal (5-10 pages) for the signed approval of the Committee.
- By 10 December, the thesis must be submitted to the two-member Committee Head, who will schedule a date for the thesis defence. Under special circumstances, the Postgraduate Studies Committee may grant an extension.

Coordinators of M.Sc. Programme in Finance
A. Milidonis, Professor  
S. Martzoukos, Associate Professor

Master of Business Administration (MBA) (full-time and part-time study) (Interdepartmental)
See pages 64-67.

Doctoral Programme in Finance
Students who wish to combine research interests in Finance with Accounting, must consult with the Ph.D. programme coordinators.

Students are expected to complete at least 90 ECTS of coursework as part of the Doctoral Programme.

Admittance to doctoral candidacy requires:
- Completion of coursework
- Successful completion of the comprehensive exams
- Preparation of a research study

Doctoral students are expected to complete the above three requirements by the end of the fifth semester. Under special circumstances, the Departmental Council may approve extension to the end of the sixth semester, but the comprehensive exams must be successfully completed by the end of the fifth semester. The Ph.D. degree is granted upon the successful defence of a doctoral dissertation, which must be a new and substantial contribution to the relevant academic literature. The dissertation must be defended orally before a 5-member faculty Committee. The minimum time required for the completion of a Ph.D. is three years, and the minimum time required for the completion of the doctoral dissertation is two years.

Coordinators of M.Sc. Programme in Finance
A. Milidonis, Professor  
S. Martzoukos, Associate Professor

Master of Business Administration (MBA) (full-time and part-time study) (Interdepartmental)
See pages 64-67.

Doctoral Programme in Finance
Students who wish to combine research interests in Finance with Accounting, must consult with the Ph.D. programme coordinators.

Students are expected to complete at least 90 ECTS of coursework as part of the Doctoral Programme.
that all doctoral students, according to their previous graduate studies, complete a minimum of 45-60 ECTS of coursework at the University of Cyprus.

Pre-Dissertation Research
During the first summer of studies, students are expected to prepare a research project under the supervision of a faculty advisor. The Department will appoint an advisor suited to the student’s research interests. The research project must be written up and must include a report of the original contribution of the student’s work. The student must complete the project by the third semester of studies, when he/she will submit it for approval to a three-member faculty Committee, one member of which is the faculty advisor. The Chairperson of the Department, in consultation with the advisor, will appoint the other two committee members. This project may count as fulfilling requirements of another course, or may count as an independent study course. This requirement is waived for students who have completed a Master’s thesis.

Comprehensive Exam
Before entering doctoral candidacy, students must demonstrate adequate knowledge of their main and related fields, as well as the relevant academic literature. To this end, students must take the comprehensive exam.

This exam (completed at the latest by the end of the sixth semester in the doctoral programme) must cover the field of studies and methodology. In line with international practice, this requirement is fulfilled by 3-hour exams in each of the following topics:
- Financial Theory and Investments
- Financial Analysis and Capital Market Research
- Futures and Options
- Econometrics

The Committee of Postgraduate Studies appoints an academic committee (that must be approved by the Departmental Council), that will administer the written exams. Each topic is graded by two faculty members and faculty members may grade no more than two topics for any student. Students must pass all the comprehensive exams to continue to doctoral candidacy. Students who fail more than one topic must retake the entire exam, i.e. all four topics. Doctoral students may sit for the exams a maximum of two times. Students who fail one topic only may retake the relevant exam on that topic alone.

The comprehensive exam is graded as Pass or Fail, based on the recommendation of the academic committee. Students, who (on their comprehensive exams) fail to demonstrate ability for successful doctoral research, may be granted a Master’s degree following the Department’s recommendation.

Doctoral Candidacy and Dissertation Requirements
After formal entrance to doctoral candidacy, students are expected to devote their efforts completely towards their dissertation research, which will initially result in a dissertation proposal in coordination with their research advisor (students wishing to change research advisor after the successful completion of their pre-dissertation research may apply to the Postgraduate Studies Committee).

Doctoral students typically remain in candidacy for a period of two additional years. At the start of this period, they must submit and defend their dissertation proposal, and at the end they submit and defend their completed dissertation before an approved academic committee.

The Dissertation Proposal
The dissertation proposal must be defended before a three-member academic Committee, which is appointed by the Chairperson of the Department in consultation with the research advisor. The research advisor will chair the Committee. The proposal must contain a complete and detailed definition of the problem under investigation, a comprehensive synopsis of the relevant literature and the unanswered research questions, an explanation of the relationship between the existing literature and the thesis topic as well as the expected new contribution. It must also provide evidence that the proposed project is feasible within a reasonable timeframe. This can be demonstrated through partial completion of the proposed research and fulfilment of some intermediate goals.

The Dissertation
The completed dissertation must be original research that makes a significant contribution to the academic literature. The dissertation will be defended before a five-member academic Committee, appointed by the Committee of Postgraduate Studies in consultation with the research advisor. Three of the Committee members (the research advisor included) will be faculty of the Department. Two of the Committee members may belong to other departments of the University of Cyprus, and one may belong to the faculty of another university.

Doctoral Candidates/Requirements
Students preparing for the comprehensive exam must register for the course AFN 890 (15 ECTS) and, at a later stage for the AFN 891 Dissertation Proposal Defense (15 ECTS). Doctoral candidates working on their dissertation research must earn at least 120 ECTS covering four research stages (AFN 895, AFN 896, AFN 897, AFN 898 - each course represents 30 ECTS). There are also 15 ECTS partial research stage courses (AFN 881, AFN 882, AFN 883, AFN 884, AFN 885, AFN 886, AFN 887, and AFN 888), should the student wish to take extra courses (beyond the required ones) during the dissertation stages, or take
AFN 890 (comprehensive exams) during the first dissertation stage. If, after having taken 120 ECTS of dissertation stages the doctoral dissertation is not finished, the student may enrol in additional writing stages; for this reason, there are writing courses credited with 30 ECTS (AFN 791, AFN 792, AFN 793, AFN 794), and writing courses credited with 15 ECTS (AFN 781, AFN 782, AFN 783, AFN 784, AFN 785, AFN 786, AFN 787, AFN 788).

Ph.D. Programme

<table>
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<td><strong>Spring Semester</strong></td>
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<td><strong>Spring Semester</strong></td>
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<td><strong>Spring Semester</strong></td>
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<td>AFN 888 Research Stage</td>
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<td>AFN 781 Writing Stage</td>
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<td><strong>Fourth Year: Total</strong></td>
<td>60</td>
</tr>
</tbody>
</table>

Coordinators of Doctoral Programme

Andreas Charitou, Professor  
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E-mail: charitou@ucy.ac.cy

Andreas Milidonis, Professor  
Tel.: +357 22893626  
E-mail: milidonis.andreas@ucy.ac.cy

Course Descriptions

AFN 515 Basic Accounting (2 ECTS)  
The course will help students in understanding how accounting is used in a business environment. It covers topics on the accounting cycle of the enterprise, preparation and presentation of the three basic financial statements. It is graded with Pass/Fail.

AFN 516 Use of Software in Finance (3 ECTS)  
The course presents the databases and software packages most useful to the financial manager/analyst of a private or public enterprise/organisation. The course is directed towards new Master students. It covers databases (like Compustat / Global Vantage, Datastream, CRSP, IDES) and software (like Matlab, SAS). It is graded with Pass/Fail.

AFN 520 Managerial Economics (6 ECTS)  
The course covers a wide variety of topics to explain and illustrate the wider economic environment of the corporation, examining it from the perspective of the neoclassical economic theory, the theory of the firm, and industrial organisation. Topics include: the utility theory, indifference curves, income and substitution effects, demand functions and price elasticity of demand, cross elasticity and income elasticity, production functions and cost functions, returns to scale and returns to scope, general equilibrium, pareto efficiency, basic principles of industrial organisation, elements of game theory, trigger pricing strategies, etc.

AFN 521 Financial Theory (7 ECTS)  
The course presents the theory underlying financial decisions and corporate policy. It covers discounted cash flow and contemporaneous methods of capital budgeting, risk and uncertainty, mean-variance portfolio choice, capital asset pricing models and arbitrage pricing theory, efficient markets, capital structure and dividend policy, basic option pricing, corporate restructuring and mergers and acquisitions.

AFN 522 Investments (7 ECTS)  
The course covers the basic principles of investment analysis and valuation, with emphasis on security analysis and portfolio management in a risk-return framework. Security analysis focuses on whether an individual security is correctly valued in the market (i.e. it looks for mispriced securities). Portfolio management deals with efficiently combining securities in a portfolio tailored to the investor’s preferences and monitoring/evaluating the portfolio. The course covers both the theory and practical aspects of investments.

AFN 523 Advanced Quantitative Business Methods (6 ECTS)  
The course introduces business students to various statistical topics useful in Business, such as Linear Regression, Probit and Logit, Discriminant analysis, Factor analysis, and Structural
AFN 524 Financial Modeling (6 ECTS)
The course covers financial models for Hedging and risk management, asset allocation, multi-period portfolio planning, option pricing, swaps, and bonds and mortgage-backed securities. Emphasis is on the use of statistics, optimisation and simulation for the solution of financial planning problems, with wide implementation of spreadsheets and high-level modeling languages (like GAMS), and spreadsheets.

AFN 525 Options and Futures (7 ECTS)
The course studies the pricing and use of derivatives such as options and futures contracts. The no-arbitrage principle and its use in pricing futures contracts and option restrictions are explained first, followed by the binomial-tree approach and the Black-Scholes model. Various extensions and applications are discussed, including pricing options on stock indices, currencies and futures, risk management, pricing options embedded in corporate securities (e.g. equity, callable bonds, warrants and convertibles and fixed-income (interest-rate) derivatives.

AFN 626 Financial Analysis and Capital Market Research (7 ECTS)
The course provides a comprehensive analysis of financial information as an aid to decision-making (e.g. in investing, lending and managerial decisions). The course covers (1) business analysis tools, such as business strategy analysis, accounting and financial analysis, prospective analysis (forecasting and valuation); (2) applications in credit analysis and bankruptcy prediction, security analysis, corporate financing decisions, such as dividend policy, capital structure, M&A and management communication; (3) international financial analysis and contemporary issues in financial analysis.

AFN 627 Theory and Methodology in Finance and Accounting (6 ECTS)
The course covers contemporary methodologies for empirical research in Finance and Accounting. Through the study and analysis of contemporary research, it highlights the role of financial and other information in setting equity prices. In addition, it covers topics such as: the role of financial analysts in equity markets, the relation between accounting rules and equity markets, the effect of income manipulation on investors and managers, and the measurement of risk.

AFN 528 Advanced Methods of Capital Budgeting (6 ECTS)
The course reviews traditional methods of capital budgeting and their deficiencies, and introduces modern investment valuation thinking and tools involving flexibility and optimal exercise of options under uncertainty. It places emphasis on the use of the real options methodology in both operating and strategic decisions, applied through the use of binomial trees and Monte Carlo simulation in the context of real-life problems and cases.

AFN 529 Applications of Neural Networks to Business (6 ECTS)
This course offers a broad treatment of the subject of Artificial Neural Networks. The material includes: introduction to neural networks, the backpropagation training algorithm and its variants, the RBF training algorithm, probabilistic neural networks, Kohonen's SOFM, LVQ's training algorithms, support vector machines. The wide applicability of the material developed in this course is demonstrated through applications to a number of problems drawn from various business areas. Students put the theory into practice through a research project in Finance or Accounting.

AFN 530 Seminar on the Economy, the Banking System, and the Financial Markets of Cyprus (6 ECTS)
In the seminar a wide range of topics related to the economy, the banking system, and the financial markets of Cyprus are analysed from the perspective of two significant events currently under development: the globalisation of economies and international markets, and the accession of Cyprus to the European Union. These developments prescribe the prospects and challenges of the economy and the financial system of Cyprus.

AFN 532 Financial Optimisation and Decision Analysis (6 ECTS)
The course covers topics of mathematical programming and financial optimisation and decision theory that constitute basic research tools in finance and economics. From the perspective of theory and model building, it covers Linear programming, duality theory, unconstrained and constrained non-linear programming, stochastic programming and large-scale programming. There is particular emphasis on the use of computers for problem solving.

AFN 533 Bank Financial Management (6 ECTS)
The continuously changing environment – increased competition, liberalisation, globalisation of markets, new capital market products – demands that banks revise their traditional financial management. The course presents financial principles, strategies, and techniques that help banks succeed in this financial environment. After examination of the existing banking environment, bank structure and problems, the course focuses on the measurement and management of interest rate, credit and currency risks. Students will learn about the measurement and evaluation of bank performance, basic instruments and techniques, asset/liability management, new financial strategies and integrated decisions for bank management.

AFN 534 Financial Risk Management (6 ECTS)
This course illustrates the use of financial theory and applied statistics for measuring and managing the risks currently facing multinational corporations and financial institutions. It will discuss: Basel I & II, volatility and value-at-risk, coherent risk measures; simulation of Profit & Loss distributions using Gaussian assumption for equity portfolios and bonds, market risk capital adequacy, linear and non-linear risks; time-varying volatility of market-risk factors, EWMA and GARCH process; extreme financial risks with non-Gaussian distributions, extreme value models; credit risk and rating systems; probability of default, recovery rates, credit risk capital adequacy; methods of Credit Metrics (JP Morgan), distance to default - KMV (Moody's), actuarial approach (Credit Suisse, First Boston); types of operational risk, measurements using Loss Distribution Approach, capital adequacy; mitigating and managing financial risks, capital for unexpected losses, risk transfer/hedging.

AFN 535 Seminar on Derivatives (6 ECTS)
The course covers advanced topics in Financial Theory, emphasizing contemporary theories of contingent claims pricing, continuous time finance, alternative stochastic processes (geometric Brownian motion, Poisson processes and
jump-diffusion, stochastic volatility, stochastic interest rates; numerical methods for option pricing problems with high dimensionality, alternative stochastic process assumptions, and path-dependencies; pricing options on foreign assets with currency risk, Guaranteed Investment Contracts with embedded options; option replication without and with transaction costs.

**AFN 537 Advanced Topics in Finance (6 ECTS)**

The course covers advanced theoretical topics in Financial Theory. The specific topic will depend on the interests of the instructor.

**AFN 538 Applied Topics in Finance (6 ECTS)**

The course covers special and applied topics in Finance. The specific topic will depend on the interests of the instructor.

**AFN 541-2 Advanced Topics (3 ECTS)**

This series introduces graduate students to contemporary research topics. It requires students' attendance and active participation in presentations of original research by visiting researchers as well as presentations of critique and analysis of selected research and students' projects. It is graded with Pass/Fail.

**AFN 661 Advanced Corporate Finance (7 ECTS)**

The aim of the course is to give insights into important topics of corporate finance, overview theories and models and understand issues of asymmetric information, adverse selection, moral hazard and agency problems in the study of optimal capital structure, payout policy and stock repurchases, financial contracting and capital restructuring.

**AFN 662 Advanced Asset Pricing (7 ECTS)**

The aim of the course is to provide knowledge into choice under uncertainty, discount factors and absence of arbitrage, and overview theories and models of contemporary equilibrium asset pricing, factor pricing and intertemporal decisions from the perspective of both discrete and continuous time.

**AFN 663 Advanced Methods in Empirical Finance (7 ECTS)**

The aim of the course is to provide understanding of the empirical techniques used most often in the analysis of financial markets and in empirical corporate finance with focus in the study of the statistical properties of asset returns and the efficient markets hypotheses, empirical tests of asset pricing models (CAPM, APT), tests of conditional asset pricing models, event studies and market microstructure econometrics.
Andreas Charitou, Professor
Capital markets research, International financial analysis, Corporate finance & investments, Credit analysis, Governance & executive compensation.

Irene Karamanou, Professor

Spyros Martzoukos, Associate Professor
Real options, R&D, Capital structure, Portfolio theory, Financial engineering.

Andreas Milidonis, Professor
Credit risk, Executive compensation, Public policy and regulatory issues, Catastrophe risk, Mortality risk.

Evangelos Benos, Associate Professor
Financial market infrastructures, trading and clearing arrangements, payment systems and related central bank policies.

Lenos Trigeorgis, Emeritus Professor
Capital budgeting/Real options, Options and futures, Volatility and capital structure, Innovation, strategy and competitiveness.

Nikos Vafeas, Professor
Corporate governance, Corporate social responsibility, Executive remuneration, Executive replacement.

Stavros Zenios, Professor
Financial risk management, the Eurozone banking crisis, Social and financial Reflexivity, Leadership theory and practice under uncertainty, Efficiency of state-owned enterprises.

Adamos Vlittis, Assistant Professor
The role of voluntary and mandatory financial disclosures in the capital markets, and the effect of corporate governance mechanisms and transparency in various business decisions.

Marios Panayides, Associate Professor
Market microstructure, Market efficiency, Econometric techniques, and Industrial organisation.

Stylianos Papageorgiou, Assistant Professor
Banking theory, Institutional design, Political economy.

Contact Details

DEPARTMENT SECRETARIAT
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Evgenia Tsinti
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E-mail: tsinti.e@ucy.ac.cy

www.ucy.ac.cy/afn/en
The Department of Business and Public Administration (BPA) aims to develop competent business executives through its postgraduate programmes of Master in Business Administration (MBA), M.Sc. in Human Resource Management, and the newly launched interdepartmental M.Sc. in Data Science. It also aspires to educate world-class researchers through its Ph.D. Programme. Through the training and the abilities they will acquire, Master students will be able to successfully manage their organisations using the latest knowledge and techniques, while Doctoral students will be able to conduct cutting-edge research of an international impact. The Department offers postgraduate studies that emphasise both an understanding of the contemporary business environment and in-depth knowledge of the various functional business areas. Based on the latest curricula of prominent European and North American academic institutions, its postgraduate programmes of studies integrate state-of-the-art principles in Business Administration, with sensitivity to the realities and priorities of the local and regional industries.

The modern business environment is being transformed. Markets are becoming global and intensely competitive, organisations are merging, and regulatory barriers are falling. Information technology has created a virtual business environment where services are rendered, transactions take place, and deals are concluded more effectively and efficiently. The only constant in today’s environment is change itself. Astute managers, who anticipate, comprehend, adapt, and act proactively in a timely fashion in this dynamic environment, will lead their enterprises to success. Those who are unable to cope with this change, face real threats to the survival of their organisations. The adage “lead, follow or get out of the way” has become particularly relevant for the managers today. In light of these realities, the Department’s goal is to provide local and regional leadership in all aspects of business and public administration and to achieve international recognition as a centre of excellence in business education and research.

Research Mission and Research Areas

The faculty of the Department is committed to state-of-the-art research of local and international impact and maintains close contacts with researchers at prominent universities in Europe, North America, and the region. Projects by Department faculty have frequently attracted substantial funds from external sources, with the major ones being various European Union Agencies, the Research Promotion Foundation and various financial institutions. Research by faculty members focuses on three major areas, namely Management, Operations Management and Marketing.

Research in Management covers various conceptual, methodological, and empirical issues related to the management of modern-day organisations. These issues include traditional areas such as strategy and human resource management, corporate social responsibility and entrepreneurship, as well as more contemporary areas such as feminist analyses and knowledge-based perspectives of organisations, social networks, and industrial ecology.

Research in Operations Management has both methodological and problem-oriented goals. On the methodological side, projects focus on the development of large-scale computing techniques for the solution of problems in optimisation, production and operations planning, logistics and distribution. Particular emphasis is placed on the solution of models for financial planning under uncertainty. Research is also conducted in such areas as service quality, efficiency and effectiveness of financial and banking institutions, and applications of neural networks to business problems.

Research in Marketing covers various conceptual, methodological and empirical issues revolving around the internationalisation process of the firm, export stimulation and obstruction, organisational and managerial effects on the firm’s export behaviour, the exporter-importer working relationship, the design of an environmental marketing strategy, the importance of sales management in successful exporting, the trade-off of standardisation versus adaptation of international marketing strategy, the examination of ethical aspects of marketing and business performance measurement.

Study and Research Facilities for Students

Students have access to the computer laboratories of the University for their assignments and research projects. A modern microcomputer laboratory has recently been installed for students of the Faculty of Economics and Management. Lectures are often supplemented with the use of specialised software.

The University Library receives and is continually enriched with all major international journals and
business magazines and books. In addition, the Library maintains databases on international financial information (e.g. DataStream, CompStat, Global Vantage, CRSP, IBES, and the Wall Street Journal Index), all of which are available to students.

Postgraduate Programmes at the Master’s Level
The Department of Business and Public Administration offers the following postgraduate programmes at the Master’s level:

- Master of Business Administration (MBA) (full-time study and part-time study) (Interdepartmental)
- Master’s in Human Resource Management (M.Sc. in HRM)
- Master in Data Science (M.Sc. in Data Science)

MASTER OF BUSINESS ADMINISTRATION (MBA) (full-time study and part-time study) (Interdepartmental)
The programme curriculum is described on pages and at the following website: [www.ucy.ac.cy/mba/en](http://www.ucy.ac.cy/mba/en).

M.Sc. IN DATA SCIENCE (MDS)
The M.Sc. in Data Science brings together the expertise of three departments in the University of Cyprus - Business and Public Administration, Computer Science, Mathematics and Statistics in order to prepare the next generation of data-oriented thinkers.

Data Science is a modern interdisciplinary field that uses scientific methods, processes, algorithms and systems in order to extract knowledge and insights from data. The Programme’s objective is to offer a strong understanding of basic and advanced methods in statistical inference, machine learning, data visualisation, data mining and business analytics. The Programme is designed for students that have a background in STEM or in Business and Economics, who can demonstrate good knowledge of English, and who, as part of their undergraduate degree, have completed an introductory statistics course, as well as a course in a programming language such as Python and/or R. The duration of the Programme is 1,5 years and requires 90 ECTS while the language of instruction is English. The first two semesters are dedicated to core courses, and homogenise students’ knowledge on the basics of data science. The third semester allows students to select one of three tracks: Computer Science, Statistics and Business Analytics. In the summer semester the Capstone project, brings students in contact with real world problems and helps them cement the knowledge and skills they acquired. Upon completion of the Programme, students will have gained skills that are critical in a modern data-driven world, and will be in a position to think across disciplines and to transform data into actionable insights.

Programme of Studies
Overall Structure (Total: 90 ECTS)
Compulsory Courses: 48 ECTS

Elective Courses:
a) Specialisation Courses (24 ECTS)
b) General Education courses/ Electives (8 ECTS)
Capstone Project: 10 ECTS

**Compulsory (Core) Courses (8 ECTS):**
- DSC 510 Introduction to Data Science and Analytics
- DSC 530 Probability and Statistics for Data Science
- DSC 531 Statistical Simulation and Data Analysis
- DSC 511 Big Data Analytics
- DSC 550 Business Analytics Applications
- DSC 532 Statistical Learning

**Electives**
- DSC 581 Data Manipulation with Python Pandas (4 ECTS)

**Business Analytics Track (Specialisation) (8 ECTS):**
(Courses offered each year depend on student demand)
- DSC 551 Data Visualisation
- DSC 552 Managing Business Processes with Information Systems & Analytics
- DSC 553 Project Management using Analytical Tools
- DSC 554 Information Networks
- DSC 555 Prescriptive Analytics and Decision Support
- DSC 556 Web Analytics for Business
- DSC 557 Data Mining for Business Analytics
- AFN 521.2 Financial Theory
- AFN 522.2 Investments

**Computer Science Track (Specialisation) (8 ECTS):**
(Courses offered each year depend on student demand)
- DSC 512 Information Retrieval and Search Engines
- DSC 513 Advanced Topics in Data Management
- DSC 514 Natural Language Processing
- DSC 515 Deep Learning
- DSC 516 Cloud Computing
- DSC 517 Data Security
- DSC 551 Data Visualization

**Statistics Track (Specialisation) (8 ECTS):**
(Courses offered each year depend on student demand)
- DSC 533 Survey Sampling
- DSC 534 Time Series Analysis
- DSC 535 Multivariate Analysis
- DSC 536 Bayesian Statistics
- DSC 537 Computational Statistics
Indicative Programme of Studies

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<td>DSC 510 Introduction to Data Science and Analytics</td>
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<td>DSC 530 Probability and Statistics for Data Science</td>
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<td></td>
<td>DSC 531 Statistical Simulation and Data Analysis</td>
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<td>One Elective Course, including courses offered by other programmes</td>
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<td><strong>Second Semester</strong></td>
<td>DSC 51 Big Data Analytics</td>
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<td>DSC 550 Business Analytics Applications</td>
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<td>DSC 532 Statistical Learning</td>
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<td>One Elective Course, including courses offered by other programmes</td>
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<td>(e.g. M.Sc. in AI), or other entities of the University of Cyprus</td>
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<td><strong>Third Semester</strong></td>
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<td>Capstone Project in Data Science (2nd Phase)</td>
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Course Descriptions

**Compulsory Courses**

**DSC 510 Introduction to Data Science and Analytics**

The course examines how data analysis technologies can be used to improve decision-making and the fundamental principles and techniques of data science are studied. During the course, real-world examples and cases are examined in order to place data science techniques in context, develop data-analytic thinking, and illustrate that proper application is as much an art as it is a science. In addition, the course works hands-on with the Python programming language and its associated data analysis libraries.

**DSC 511 Big Data Analysis**

Big data analysis is the process of examining large and varied big data sets that has been generated by various sources such as eCommerce, mobile devices, social media and the Internet of Things (IoT). It involves integrating different data sources, transforming unstructured data into structured data, and generating insights from the data using specialised tools and techniques that spread out data processing over an entire network. The course focuses on the processes involved in processing efficiently large amounts of data of a variety of types and covers the major analytics platforms including Hadoop and Spark. It also includes lab sessions using the Python programming language.

**DSC 530 Probability and Statistics for Data Science**

The course covers fundamentals topics of probability and statistics in the context of data science with its inherent challenges. The course starts with a review of fundamental probability, covering topics like random variables, their distribution functions, expected values, conditioning on certain events and independence. Students will be acquainted with certain families of probability distributions and learn how to estimate certain quantities of interest from observations. A range of properties of estimators will be studied, including sufficiency, unbiasedness and consistency, which enable the evaluation of their quality with an emphasis in the framework of big datasets. Students will also learn how to introduce different types of hypotheses, how to construct tests for their hypotheses, as well as how to compare between tests and how to construct confidence intervals for their estimators. The course includes practical sessions using the R statistical programming language.

**DSC 531 Statistical Simulation and Data Analysis**

Students will be introduced to the R programming language, a programming language that was specifically developed for analysing data, and is today widely used in most organisations that conduct data analysis. They will learn how to explore datasets in R, using basic visualisation tools and summary statistics, how to run different kinds of regressions and analyses, and how to perform statistical inference in practice, for example, how to test certain hypotheses regarding the data or how to compute confidence intervals for quantities of interest. Students will also learn how to use R in order to conduct simulations, an extremely useful tool that can fulfil a wide range of analytical tasks. Simulation techniques covered will include Monte Carlo, importance sampling and rejection sampling. Finally, students will learn how to estimate the precision of computed sample statistics using resampling methods. The course uses a hands-on approach, with nearly half the work done in the lab.

**DSC 532 Statistical Learning**

Students will acquire the knowledge to conduct statistical analysis on a variety of data sets using a wide range of modern computerised methods. They will learn how to recognise which tools are needed for analysing different types of datasets, how to apply these tools in each case, and how to employ diagnostics to assess the quality of their results. They will learn about statistical models, their complexity and their relative benefits depending on the available data. Some of the tools that students will come to learn well include linear simple and multiple regression, nearest neighbours methods, shrinkage methods (ridge, lasso), dimension reduction methods (principal components), logistic regression, Poisson regression, linear/quadratic discriminant analysis and model selection algorithms with criterion or by resampling techniques. The focus of the course will be less on theory and more on providing the students with as much statistical intuition as possible. The course will make substantial use of the R statistical programming language and its libraries.

**DSC 550 Business Analytics Applications**

This course provides the necessary knowledge and skills required for applying business analytics to managerial decision-making in modern organisations. Key topics include descriptive, predictive, and prescriptive analytics, measuring the economic value of information in analytics investments, and using data to improve decision making under risk and uncertainty. Specifically, students learn how to use data and
natural language processing to make better decisions across different functional areas of the organisation.

**DSC 571 Capstone Project I (1st Phase)**

The course links and applies in a real work environment the knowledge that students have acquired in the curriculum courses, and brings students in direct contact with the new trends and needs of the industrial market as well as the demand for specific skills and competencies. Students engage in the entire process of solving a real-world data science project: from collecting and processing actual data, to applying suitable and appropriate analytic methods to the problem. Both the problem statements for the project assignments and the datasets originate from real-world domains similar to those that students might typically encounter within industry, government, non-governmental organisations (NGOs) and academic research. During the course, placement and secondment opportunities in the local industry are promoted.

**DSC 572 Capstone Project II (2nd Phase)**

The course links and applies in a real work environment the knowledge that students have acquired in the curriculum courses, and brings students in direct contact with the new trends and needs of the industrial market as well as the demand for specific skills and competencies. Students engage in the entire process of solving a real-world data science project: from collecting and processing actual data, to applying suitable and appropriate analytic methods to the problem. Both the problem statements for the project assignments and the datasets originate from real-world domains similar to those that students might typically encounter within industry, government, non-governmental organisations (NGOs) and academic research. During the course, promote placement and secondment opportunities in the local industry are promoted.

**Computer Science Track**

**DSC 512 Information Retrieval and Search Engines**

The aim of the course is to examine the main computer science principles that lie behind Google and other search engines. To this end, the course will focus on basic and advanced techniques for text-based information systems: efficient text indexing, Boolean and vector space retrieval models, evaluation and interface issue, text classification and clustering. The course will also focus on Web search including crawling, link-based algorithms, and Web metadata.

**DSC 513 Advanced Topics in Data Management**

The main aim of the course is to provide an in-depth understanding of advanced concepts and research directions in the field of databases. The course is organised in three parts: 1) Fundamentals of Database Systems Implementation, 2) Distributed, Web and Cloud Databases and 3) Spatio-temporal Data Management, Sensor Data Management, other selected and advanced topics from the recent scientific literature.

**DSC 514 Natural Language Processing**

The course examines modern computational approaches based on representation learning for understanding, processing and using human language. Natural language processing (NLP) is one of the most important technologies of the information age, and a crucial part of artificial intelligence. Applications of NLP are everywhere because people communicate almost everything in language: web search, advertising, emails, customer service, language translation, medical reports, etc.

Several models and algorithms for automated textual data processing are described: a) morpho-lexical level: electronic lexica, spelling checkers, b) syntactic level: regular, context-free, stochastic grammars, parsing algorithms and c) semantic level: models and formalisms for the representation of meaning. Several application domains are presented: Linguistic engineering, Information Retrieval, Text mining (automated knowledge extraction), Textual Data Analysis (automated document classification, visualisation of textual data).

**DSC 515 Deep Learning**

The course aims at developing students’ skills as regards to the use of deep learning methods on applied problems. It will show how to design and train a deep neural network for a given task, and the sufficient theoretical basis to go beyond the topics directly seen in the course. The course includes the following topics: what is deep learning, introduction to tensors. Basic machine-learning, empirical risk minimisation, simple embeddings. Linear separability, multi-layer perceptrons, back-prop. Generalized networks, autograd, batch processing, convolutional networks. Initialisation, optimisation, and regularisation. Drop-out, activation normalisation, skip connections. Deep models for Computer Vision. Analysis of deep models. Auto-encoders, embeddings, and generative models. Deep learning for sequences - Recurrent neural networks (RNNs); vanishing and exploding gradients; Long Short-Term Memory (LSTM); deep RNNs; bidirectional RNNs; combination of CNNs with RNNs - pytorch tensors, deep learning modules, and internals.

**DSC 511 Data Visualisation**

In the course, students will learn how to design, judge, build and present their own interactive data visualisations. Introduction to Data visualisation, Web development, JavaScript, Data driven documents (D3.js), Interaction, filtering, aggregation, Perception, cognition, Designing visualisations (UI/UX), Text visualisation, Graphs, Tabular data viz Music viz. Introduction to scientific visualisation, Storytelling with data/data journalism, Creative coding.

**DSC 516 Cloud Computing**

The course covers topics and technologies related to Cloud Computing and their practical implementations. The course is organized in four parts focusing on: 1) Fundamental concepts and models of Cloud Computing, 2) Cloud-enabling technologies: warehouse-scale machines, virtualisation, and storage, 3) Cloud application programming models and paradigms and 4) Cloud resource orchestration, monitoring, and DevOps. Different architectural and service models of cloud computing, the concepts of virtualisation, containerisation and cloud orchestration are explored. Through lectures, tutorials, and laboratory sessions, students will gain hands-on experience with various features of popular cloud platforms, such as Openstack, VMware, Docker, and Kubernetes, as well as commercial offerings like Google App Engine, Microsoft Azure and Amazon Web Service. Advanced cloud programming paradigms such as Hadoop’s MapReduce and Microservices are also included in the course. Students will also learn the concept of modern Big Data analysis on cloud platforms using various data mining tools and techniques. The lab sessions will cover cloud application development and deployment, use of cloud storage, creation and configuration of virtual machines and data analysis on cloud using data mining tools. Different application scenarios from popular domains that leverage the cloud technologies such as online social networks will be explained. The theoretical knowledge, practical sessions and assignments aim to help...
students to build their skills in developing large-scale industry standard applications using cloud platforms and tools.

**DSC 581 Data Manipulation with Python Pandas**

The course provides students with the knowledge required to perform advanced data manipulation tasks, in preparation for data analytics tasks. The course uses primarily Python's Pandas library to introduce to students advanced data manipulation and exploration techniques. Other Python libraries, such as NumPy, SciPy, Matplotlib, Seaborn are also introduced for this purpose. The course covers, loading and manipulating data, cleaning, and handling missing values, indexing, reshaping and pivoting, merging and joining with other data sources, grouping, as well as visualising data.

**DSC 517 Data Security**

Processing data is often realised through systems that can operate under hostile conditions, where adversaries try to monetize access to sensitive data. The course provides a short introduction of data security and the basic arsenal we have for protection is reviewed. A large portion of applied cryptographic primitives and protocols that facilitate secure transmission of data is covered, and a reviewal of how systems that process data can be attacked and protected is done. Finally, the advanced attacks and potential defences for systems that are based on Machine Learning are discussed.

**Statistics Track**

**DSC 533 Survey Sampling**

The course introduces the mathematical background and methodology necessary for surveys in finite populations. Topics covered include: survey design, sampling and non-sampling errors, simple random sampling, stratified sampling, systematic sampling, cluster sampling, ratio estimators, regression estimators, determination of optimal sample size, bias in survey sampling, modern techniques of survey sampling.

**DSC 534 Time Series Analysis**

The course studies models for analysing data indexed in time. Students will learn how to construct plausible time series models, and how to estimate their parameters. Topics covered include: fundamental notions of stochastic processes (weak and strong stationarity), autoregressive and moving average based models for stationary and non-stationary time series, trend and seasonal behaviour, sample autocorrelation function, sample partial autocorrelation function, parameter estimations, model identification, prediction, ARMA, ARIMA and SARIMA models, properties, estimation and examples, ARCH and GARCH models for volatility. The R statistical programming language will be used for applying the introduced methods in a range of Data Science problems.

**DSC 535 Multivariate Analysis**


**DSC 536 Bayesian Statistics**

The course introduces Bayesian Statistics, an intuitive approach to Statistics allowing for better accounting of uncertainty. Topics include: sources of uncertainty, Bayes rule, prior and posterior distributions, conjugate and non-informative priors, point-wise estimation and credible intervals, hypothesis testing, introduction to Bayesian decision analysis, introduction to Markov chain Monte Carlo techniques. The course makes use of the statistical programming languages R and Stan for the implementation of algorithms for extracting information from the posterior and for the application of the introduced methods in a range of Data Science problems.

**DSC 537 Computational Statistics**


**DSC 573 Research Project**

The Research Project refers to students that are interested in research in the areas covered by the programme. They usually wish to continue their studies and be enrolled in a Ph.D. programme, after fulfilling the respective departmental Ph.D. admission criteria. This optional course is available only to students that maintain high GPA and who have clearly demonstrated research interest during their studies. The Interdepartmental Council must approve a student's request to take the Research Project option, provided there are appropriate supervisors for the undertaking of the project.

**Business Analytics Track**

**DSC 552 Managing Business Processes with Information Systems and Analytics**

The course provides students the key tools to analyse and improve business processes in organisations, with an emphasis on the service sector. This is achieved by bringing together key ideas from the fields of information systems, business analytics, and business process design and management. The course introduces the fundamental types of information systems, including enterprise-wide systems (ERP, SCM, CRM), and the basic principles of supporting business strategy with Information Systems. Students will learn how to use information systems to support their organisation’s business processes, and how to use business analytics and business process modelling techniques to inform key decisions during Business Process Re-engineering. The students will be introduced to different business analytics systems in fields such as Marketing, Retail, Supply-chain management, E-commerce, etc. They will also learn how to measure business process performance through appropriate metrics and frameworks (e.g. the Balanced Scorecard approach).

**DSC 553 Project Management using Analytical Tools**

The course examines the project management process with a focus on business analytics techniques to overcome the pitfalls
and obstacles that frequently occur during a typical project. It is designed for business leaders who are responsible for implementing projects, as well as beginning and intermediate project managers. It includes topics on planning and scheduling issues, costing and budgeting, staffing and organising, project management methodologies and using data in order to inform the project manager’s decisions throughout the project’s lifecycle. During the course, computer software dealing with project management will also be presented.

**DSC 551 Data Visualisation**

In this course, students will learn how to design, judge, build and present their own interactive data visualisations. Introduction to Data visualisation, Web development, JavaScript, Data driven documents (D3.js), Interaction, filtering, aggregation, Perception, cognition, Designing Visualisations (UI/UX), Text visualisation, Graphs, Tabular data viz Music viz, Introduction to scientific visualisation, Storytelling with data/data journalism, Creative coding

**DSC 554 Information Networks**

The course focuses on how the social, economic, technological and natural systems are connected, and how the study of networks sheds light on these connections. Topics include: how to model the formation of social and economic networks; understand and measure certain patterns of real-world networks; identify, quantify and model how opinions, fads, political movements and diseases spread through interconnected systems and measure the robustness and fragility of them. Models and techniques from Economics, Sociology, Maths, Physics, Statistics and Computer Science are brought together in order to answer these questions. In more detail the course will include: Repetition of Statistical Definitions, Background and Network Elements, Networking, Social Networking & Behavioural Contagion, Project Management Networks, Economic complexity, Visualisation of Networks.

**DSC 555 Quantitative and Qualitative Decision-Making**

The course explores decision-making and policy formulation in organisations. It includes goal setting and the planning process, rational models of decision making, effective combination of qualitative and quantitative data (e.g. triangulation, complementarity, etc.) with respect to the goal set, evaluation of alternatives, prediction of outcomes, cost-benefit analysis, decision trees, uncertainty and risk assessment, and procedures for evaluation of outcomes.

**DSC 556 Web Analytics for Business**

The course explores web analytics, text mining, web mining, and practical application domains. The web analytics part of the course studies the metrics of websites, their content, user behaviour, and reporting. The Google analytics tool is used for collection of website data and doing the analysis. The text mining module covers the analysis of text including content extraction, string matching, clustering, classification, and recommendation systems. The web mining module presents how web crawlers process and index the content of web sites, how search works and how results are ranked. Application areas mining the social web and game metrics will be extensively investigated.

**DSC 557 Data Mining for Business**

Enterprises, organisations and individuals are creating, collecting, and using massive amount of structured and unstructured data with the goal to convert the information into knowledge, to improve the quality and the efficiency of their decision-making process, and to better position themselves to the highly competitive marketplace. Data mining is the process of finding, extracting, visualising and reporting useful information and insights from both small and large datasets with the help of sophisticated data analysis methods. It is part of the business analytics, which refers to the process of leveraging different forms of analytical techniques to achieve desired business outcomes through requiring business relevancy, actionable insight, performance management, and value management. The fundamental principles and techniques of data mining will be studied and students will learn how to apply advanced models and software applications for data mining. Finally, students will learn how to examine the overall business process of an organisation or a project in order to understand the business context where hidden internal and external value is to be identified and captured, and what exactly the selected data mining method does.

**M.Sc. IN HUMAN RESOURCE MANAGEMENT (M.Sc. in HRM)**

The M.Sc. in Human Resource Management has been designed to offer state-of-the-art knowledge to students concerning the management and development of individuals, teams and organisations. Its main aim is to offer students a challenging, supporting and constructive learning environment, where theoretical perspectives and research insights are critically debated in order to understand how HR can contribute to the development of organisations of excellence. The Programme’s defining characteristic is its dual focus on the theory and practice of HRM. Through this focus, the Programme will give students a strong background to continue their studies in Ph.D. or become effective HR practitioners in different organisational settings.

In addition, the Programme is well connected within the human resource management industry. In this respect, students will have the opportunity to enrich their knowledge and skills through internships and other activities. Finally, the programme also offers evening classes to students.

The M.Sc. in HRM is offered in the English language and, at a later stage it will also be offered in the Greek language. The Programme can be completed in three academic semesters (minimum attendance) or in eight academic semesters (maximum attendance). The programme of study requires completion of at least 96 ECTS and has been designed according to international standards adopted by similar programmes in leading universities abroad. For more information, you can visit the web page [www.ucy.ac.cy/mschrm](http://www.ucy.ac.cy/mschrm).

The admission criteria for the M.Sc. in Human Resource Management are the following:

1. Undergraduate Degree in any field of study – min GPA 7/10 or 2:1 (UK System). Subject of degree is irrelevant.
2. Proof of proficiency in the English language, equivalent at least to level C1 of the Common European Framework of Reference for Languages (CEFR), e.g. through one of the following exams:

Department of Public and Business Administration
2. Two recommendation letters from academics and/or work supervisors.
3. CV and a Statement of Purpose (max 500 words)
4. A personal interview (in Greek and English)

Programme Curriculum

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<thead>
<tr>
<th>September-October</th>
<th>ECTS</th>
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<tbody>
<tr>
<td>HRM 530 Principles of Management and Work</td>
<td>3 (14 hours)</td>
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<tr>
<td>HRM 531 Advanced Organisational Behaviour</td>
<td>6 (28 hours)</td>
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<tr>
<td>HRM 532 Human Resource Management and Strategic HR</td>
<td>6 (28 hours)</td>
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<td>HRM 563 Strategic Management</td>
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<tr>
<td>HRM 533 Comparative &amp; International Human Resource Management</td>
<td>3 (14 hours)</td>
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<td>HRM 540 Quantitative and Qualitative Research Methods</td>
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<td>HRM 565 Leading People</td>
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<tr>
<td>HRM 534 Employee Selection and Succession Planning</td>
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<td>HRM 537 Compensation and Rewards Management</td>
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<td>HRM 538 Managing Change</td>
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<td>HRM 574 Workshop on Structures, Job Design and Workforce Planning</td>
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<td>HRM 576 Workshop on Psychometric Measurements</td>
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<td>HRM 535 Employee Training and Development</td>
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<td>HRM 536 Performance Management</td>
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<td>HRM 539 Entrepreneurship, Creativity and Innovation</td>
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<td>HRM 573 Workshop on Human Resource Information Systems</td>
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<td>HRM 575 Workshop on HR Analytics and Evidence-Based HRM</td>
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<tr>
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<td>HRM 561 The Regulatory Framework of HRM</td>
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<td>HRM 562 Managing Workforce Diversity, Theory and Practice</td>
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<td>HRM 577 Workshop on Negotiations and Conflict Resolution</td>
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<td>HRM 578 Workshop on HR Business Partnering</td>
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Course Descriptions

MBA Programme (full-time and part-time)

The courses of the interdepartmental programme are described on pages 66-67.

M.Sc. in Human Resource Management

**HRM 530 Principles of Management and Work (3 ECTS)**

The purpose of the course is to provide an understanding of the nature and role of management and work in various types of organisation as well as to develop the corresponding individual managerial skills. It provides an introduction into how individual, group and organisational factors influence employee behaviour, work and in turn the performance of an organisation. It is designed to give students a framework for understanding the way organisations function and the behaviour of individuals and work groups within them. It also focuses on developing the business skills of students in this context.

**HRM 531 Advanced Organisational Behaviour and Work (6 ECTS)**

Students study individual and group processes within organisations in depth. The course adopts an interactive and critical approach to these issues through cases and examples that students will study to understand the multiple factors affecting behaviour at the individual, group and organisational levels. Topics covered include psychological contract, employee engagement, commitment, job satisfaction and designing effective organisations.

**HRM 532 Human Resource Management and Strategic HRM (6 ECTS)**

The course introduces students to the theory and practice of Human Resource Management (HRM) in a variety of organisational settings. Issues that will be examined include: the strategic importance of HRM, the role of managers and employees in HRM issues, recruitment, selection, performance appraisal, HR planning, compensation and benefits and training and development. The course aims to provide an overview of the issues related to HRM, their study and their application.

**HRM 533 Comparative and International Human Resource Management (3 ECTS)**

The course helps students to think systematically and strategically about managing people and implementing...
relevant policies to achieve competitive advantage. It addresses human resource topics from a strategic perspective. These key issues are illustrated with case study examples from differing organisational situations. Furthermore, the course emphasises an international and comparative perspective to the management of human resources. HR topics are discussed within the diverse and changing international business context. Within this context, the course considers the implications and complexity involved in managing the workforce of multinational companies strategically.

**HRM 534 Employee Selection and Succession Planning (6 ECTS)**
The course provides students with necessary knowledge and skills associated with recruiting and selecting the right people in the right jobs at the right time. It covers processes and practices that ensure the most effective selection and utilisation of talent, external and internal forces that affect the hiring process, as well as the process of identifying and placing talent and succession management. Emphasis is placed on successfully conducting a job analysis, which identifies the competencies (knowledge, skills, and abilities) necessary for effective job-related selection criteria. Then, the course provides participants with an understanding of a variety of assessment instruments to select the right persons for the right job.

**HRM 535 Employee Training and Development (6 ECTS)**
The course is designed to provide students with the knowledge and skills required to design and deliver programmes that ensure the requisite training and development of individuals and groups within organisations, ultimately contributing to the enhanced performance of organisations. Topics covered include the assessment of learning needs at the individual, group and organisational levels; the design of training methodologies appropriate for different types of employees within different organisational contexts; and the evaluation of the effectiveness of training programmes. Other issues addressed in this course include critical perspectives in labour utilisation, the changing nature of training in organisations and the importance and extent of training investment in the modern global economy.

**HRM 536 Performance Management (3 ECTS)**
The course approaches performance management (PM) as a strategic issue in managing the human resources of organisations. It promotes the notion that PM is not a one-off exercise, but a continuous process of identifying, measuring and developing the performance of individuals and groups in ways that promote the implementation of the organisation’s strategic goals. The course discusses the links between PM and strategic planning as well as the advantages and disadvantages of implementing PM systems. Getting into the specifics of designing and implementing effective PM systems, the course examines the PM process and discusses issues such as defining performance and choosing a measurement approach, measuring results and behaviour, implementing a PM system, linking PM with employee development and skills and managing team performance.

**HRM 537 Compensation and Rewards Management (6 ECTS)**
The course approaches compensation and rewards as a strategic human resource tool that organisations can leverage as a competitive advantage. It aims at examining compensation and rewards in an organisational and international context in order to provide students with the knowledge and understanding of environments in which professionals plan, implement and evaluate employee reward policies to support strategic organisational goals. The diverse approaches to reward management, strategically selecting a competitive reward policy and developing internal pay and structures will be discussed. The course also discusses the social, legal, ethical and union issues in managing compensation and rewards, as well as the relevant trends affecting contemporary organisations.

**HRM 538 Managing Change (3 ECTS)**
The course introduces students to the basic concepts, theories and frameworks related to organisational change management and explains their importance in human resource management. Most organisations operate in environments that change rapidly and their ability to respond effectively to such changes is defining to their survival and competitiveness. Therefore, managers need to adopt a proactive and strategic approach to change management in order to ensure the people’s effective transition to the new state of affairs. Topics covered relate to managing the human aspects of change, the leadership of change, managing resistance to change, and political and institutional perspectives on change management. Attention is given to critical issues that must be considered when designing and implementing plans for change, including communication, motivation and involvement, stakeholder management, sequencing of interventions and preserving change.

**HRM 539 Entrepreneurship, Creativity & Innovation (3 ECTS)**
The course uses the theories and concepts of entrepreneurship and innovation in order to explore how effective organisations engage in these two strongly integrated processes. Its purpose is to explain the dimensions of new venture creation and growth and to enhance students’ knowledge in an understanding of the process of idea generation and new venture/product development. The course discusses the importance of entrepreneurship for individuals, groups and organisations, and the role of HRM in promoting it. Through the critical analysis of examples, it explores ways in which HRM policies and practices can foster an intra/entrepreneurial culture within different forms of organisation.

**HRM 540 Quantitative and Qualitative Research Methods (9 ECTS)**
The course aims to provide students with an understanding of the main methods, processes and tools of business research. Its primary aim is to emphasise the diversity of research, by discussing the concepts of original vs. applied and quantitative vs. qualitative research in order to highlight the significance of appropriate research methods, instead of ‘best’ methods. Basic knowledge of methodological approaches is critical to the comprehension of scientific knowledge, the evaluation of empirical studies and the design of research projects. The course is organised in three parts. Part A critically discusses the notion of research and research philosophies, links between theory, hypotheses and variables, research design, sampling and ethical issues. Part B focuses on qualitative research methods and Part C on quantitative research methods. Alternative methods of sampling, collecting and analysing data are also discussed.

**HRM 560 MNCs, Employment Systems and Institutions (3 ECTS)**
The course analyses how supra-organisational systems and social institutions affect the implementation and effectiveness of organisational HRM policies and practices in local and multinational enterprises. The course aims to provide students...
with knowledge on the theories, concepts and frameworks used to understand and analyse the role of social agencies and institutions in shaping the potential performance of firms and economies. Issues addressed include operating models and forms of ownership, local responsiveness, global integration and employment policies and culture in context.

HRM 561 The Regulatory Framework of HRM (3 ECTS)

This course aims at providing students with an understanding of the way in which the employment relationship is regulated around the world, including an understanding of the influence of regulation in organisations. It covers key issues and tensions which can arise in employment relations as well as the nature, objectives and methods adopted by the various parties seeking to influence the nature of those relations (e.g. government, employers, management, trade unions and employees). Specific topics discussed include theoretical perspectives on work and employment relations, trade unions and collective bargaining, trends in unionisation, influence of the financial crisis on employment relations and institutions, links between employment relations, skills, pay and economic performance, and employment relations in the public sector. Emphasis will also be given on the Cypriot context.

HRM 562 Managing Workforce Diversity, Theory and Practice (6 ECTS)

The course aims at providing students with an understanding of the individual, societal and organisational dynamics related to managing, and being part of, a diverse workforce in contemporary organisations. It covers the main concepts and frameworks in order to familiarise students with the variety of human difference and the criticality of managing this difference to create inclusive workplaces. The topics covered include the definition and importance of diversity in HRM and social policy, the social, cultural and legal context for the development of HRM diversity policies and practices in organisations, the business case for managing diversity and the various dimensions of diversity. Students will receive practical training in understanding, increasing their sensitivity to people’s needs and adapting to various needs, concerns and characteristics of different people. This must enhance their interpersonal relationships with members of their team and help them grow into sensitive, responsible and ethical managers and leaders.

HRM 563 Strategic Management (3 ECTS)

The course focuses on some of the important current issues in strategic management and highlights the significant emerging trends in the field. It aims at providing students with a pragmatic approach to understanding, formulating and implementing corporate, business and functional strategies. Towards this purpose, the course relies on the analysis of examples from organisations that operate in complex and rapidly changing environments to understand how globalisation, new business models, disruptive technologies and changes in societal aspirations challenge managerial decision-making. Topics covered include the changing nature of strategic management, strategy and the strategic context, analysis of organisational aims, environment, resources and capabilities, strategy formulation and implementation, assessment of corporate and business strategies, competitive advantage, and the links between organisational strategy, structure, leadership, culture and HRM systems.

HRM 564 Business Ethics and CSR (3 ECTS)

The course provides a general overview of ethical performance in business, their CSR activities and the role of HRM in it. Students will learn to examine standards and priorities through ethics and moral reasoning and achieve a balance between business and economic responsibility on one hand, and social and public responsibility on the other. Topics include: ethical HR policies and practices, ways to promote and institutionalize ethical and responsible behaviour in organisations, and differences in ethical standards and corporate social responsibility approaches in different countries. Cases and problems illustrating relevant dilemmas will be used extensively.

HRM 565 Leading People (3 ECTS)

The course introduces students to the major issue of Leadership and its connection to HRM, on the basis that leadership is dynamic and not static. Major theories on leadership as well as the process of leadership are analysed and the relationship between leader, followers and situations is explored. Emphasis is given to the role of social gender and culture in leadership, the characteristics and values of leaders as well as charismatic leadership and follower roles. This aims to develop students’ skills and competencies in order to become effective leaders in organisations. Students are expected to understand their own skills and competencies related to a display of effective leadership and to use the opportunities provided to acquire and build these skills.

HRM 573 Workshop on Human Resource Information Systems (1 ECTS)

During the workshop, participants will learn how to select, set up and use a human resource management information system (HRIS) for optimum performance. The session will focus on providing participants with the skills and knowledge necessary to get the most out of an HRIS, including an understanding of how it can enhance decisions relating to all HR functions.

HRM 574 Workshop on Structures, Job Design and Workforce Planning (1 ECTS)

The objective of the workshop is to help students become good analysts of organisational structure and process, learning effective tools of design and implementation. The workshop provides the tools needed to analyse an organisation’s structure and its workforce and create a plan for talent management and retention. Attention is placed on the process of organisational and job design, emphasising their links with strategic goals, motivation and performance.

HRM 575 Workshop on HR Analytics and Evidence-Based HRM (1 ECTS)

The workshop aims to provide students with the necessary skills needed to act in a consultancy capacity for both external and internal clients as HR professionals in an organisational context. The value-added of the HRM function is often questioned, considered more of a rhetoric than a reality. However, through the use of HR data, metrics and analytics, the HRM department of the organisation can measure and assess the impact of specific practices and policies on measurable outcomes for the organisation. The workshop introduces evidence-based management through HR analytics and enables participants to initiate a human capital metrics journey that will help to improve the quality and credibility of HR decision-making.

HRM 576 Workshop on Psychometric Measurements (1 ECTS)

The workshop will help participants understand how psychometric tests are developed and how they are used and interpreted effectively. Psychometric tests are a standard and scientific method used to measure individuals’ mental capabilities and behavioural style. They are designed to measure a candidates’ suitability for a role based on the required
personality characteristics and aptitude (or cognitive abilities). Employers use the information collected from the psychometric test to identify the hidden aspects of candidates that are difficult to extract from a face-to-face interview or other employee selection methods that are typically used.

**HRM 577 Workshop on Negotiations and Conflict Resolution (1 ECTS)**

Negotiations are an integral part of our professional and personal life. Therefore, business executives must have highly developed negotiation skills and be familiar with the necessary procedures for a successful negotiation. With these skills they must be able to deal effectively with business situations with individuals or teams as well as with suppliers and customers. The workshop examines the theory, procedures and practical aspect of negotiations within the business environment. It gives special emphasis on the different types of negotiation, the strategy of negotiations, the appropriate communication between parties, sources of power in negotiations, ethics, multiparty negotiations and others. It also covers conflict resolution during the negotiation process.

**HRM 578 Workshop on HR Business Partnering (1 ECTS)**

The workshop aims to discuss the importance of the HR function in becoming a business partner in the organisation, therefore having a say in strategic decisions. More importantly, it aims at critically analysing the factors that may facilitate or impede the HR function from becoming a business partner, whether they relate to the organisational culture, the skills and experiences of HR specialists or the alignment of talent management with business objectives. These issues are analysed and good practices are presented and discussed.

**DOCTORAL PROGRAMME**

The Department offers a Ph.D. in Business Administration, which is intended for students (Cypriots and non-Cypriots) from accredited universities with postgraduate qualifications at Master's level. The Programme is offered in Greek and English language. Graduates of the programme will be qualified to pursue an academic career in government and/or private universities in Cyprus or abroad, work in public or private organisations or engage in activities of an advisory/consultant nature.

Financial support for doctoral students in the Department is the same as that for all doctoral programmes at the University. Scholarships (i.e. reduction of/exemption from tuition fees and/or financial support for research/teaching project) are granted based on available resources (e.g. funded research programmes, donations from other sources, etc.), always in accordance with applicable regulations of the University.

**Admission Criteria**

The specific admission criteria to the Ph.D. in Business Administration Programme are the following:

1. Very good academic performance in previous studies.
2. Hold a postgraduate, Master-level qualification in a relevant subject from a recognised university (or submit a certificate confirming that the Master level qualification will be obtained before the beginning of the doctoral programme).
3. Prepare and submit a preliminary research proposal that outlines the proposed research topic. Specifically, the proposal must include: a) the research question(s) and its significance, b) the research method(s) - how the question(s) will be approached, c) the essential literature on the specific question(s) and d) Schedule for completion of the Ph.D.
4. Students must provide complete degree transcripts for their Master's level and undergraduate study.
5. Request that at least two academic references in support of their application are sent to University of Cyprus (applicants must give the names and contact details of their academic references on their application).
6. Submit certificates and other relevant documents, e.g. samples of prior academic and/or professional experience (publications, surveys, digital work etc.).
7. Submit evidence of very good knowledge of the English language.

**Programme Structure**

To obtain a Ph.D. degree in Business Administration, it is required to complete a total of 240 ECTS. The programme of studies consists of four parts:

**Part I** - It includes courses representing 60 ECTS (i.e. 6-10 courses). Three of these courses are foundation courses in the specific field the student has decided to focus on. Depending on previous academic preparation (e.g. successful completion of relevant postgraduate courses in another academic institution), the student may be partially or fully exempted from the above courses.

**Part II** - It relates to the preparation and the successful completion of the Comprehensive Exams, which refers to three basic modules and represents 10 ECTS.

**Part III** - It relates to the manner of conducting the research, focusing on issues related to Management (this part represents 120 ECTS).

**Part IV** - It is the writing stage of the dissertation, which is credited with 50 ECTS. This could take the form of a comprehensive study (thesis) or a series of essays on a specific research area. The thesis must be an original work that makes a significant contribution to the field. The aim is to produce research results that are publishable in refereed international journals.

**Type of Courses**

The Programme includes courses of quantitative and qualitative content, which touch on matters of Epistemology, Methodology, methods of Quantitative Analysis and Qualitative Research, Finance, Management, Management Science, Operations Management and Marketing. The curriculum for each student is adjusted according to the student’s chosen field of concentration. The courses offered are the following:
The language of instruction will be in Greek and English. The courses will be taught provided a sufficient number of students register for them. In the cases where the number of students registered for a course is small, the course will follow the structure of a seminar or independent study under the supervision of departmental faculty. The majority of courses will be offered by the Department, while relevant courses will be offered from other departments of the University of Cyprus, as shown below:

- Social Influence and Social Representations
- Qualitative Research Methods in Psychology
- Experimental Psychology
- Advanced Research Methods II
- Using Basic and Advanced Multilevel Modelling in Educational Research

### Course Descriptions

#### Core Courses

**BPA 630 Science Philosophy in Business Administration** *(7.5 ECTS)*

The course provides tools for generating ideas and translating them into formal theories in the various fields of Business Administration. The aim is to offer students clear guidance for defining constructs, thinking through relationships and processes that link constructs, and deriving new theoretical models (or building on existing ones) based on those relationships. It will illustrate how to use causal analysis as well as grounded and emergent approaches to theory construction. Students will learn to distinguish between moderation and mediation as well as how to develop ideas at theoretical and analytical levels. The explicit aim of the course is to provide students with a deeper appreciation for theory building.

**BPA 640 Research Methods in Business Administration I** *(Quantitative Methods) (7.5 ECTS)*

The overall aim of the course is to provide econometric analytical tools to Ph.D. students to help identify the appropriate econometric technique given their research question and the available data. Students will be able to distinguish between different econometric models and understand their various strengths, limitations and pitfalls. Upon the completion of this course, students will acquire a thorough knowledge and understanding of the basic and advanced methods used in the business literature, become familiar with the different observational and experimental approaches to management and marketing, identify recent developments, and acknowledge the methodological requirements for publishing in top-tier journals.

**BPA 631 Research Methods in Business Administration II** *(Qualitative Methods) (7.5 ECTS)*

The course comprises three main components: a) it gives students hands-on knowledge on how to conduct a qualitative research project with a particular interest in how to make a research topic workable, how to collect and analyse qualitative-type data (e.g. visual methods, narratives, questionnaires, ethnography, biography, interviews) and how to select cases, b) it discusses qualitative research methods in relation to dominant theoretical perspectives and the quality criteria of research projects today and c) by actively participating in an intensive supervisory process, the course provides students with a good platform for developing their own research methods and projects.

**BPA 635 Strategic Management** *(7.5 ECTS)*

The course offers a broad, multi-disciplinary introduction to the study of business strategy, with a particular emphasis on its behavioural and economic foundations. Different schools of thought and their evolution will be analysed, discussed and compared.

**BPA 641 Operations Management** *(7.5 ECTS)*

The course provides more theoretical and methodological concepts/tools for the management of operations and the decision-making process within the scope of the supply chain. Competitive advantage driven by supply chain strategy has been a common practice in the business environment for the past few years. Most strategies involve improving operational efficiency either through cost reduction or increased capital efficiency. Decision-making about operational issues is one of
the most common tasks in organisations. The course will enhance students’ ability in analysing quantitative research and understand the management issues in order to make good operational decisions within the supply chain. Coverage is topical and will include supply chains issues and strategy, operations management framework, the Six Sigma approach, quality management, demand and supply planning, inventory deployment/control, and transportation networks optimisation. Other topics will be added as the course progresses. Where appropriate, concepts are introduced through case studies.

**BPA 656 Marketing Management (7.5 ECTS)**

The course focuses on issues relating to the analysis, planning, implementation and control of the marketing activity. It particularly examines concepts, tools and techniques, which are essential in making effective strategic marketing decisions. It also provides a comprehensive analysis of the firm’s resources and capabilities as well as of the customers, the competition and the environment, in building effective marketing strategies and achieving a sustainable competitive advantage. It also examines various theoretical frameworks, analytical methods, and best practices relating to the development of marketing strategies.

**Elective Courses**

**BPA 633 Organisational Theory (7.5 ECTS)**

The course is an introduction to the major theoretical approaches and debates in Organisational Theory, which draws primarily on Sociology and secondarily on Economics, Psychology, and Political Science. The course will provide students with a roadmap to guide them through organisational theory. For this reason, the classic theories are presented first and then the newer theories, as these have evolved throughout history to the present.

**BPA 634 Entrepreneurship & Innovation (7.5 ECTS)**

The course uses theories of innovation and entrepreneurship to explore how effective organisations engage in these two strongly integrated processes. The course examines product, service and process innovation and demonstrates the role of innovation as a driver of organisational growth and competitiveness.

**BPA 636 Human Resource Management (7.5 ECTS)**

The course introduces students to the theory and practice of Human Resource Management (HRM) in organisations. The issues that will be examined include: the strategic importance of HRM, the role of managers and employees of the organisation in HRM issues, recruitment, selection, performance appraisal, HR planning, compensation and benefits and training and development. Students will have the opportunity to analyse a variety of practical situations where the theories behind the practice of HRM are applied.

**BPA 642 Supply Chain Management (7.5 ECTS)**

The course examines the major challenges involved in managing efficient supply chains. It illustrates various strategic and tactical supply chain issues such as product design, virtual integration, information-sharing strategy, outsourcing, procurement, distribution strategy and risk management. Students are given the chance to explore emerging supply chain issues and case studies are used to examine issues related to supply chain management.

**BPA 643 Service Management (7.5 ECTS)**

The service sector is today one of the largest and fastest-growing components of most developed and developing economies. Most manufacturing firms also encompass extensive service functions in addition to production operations. This course focuses on the unique aspects involved in the design and delivery of service operations, both within “pure” service organisations (banking, retailing, transportation, travel, hospitality, etc.) as well as within the service functions of manufacturing. The course further examines important design and operation issues related to electronic and consulting services. The course takes a theoretical and methodological viewpoint with a bias towards operations, while further considering marketing, IT and human resource management, all of which need to be integrated in order for the service firm to gain a competitive advantage. Students will be exposed to the basic theoretical and methodological approaches related to such issues as service delivery design and management, service quality and customer satisfaction, yield management and waiting line systems. Students will gain an appreciation of the complexities involved in managing service encounters and implementing changes, and further appreciate entrepreneurial opportunities in services.

**BPA 644 Applied Optimisation Modelling (7.5 ECTS)**

Optimisation models provide an effective framework for analysing diverse quantitative problems to support operational and tactical business decisions. The course looks at different model forms to ascertain their capabilities and limitations in addressing various practical business problems. Students develop modelling skills that involve: ability to formulate different classes of optimisation models, familiarisation with suitable software tools to numerically solve models, application of models in diverse business problems drawn from operations, financial planning, marketing, ability to derive economic interpretations and insights from the results.

**BPA 645 Planning under Uncertainty (7.5 ECTS)**

Uncertainty is prevalent in all business endeavours (e.g. due to randomness in economic factors/agents, market volatility, changing customer preferences and even unpredictable catastrophic events). Ignoring impacts of uncertainty on operational, tactical and, most importantly on strategic decisions, can be perilous for businesses. Prudent planning requires an understanding of sources of uncertainty and means to quantify and mitigate the potential consequences. The course focuses on risk measurement and risk management and examines various sources of risk and presents metrics for measuring risks. It also develops quantitative models that appropriately incorporate risk mitigation measures in order to support decisions in the face of uncertainties and ambiguities. Stochastic programming and robust optimisation models, as risk management tools, are examined through practical examples for various business problems.

**BPA 651 Consumer Behaviour (7.5 ECTS)**

The course examines fundamental principles, concepts and theories of Consumer Behaviour, emphasising both the psychological and the sociocultural factors that influence the consumer decision-making process. The course will familiarise students with research in the field of consumer behaviour as it presents current theoretical and methodological approaches to various aspects of consumer behaviour. Upon completion of this course, students will be able to analyse and critically assess the extant research, develop innovative research ideas, form
testable research hypotheses and specify rigorous empirical approaches.

BPA 652 Marketing Models (7.5 ECTS)

The objective of the course is to introduce students to the quantitative models used to investigate marketing-related research problems and improve marketing decisions. Upon completion of this course, students will be able to build their own models and explore research questions.

BPA 653 International Marketing (7.5 ECTS)

The course will present the distinctive characteristics of International Marketing, and identify the main challenges firms face when they expand their operations in overseas markets. The course analyses the complex environmental forces that influence international marketing strategies and programmes e.g. the economic, social, political, cultural and legal dimensions. It also presents the strategic planning process necessary for developing international marketing programmes that will satisfy customers across different country-markets. Drawing on the relevant academic literature, the course will examine international trade theories, the internationalisation process of the firm, multinational firms and foreign direct investments, and other research paradigms that have influenced the evolution of International Marketing as a distinct academic discipline. By the end of the course, students should be familiar with the key international marketing theories and concepts, able to recognise the main research streams in the field of International Marketing, understand the alternative methodological approaches that are commonly employed in order to investigate international marketing phenomena and develop innovative research ideas for advancing the existing body of knowledge.

BPA 654 Advanced Topics in Marketing (7.5 ECTS)

The course introduces students to topical marketing problems and research challenges. Students are encouraged to make a critical analysis of recent developments in the general social and economic environment and assess the influence of such changes on contemporary marketing theory and practice. The main topics include environmental and green marketing, corporate social responsibility, the role of digital interactive media and social networks, the diffusion of technological innovations and health care marketing.

BPA 655 Sales Management (7.5 ECTS)

The course presents the key topics that concern academic researchers in the area of Sales Management, provide an in-depth analysis of relevant theories, and present recent conceptual and methodological advancements. Upon the completion of this course, students will acquire a thorough knowledge and understanding of the sales management literature, become familiar with the different research streams in this field, comprehend the main research approaches and methodologies that can be employed to investigate sales management-related phenomena, identify recent developments, and acknowledge the requirements for publishing in top-tier journals.
Angelos Georgiou, Assistant Professor
The development of tractable computational methods for the solution of stochastic and robust optimisation problems, as well as applications in operations management, healthcare and energy.

Demetris Hadjinicolas, Lecturer
Organisational improvisation; Organisational knowledge and learning; Organisational judgement; Philosophy and organisation studies; Business ethics.

George Hadjinicolas, Professor
The production-marketing interface, International manufacturing/operations management, Serial production systems, Product positioning methods.

Christiana Ierodiakonou, Assistant Professor
Work and employment inequalities; Transitions between employment and family; Flexible work arrangements; Inclusion and diversity at work; Institutions and employment; Job insecurity and precarity.

George Kassinis, Professor
Strategy, Environmental issues in business, CSR, Stakeholders and value co-creation, Social networks, Industrial ecology and regional development.

Leonidas C. Leonidou, Professor
International marketing/purchasing, Relationship marketing, Socially responsible marketing, Marketing in emerging economies, and Strategic marketing.

Panos Markopoulos, Assistant Professor
Management information systems, Economics and electronic markets, Product information online: Mechanisms and market operation, Game theory.

Christos Nicolaides, Assistant Professor
Data science, Business analytics, Social networks, Digital marketing, Peer effects, Policy implementation, Public health, Computational social science.

Alexia Panayiotou, Associate Professor
Organisational storytelling, Popular culture, Gender and organisations, Management/organisational control, Power and resistance, Organisational paradoxes, Space and symbolism, critical management education.

Andreas Soteriou, Professor
Management of service operations, Production and operations management, Quality and productivity in services and manufacturing, Empirical research methods.

Eleni Stavrou, Professor
Strategic Human resource management in a comparative international context, Flexible work arrangements, Work-life balance and intergenerational transitions in family firms.

Marios Theodosiou, Associate Professor
Standardisation versus adaptation of marketing strategy in international markets, Marketing strategy-performance relationship in the context of international business ventures, Sales management/export sales management, Marketing strategy/export marketing strategy, Work outcomes and performance of frontline customer-contact employees.

Haridimos Tsoukas, Professor
Knowledge-based perspectives on organisations, Management of organisational change and social reforms, Organisations, change and routines, Practical reason–the epistemology of practice, Phenomenological-neoaristotelian perspectives on organisations and organisation theory, Meta-theoretical issues in organisation theory and management studies.

Hercules Vladimirou, Professor
Stochastic programming (models, applications and algorithms), Financial modelling/optimisation, Computational finance, Risk management, Models for planning under uncertainty (with applications in finance and operations planning/management problems), Data science, Business analytics (predictive & prescriptive analysis).

Communication

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George Hadjinicolas, Professor
Haridimos Tsoukas, Professor
Leonidas C. Leonidou, Professor

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Introduction
The science of Economics studies human behaviour and the organisation of human societies. As individuals we continuously make decisions with economic repercussions. Some are minor, such as our daily transactions and our weekly groceries; whether to go out for dinner or coffee; if we are going to drive or take the bus to work. Others have important consequences in our lives: whether to go to college and what subject to study, how much to save and how, and if we are going to accept an offer for a new job or stay with our current employer. Firms also have to make a lot of decisions such as what goods and services to produce, how much to invest, how many employees to hire and how much to pay them, and how much to invest in marketing and advertising. The third important party is the state, which makes decisions that affect our everyday lives as well as the long-term evolution of the economy. All these decisions by individuals, the firms and the state form our social and economic environment and determine our living standards.

Understanding the economic behaviour of the individual and the basic principles that govern the functioning of a modern economy allow economists to evaluate economic data and information correctly and to make rational decisions. With this knowledge the economics graduate can pursue a career in the civil service, regulatory bodies, banking, accountancy or consulting services. One can also choose to specialise in economic research and advance to an academic or research career. We strive to offer modern high quality graduate programmes that teach the state-of-the-art in economics in order to allow graduates to successfully compete with the graduates of the best universities in the world.

Research
The Department of Economics covers a broad spectrum of research areas such as international trade, employment and migration, econometric theory, international finance, industrial organisation, productivity, economic growth, experimental economics, political economy and micro-economic theory. Our staff members have links to some of the best research centres and universities in the world and participate in important international research networks. Our key goal is the production of high quality research for publication in the best international scientific journals.

Resources and Facilities
The University Library offers students access to all the important scientific journals as well as a large number of books. Student also have access to the computer labs of the Faculty of Economics and Management which are equipped with state-of-the-art hardware and software, including statistical packages. The Faculty also provides access to several international databases as well as data on the Cypriot economy that can be used by students in

The Department aims to produce scientific knowledge of an international standard and to transfer this knowledge to its students. It offers a range of postgraduate programmes that cover the needs of both the students that are interested in entering the job market upon completion of their studies and of those who are interested in continuing with a research career. Specifically, the Department offers the following postgraduate degrees:

- Master Degree in Economic Analysis (MECA)
- Master Degree in Monetary and Financial Economics (MMFE)
- Master Degree in Behavioural Economics (MBEHEC)
- Master in Business Economics TIME MBE (Technology Innovation Management and Entrepreneurship, offered in collaboration with the University of Crete)
- Ph.D. in Economics
their research projects or theses. In this environment graduate students can study and acquire all the necessary skills needed for a successful career.

Admission Requirements
In addition to the requirements described in the relevant Admission and Attendance Regulations, candidates for the graduate studies programme, whose first language is not English, are required to provide proof of proficiency in English in one of the following ways:

1. G.C.E. O-Level English with a minimum grade “C”.
2. I.G.C.S.E. English with a minimum grade “C”.
3. I.E.L.T.S. minimum average score 6.5.
4. T.O.E.F.L. with a minimum score of 550 (Paper-based) or T.O.E.F.L. with a minimum score 213. (Computer-based) or T.O.E.F.L. (Internet based) with a minimum score 92.
5. Cambridge English First (FCE), with a minimum score 176.
6. Cambridge English Advanced (CAE), with a minimum score 176.
7. Cambridge English Proficiency (CPE), with a minimum score 176.
8. Certificate of Proficiency in English (ECPE), with a minimum score 650.
9. Anglia Examinations–Proficiency (C1).
10. IB diploma (International Baccalaureate).
11. Certificate of success in the exams conducted by the Cyprus Ministry of Education, Sport and Youth.
12. Certificate of success in year 6th final exams, of the Cyprus State Institutes of Further Education.
13. Any other equivalent exam that will prove proficiency in English language.
14. Candidates who hold a degree from a recognised university programme taught in English are considered to have proficiency in English.

For more information on applications to join the graduate programme of Economics, please refer to the Admission/Attendance Regulations–Application Procedures.

Our programmes are open to students without an undergraduate degree in economics. All programmes have been designed to accommodate students of diverse backgrounds, particularly students in technical fields, such as Mathematics, Statistics and Engineering.

MASTER’S PROGRAMMES

Master in Economic Analysis (MECA)
The Master provides rigorous training in Economic Theory and Econometric Methods. It is suitable for students interested in working as economic analysts or in continuing their studies for a Ph.D.

Master in Monetary and Financial Economics (MMFE)
The Master provides a broad background in Economic Theory and specialised courses in Monetary and Financial Economics. It is suitable for students who are interested in a career in the financial sector, such as banks, investment companies, etc.

Master in Behavioural Economics (MBEHEC)
The Master provides students with a general grounding in behavioural and experimental approaches to social sciences and policy design. It is suitable for students interested in working and applying behavioural insights in both the public and private sector, as well as for those interested in continuing their studies in behavioural science at the doctoral level.

Master in Business Economics (TIME MBE)
The TIME (Technology Innovation Management and Entrepreneurship) is a full-time inter-University 15-month Master’s programme in Business Economics (MBE). It offers a novel inter-university Masters of Business Economics curriculum, that combines targeted classroom and practical training in order to provide students with the knowledge and the entrepreneurial skills, needed to successfully manage innovative organisations in an ever-changing environment, by offering an integrated curriculum. The language of instruction is English for all programmes.

Programme Structure
The normal duration of all programmes for full-time students is three semesters. The maximum time allowed for completion of a degree is eight semesters.

All Master’s degrees are awarded upon successful completion of at least 90 ECTS in graduate courses, with the exception of the TIME MBE programme which requires 105 ECTS. For the Master Degree in Monetary and Financial Economics, the completion of nine courses and a Master’s thesis is required. For the Master Degree in Economic Analysis, the requirement is twelve courses or eight courses plus a Master’s thesis. Courses are separated into two categories: required and elective courses. Required courses give essential background in Microeconomics, Macroeconomics and Econometrics. Elective courses give students the opportunity to specialise in their area of interest. Required courses for each Master’s programme are described below.

Master’s Thesis
(EO 698 – 24 ECTS, MMFE)
(EO 699 – 30 ECTS, MEE)
(EO697 – 30 ECTS, MBEHEC)
(MBE 5500 – 30 ECTS, MBE)

The thesis should demonstrate in-depth knowledge of a particular topic and must contain original research elements. The thesis is presented to students and faculty.
and is marked independently by the student’s advisor and a member of staff with similar research interests appointed by the Departmental Committee of Graduate Studies. If work on the thesis extends beyond one semester, students can register for the course ECO 600 Continuation of Master Thesis (1 ECTS) / MBE 5501 Continuation of Master Thesis (0 ECTS) for at most two subsequent semesters.

**MASTER IN ECONOMIC ANALYSIS (MECA)**

For the Master Degree in Economic Analysis, the requirement is twelve courses or eight courses plus a Master’s thesis.

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Description</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
<td></td>
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<tr>
<td>ECO 601 Microeconomic Analysis I</td>
<td>7.5</td>
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<tr>
<td>ECO 602 Macroeconomic Analysis I</td>
<td>7.5</td>
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<tr>
<td>ECO 603 Statistics and Econometrics I</td>
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<tr>
<td>ECO 604 Analytical Methods in Economics</td>
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<tr>
<td><strong>Second Semester</strong></td>
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<tr>
<td>ECO 651 Microeconomic Analysis II (ECO 601)</td>
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<tr>
<td>ECO 652 Macroeconomic Analysis II (ECO 602)</td>
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<tr>
<td>ECO 653 Statistics and Econometrics II (ECO 603)</td>
<td>7.5</td>
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</table>

*Note: The courses in brackets are prerequisites*

One of the following:
- ECO 605 International Trade 7.5
- ECO 606 International Finance 7.5
- ECO 610 Money, Banking and Financial Economics 7.5
- ECO 611 Labour Economics 7.5
- ECO 612 Industrial Organisation and Policy 7.5
- ECO 613 Public Economics 7.5
- ECO 644 The Economics of Firm Financing 7.5
- ECO 664 Analysis of Economic and Financial Data 7.5
- ECO 673 Applied Microeconometrics 7.5
- ECO 680 Applied Financial Econometrics 7.5
- ECO688 Current Topics in Economic Research I 7.5
- ECO788 Current Topics in Economic Research II 7.5

**Third Semester**

- ECO 699 Master’s Thesis or four courses from the above list (4 courses X 7.5 ECTS)

**Notes:**
1. Students may replace an elective course with a graduate course offered by other university departments, following approval from the Departmental Board.
2. Students may replace an elective course with an undergraduate course offered by other university departments, following approval from the Departmental Board.

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**MASTER IN MONETARY AND FINANCIAL ECONOMICS (MMFE)**

For the Master Degree in Monetary and Financial Economics, the requirement is nine courses plus a Master’s thesis.

<table>
<thead>
<tr>
<th>ECTS</th>
<th>Required Courses</th>
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<tbody>
<tr>
<td>52.5</td>
<td>First Semester</td>
</tr>
<tr>
<td></td>
<td>ECO 610 Money, Banking and Financial Economics</td>
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<tr>
<td></td>
<td>ECO 661 Microeconomics</td>
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<tr>
<td></td>
<td>ECO 662 Macroeconomics</td>
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<td>ECO 663 Econometrics</td>
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<td>Second Semester</td>
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<td></td>
<td>ECO 606 International Finance</td>
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<td></td>
<td>ECO 644 The Economics of Firm Financing</td>
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<td></td>
<td>ECO 680 Applied Financial Econometrics</td>
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<td></td>
<td>One Elective Course</td>
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<td></td>
<td>Third Semester</td>
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<tr>
<td></td>
<td>One Elective Course</td>
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<tr>
<td></td>
<td>ECO 698 Master’s Thesis*</td>
</tr>
<tr>
<td></td>
<td>Elective Courses</td>
</tr>
<tr>
<td>13.5-15</td>
<td>Two of the following:</td>
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<tr>
<td></td>
<td>AFN 521 Financial Theory</td>
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<td></td>
<td>AFN 522 Investments</td>
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<td></td>
<td>AFN 525 Options and Futures</td>
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<td></td>
<td>AFN 526 Financial Analysis and Capital Market Research</td>
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<td></td>
<td>AFN 528 Advanced Capital Budgeting</td>
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<td></td>
<td>AFN 530 Seminar on Cyprus Economy, Banking and Financial Markets</td>
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<td></td>
<td>AFN 534 Financial Risk Management</td>
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<td></td>
<td>AFN 538 Applied Topics in Finance</td>
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<tr>
<td></td>
<td>ECO 664 Analysis of Economic and Financial Data</td>
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</tbody>
</table>

* Master’s Thesis: The thesis must be related to the specific programme and must satisfy the criteria specified above (General Programme Structure – Master’s Thesis)

* Placement in Financial Organisations (ECO691, 7.5ECTS): The ECTS obtained from a placement cannot count towards the fulfilment of the 90 ECTS that are required for the completion of the programme. ECO691 can be completed as an additional elective course.

If the nine courses chosen by a student total under 66 ECTS then that student may enrol in ECO 695 (Seminar of Economic Research, 1.5 ECTS) to fulfil their Master’s degree requirements.
MASTER IN BEHAVIOURAL ECONOMICS (MBEHEC)

For the Master in Behavioural Economics the requirement is eight courses plus a Master’s thesis.

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>ECTS</th>
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<tbody>
<tr>
<td><strong>First Semester</strong></td>
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<tr>
<td>ECO 661 Microeconomics</td>
<td>7.5</td>
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<tr>
<td>ECO 665 Behavioural and Experimental Economics</td>
<td>7.5</td>
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<tr>
<td>One of the following four*:</td>
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<tr>
<td>ECO 663 Econometrics</td>
<td>7.5</td>
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<tr>
<td>ECO 664 Analysis of Economic and Financial Data</td>
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<tr>
<td>PSY 604 Multivariate Statistics for the Behavioural Sciences</td>
<td>7.5</td>
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<tr>
<td>PSY 789 Applied Data Analysis I</td>
<td>7.5</td>
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<tr>
<td>One of the following two:</td>
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<tr>
<td>PSY 713 Experimental Methods in Psychology</td>
<td>7.5</td>
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<tr>
<td>PSY 641 Epistemology and Research Design in the Social Sciences</td>
<td>7.5</td>
</tr>
<tr>
<td><strong>Second Semester</strong></td>
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<tr>
<td>PSY 608 Attention and Perception</td>
<td>7.5</td>
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<tr>
<td>PSY 640 Social Influences and Social Representations</td>
<td>7.5</td>
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<tr>
<td>ECO 675 Behavioural Insights for Policy</td>
<td>7.5</td>
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<tr>
<td>One of the following two:</td>
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<tr>
<td>PSY 731 Cognitive Neuroscience</td>
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<tr>
<td>PSY 719 Topics in Neuroscience</td>
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<tr>
<td><strong>Third Semester</strong></td>
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<tr>
<td>Master’s Thesis</td>
<td>30</td>
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</tbody>
</table>

*ECO 664 is typically offered and suggested to the students. In cases this course is not possible to be offered, students with some background in Economics can take ECO 663 and those with no such background can take PSY 604 or PSY 789 as alternates.

MASTER IN BUSINESS ECONOMICS TIME-MBE (Technology Innovation Management and Entrepreneurship)

TIME MBE is a full-time, 15th - month programme with 105 ECTS needed for a successful completion. All courses are compulsory.

The programme consists of three different components:
1. The Academic Modules (September – May, 60 ECTS)
2. The Summer Practicum (May – July, 15 ECTS)
   A Supervised Summer Internship
3. The Master’s Thesis (May – December, 30 ECTS)

DOCTORAL PROGRAMME

The goal of the Ph.D. Programme in Economics is to provide training to individuals to become high quality researchers in line with international standards. Our aim is for our graduates to be able to successfully compete for employment at research institutions, public policy organisations, and the private sector. The creation of a dynamic research community at the University of Cyprus will raise the level of economic research in Cyprus and will infuse public debate on economic policy with scientific methods and rigorous analysis.

Admission Requirements

1. A research-oriented Master’s Degree in Economics (similar in structure to the Master in Economic Analysis) and a strong background in Microeconomics, Macroeconomics and Econometrics.
2. Very good command of the English language. This can be certified in one of the following ways:
   1. G.C.E. O-Level English with a minimum grade “C”.
   2. I.G.C.S.E. English with a minimum grade “C”.

Department of Economics
3. I.E.L.T.S. minimum average score 6.5.
4. T.O.E.F.L. with a minimum score of 550 (Paper-based) or T.O.E.F.L. with a minimum score 213 (Computer-based) or T.O.E.F.L. (Internet based) with a minimum score 92.
5. Cambridge English First (FCE), with a minimum score 176.
6. Cambridge English Advanced (CAE), with a minimum score 176.
7. Cambridge English Proficiency (CPE), with a minimum score 176.
8. Certificate of Proficiency in English (ECPE), with a minimum score 650.
9. Anglia Examinations – Proficiency (C1).
10. IB diploma (International Baccalaureate).
11. Certificate of success in the exams conducted by the Cyprus Ministry of Education, Sport and Youth.
12. Certificate of success in year 6th final exams, of the Cyprus State Institutes of Further Education.
13. Any other equivalent exam that will prove proficiency in English language.
14. Candidates who hold a degree from a recognised university programme taught in English are considered to have proficiency in English.

Evaluation of applications is done by the Departmental Committee of Graduate Studies, based on applicants’ performance in their undergraduate and postgraduate studies. Applicants may be invited to an interview if this is deemed necessary. The Committee submits their recommendation to the Departmental Council, which has the final say on offering a position in the programme.

The Committee prepares individual curriculums for each student accepted to the Programme. This ensures that all students have the necessary skills and knowledge in order to proceed to the research stage of their programme.

Programme Structure
The Ph.D. programme requires the completion of 240 ECTS. The teaching part of the Ph.D. programme is 90 ECTS and the research part 150 ECTS. The main stages of the programme are the following:

A. Coursework - Comprehensive Examinations
During the first two semesters, students take two core courses in each of the three core areas of Economic Theory: Microeconomics, Macroeconomics and Econometrics as well as one course of Analytical Methods and one course on Current Topics of Economic Research. During the third semester, students take one more course on Current Topics of Economic Research and three field courses that give them the opportunity to acquire expertise in the research area they are interested in. Depending on course availability, a student might take some field courses during the fourth semester. Moreover, during the fourth semester, students are also expected to write a research paper, which must contain original research.

The second important step before entering the research stage of the programme is for a student to succeed in the comprehensive exam. For the comprehensive exam to take place, the student must first reach a mutual agreement with a faculty member who will agree to become the student’s main advisor. The exam is expected to take place before the end of the fourth semester of studies.

The comprehensive exam consists of a written examination focused on topics related to the research area the student plans to work on. Typically, the examined material consists of a series of relevant academic papers that the student needs to study and understand in-depth. These papers are chosen by the student’s advisor.

The exam is administered by a three-member Committee, which is usually consisted of faculty members of the Department and one of them is the student’s advisor. The Committee is also responsible for the timing of the exam which must ensure that it takes place within the required time frame (not earlier than the third semester of studies). The three-member committee is appointed by the Departmental Council after a suggestion by the Department’s Committee of Graduate Studies and the student’s advisor. The exam is graded with a pass or fail. A student who fails the exam will have to repeat it during the following semester (and no later than the end of the seventh semester of studies).

B. Specialisation-Submission of Research Proposal
The first milestone of the programme’s research stage is the submission of the research proposal. The student is expected to demonstrate the ability to study a new subject in an original way and his/her knowledge of the appropriate research methods. She/he is also expected to present some supportive preliminary results. The procedure regarding the presentation of the research proposal is determined by the rules of postgraduate studies of the University.

Students are required to have prepared and successfully defended their research proposal by the end of their third year of studies, including the time spent in the coursework stage. A necessary requirement is that the proposal is defended between two and four semesters after the student has succeeded in the comprehensive exam.

The committee examining the research proposal consists of three members proposed by the student’s advisor and
appointed by the Departmental Council after a suggestion from the Department’s Committee of Graduate Studies and the student’s advisor. The Committee is chaired by the student’s advisor. One of the members of the Committee could be an academic from another department of the University of Cyprus or an academic from another university or research centre.

C. Research-Submission of Dissertation and Thesis Defence

Upon succeeding in defending the research proposal, the student will conduct original research under the guidance of his/her advisor. This research should be oriented in leading towards the writing of the student’s doctoral dissertation. When the dissertation is completed by the student and upon the advisor’s approval, he/she must submit it to the Department and start preparing for its subsequent public presentation. The submission of a doctoral dissertation and its subsequent public presentation may be completed at the earliest during the sixth semester of the student’s enrolment in the Ph.D. programme. The doctoral dissertation must be submitted at the latest during the first month of the final semester of studies.

The Thesis Defence is conducted according to the relevant rules of the University of Cyprus. The candidate presents the dissertation in an open lecture, with duration 30-45 minutes, before a five-member Examining Committee. During the Thesis Defence, the candidate gives a brief oral summary and answers questions on the content and results of the Ph.D. thesis. The candidates are expected to defend the Thesis, demonstrate its originality and justify deviations from previous results in the literature.

The five-member Examining Committee is set up by the Departmental Council at the suggestion of the Department’s Committee of Graduate Studies and the student’s advisor. The Examining Committee is made up of three members of the Department’s faculty, one of which is always the student’s advisor and they are typically the same members that examined the student’s research proposal, and two external members. The Chair of the Examining Committee is a member of the Department’s faculty, but not the student’s advisor.

Detailed information regarding the Rules/Attendance Regulations of Postgraduate Studies can be found in the webpage of the Graduate School (www.ucy.ac.cy/graduateschool/en) or by contacting the Graduate School at 22894021/44.

Credit for Previous Coursework

Admitted students are given opportunity to transfer credits from similar classes taken in other universities. It is possible to transfer up to 60 ECTS (roughly equivalent to one year of coursework), upon approval from the Departmental Committee of Graduate Studies. Thus, all students admitted directly to the Ph.D. programme are required to at least some of the relevant graduate-level courses (with a minimum of 30 ECTS). Students cannot be exempted from the comprehensive exam.

### Elective Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>ECTS</th>
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<tbody>
<tr>
<td>ECO 601 Microeconomic Analysis I</td>
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<tr>
<td>ECO 602 Macroeconomic Analysis I</td>
<td>7.5</td>
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<tr>
<td>ECO 603 Statistics and Econometrics I</td>
<td>7.5</td>
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<tr>
<td>ECO 604 Analytical Methods in Economics</td>
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<tr>
<td>ECO 651 Microeconomic Analysis II (Prerequisite ECO 651 - 7.5 ECTS)</td>
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<tr>
<td>ECO 652 Macroeconomic Analysis II (Prerequisite ECO 652 - 7.5 ECTS)</td>
<td>7.5</td>
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<tr>
<td>ECO 653 Statistics and Econometrics II (Prerequisite ECO 653 - 7.5 ECTS)</td>
<td>7.5</td>
</tr>
<tr>
<td>ECO 688 Current Topics in Economic Research I</td>
<td>7.5</td>
</tr>
<tr>
<td>ECO 788 Current Topics in Economic Research II</td>
<td>7.5</td>
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</tbody>
</table>

### Notes:
1. Students may replace up to two elective courses with graduate courses offered by other university departments, subject to approval from the Departmental Council.
2. Students may replace up to one elective course with an advance undergraduate course offered by another University department, subject to approval from the Departmental Council. Any course considered by the Departmental Council to have low attendance can be taught as a Reading Course or as an Independent Study (ECO 693 and ECO 696). Students cannot select more than two reading courses.

### Guidance

The Director of Graduate Studies is responsible for guiding doctoral students from the time of admission up to the selection of a research advisor. The research advisor follows each student’s progress in research and other tasks, and provides the necessary guidance.

### Research Stage

Students who pass their comprehensive examinations have the following additional responsibilities in each semester of their research and writing stages:
a) They are required to attend in each semester at least 80% of the seminars of the Departmental Seminar Series and of the Faculty’s Brownbag Seminar Series. Attendance is confirmed by a faculty member who must sign the relevant document at the end of the seminar.

b) They are required to present once a semester in the Departmental Seminar Series. (Students signed up for 15 ECTS research stage are exempt from this requirement).

The Director of Graduate Studies will be responsible for overseeing doctoral students’ completion of these requirements.

**Financial Support for Doctoral Students**

The department makes every effort to ensure that doctoral students have enough income to allow them to live independently. This is accomplished mainly through their employment as teaching assistants. The Department also awards some grants and scholarships, while students can also secure employment as research assistants.

**Course Descriptions**

**ECO 601 Microeconomic Analysis I (7.5 ECTS)**

Rigorous study of market structures (perfect competition, monopoly, monopolistic competition and oligopoly), theory of distribution under perfect and imperfect competition, capital theory and introduction on general equilibrium and welfare economics. Depending on the course duration, the course will proceed with a rigorous treatment of production functions, cost functions and duality.

**ECO 602 Macroeconomic Analysis I (7.5 ECTS)**

The course will introduce students to the foundations and methodology of dynamic macroeconomic theory and main classes of macroeconomic models, with a review of useful mathematical tools such as dynamic programming and optimal control, as well as relevant empirical methods. The objective is to deepen the understanding of aggregate fluctuations, as well as the role of economic policy.

**ECO 603 Statistics and Econometrics I (7.5 ECTS)**


**ECO 605 International Trade (7.5 ECTS)**

The course analyses the traditional trade theory, as well as the “new trade theory.” The first part of the course covers absolute and comparative advantage, as well as the Heckscher-Ohlin model. The second part examines optimal tariffs in situations, where countries have market power and strategically interact with each other. These methods are used to examine economic integration at both the regional and global levels.

**ECO 606 International Finance (7.5 ECTS)**

Introduction to the main open questions of International Macroeconomics. Introduction to basic open economy inter-temporal models and the determinants of the current account. Review of the properties of the international business cycle with the goal of understanding international co-movement of macroeconomic variables. A look at international relative prices, with the goal of understanding the degree of segmentation of markets across countries. A review of the main factors and mechanisms driving economic crises, with a focus on the role of and inter-relation between international capital flows, credit expansions, real estate bubbles, overconsumption and the sovereign, and a look at macro-prudential and other policies that can be used to limit the frequency and consequences of such crises.

**ECO 610 Money, Banking and Financial Economics (7.5 ECTS)**

This course examines financial markets and institutions. We analyse recent research developments in financial markets (bonds, stocks and foreign exchange) and financial institutions (banks, insurance companies, mutual funds etc.). Topics to be covered will be chosen from the following: financial markets, financial institutions, the financial system, prices and exchange rates, money and bond markets, interest rates, inflation, stocks, bonds, portfolio choice, European economic convergence, and others.

**ECO 611 Labour Economics (7.5 ECTS)**

This course begins by examining static and dynamic theories of the demand for and supply of labour, as well as their interaction in the context of the competitive paradigm. Emphasis is placed on econometric methods for the empirical implementation of these models. Studies of wage outcomes and apparent deviations from the competitive norm are then considered. A number of non-competitive labour market models are reviewed as well as empirical attempts to discriminate amongst them. The course ends with an examination of issues relating to possible failure of the labour market to clear, e.g. wage rigidity and unemployment.

**ECO 612 Industrial Organisation and Policy (7.5 ECTS)**

Industrial Organisation is concerned with the study of imperfectly competitive markets. The course aims to develop an under-standing of competitive interaction in such markets; to introduce the empirical methods used to analyse them; and to outline the basic policy principles that govern their operation. Indicative topics include estimation of supply and demand, estimation of cost and production functions, monopoly regulation, oligopoly models, collusion and cartels, mergers, product differentiation, barriers to entry.

**ECO 613 Public Economics (7.5 ECTS)**

This course examines the effects of fiscal policy on the economy through taxation and public expenditure from both positive and normative points of view. Both positive and normative aspects of public policy are examined in relation to issues like the role of the state, the taxation of goods and services, the effect of taxation on labour supply and savings, the taxation of company profits and its effects on corporate finance and investment and the incidence of taxes. Also examined from the public expenditure point of view are topics on market imperfection such as public goods, externalities and social insurance. In several topics reference is made to the public sector in Cyprus and conclusions drawn from empirical analysis are presented.
ECO 644 The Economics of Firm Financing (7.5 ECTS)
The course examines among other topics the valuation of a firm’s financial condition, bond, stock and option valuation, the trade-off between risk and return, valuation of investment projects, creating value for shareholders, global financial markets and their impact on raising long-term capital, establishing a target capital structure and dividend policy.

ECO 651 Microeconomic Analysis II (7.5 ECTS)
This course continues the analysis of the principles of Microeconomic Theory and is divided into two parts. The first part will develop the basic principles of game theory under conditions of both complete and incomplete information and will apply these to the analysis of problems such as collusion, bargaining, auctions, moral hazard, and adverse selection. The second part will serve as an introduction to general equilibrium theory and its extensions, and will discuss the general theorems of welfare economics.

ECO 652 Macroeconomic Analysis II (7.5 ECTS)
Analytical approach to basic macroeconomic models with finite and infinite horizons in discrete and continuous time. Introduction to real business cycle and international real business cycle models. Endogenous growth theory with emphasis on R & D-based models and international technology diffusion.

ECO 653 Statistics and Econometrics II (7.5 ECTS)
Basics of Probability and Statistics, the bootstrap, generalized method of moments, endogeneity, Simultaneous equation models, limited dependent variables, panel data models, nonparametric density estimation, nonparametric regression estimation.

ECO 661 Microeconomic Analysis (7.5 ECTS)
The course will begin with a review of the classic theories of consumer and producer behaviour and proceed to the description of basic market structures and the analysis of factor markets. It will then lay out the basic principles of game theory under conditions of both complete and incomplete information. These will be the tools for the analysis of topics in modern micro-economic theory such as bargaining auctions, moral hazard and adverse selection.

ECO 662 Macroeconomic Analysis (7.5 ECTS)
The primary objective of this course is to help students understand the functioning of the macroeconomy as the aggregate outcome of the actions of heterogeneous agents. The course presents and analyses macroeconomic models, that can help us understand the behaviour of macroeconomic variables and their responses to policy shocks. The course includes an in-depth discussion of a number of concepts and topics in the area of macroeconomics, including economic expectations and monetary policy.

ECO 663 Econometrics (7.5 ECTS)

ECO 664 Analysis of Economic and Financial Data (7.5 ECTS)
The purpose of this course is enabling students to collect economic data from databases and subsequently be able to analyse them with aid of specialised statistical and econometric software.

ECO 665 Behavioural and Experimental Economics (7.5 ECTS)
By the end of the course students should understand how findings from psychology can inform standard economic theory in order to develop better models of economic behaviour. Students should also become familiar with the use of experimental methods and the analysis of experimental data for the study of economic behaviour.

ECO 675 Applied Microeconometrics (7.5 ECTS)
Brief review of the classical linear regression model. Econometric models for cross-section data and time-series data. Economic applications and the use of specialised econometric software are emphasized. Topics will be drawn from: 1) models of multiple equations, 2) models of limited dependent variables, 3) elements of time-series analysis and models for macro and financial data.

ECO 686 Behavioral Insights for Policy (7.5 ECTS)
Understanding the ways in which findings of behavioural sciences can help in better policy design by public institutions and other bodies, and in the systematic study of the impact of such policies on the society.

ECO 688 Current Topics in Economic Research I (7.5 ECTS)
The class is divided into two parts. In the first part the most important topics in current economic research will be presented and analysed. In the second part students will choose a field to focus on and present systematically analyse the relevant literature and produce the relevant reports.

ECO 689 Placement in Financial Organisations (7.5 ECTS)
(Prerequisites: Successful completion of the compulsory courses of the 1st semester of the academic studies and at least 30 ECTS of the corresponding academic program that the student attends. Selection Criteria: Selection is based on the academic achievement of the student in the previous semester with minimum grade point average 6 /10 and the criteria set by the firm/organisation.)

The objective of the placement in organisations is to enable students to acquire practical experience and applied knowledge in sectors or departments related to monetary and financial economics. Also, students will have the opportunity to develop communication and other skills.

ECO 788 Current Topics in Economic Research II (7.5 ECTS)
The class is divided into two parts. In the first part the most important topics in current economic research will be presented and analysed. In the second part students will choose a field to focus on and present systematically
analyse the relevant literature and produce the relevant reports.

**MBE 5101 Business Economics (4.0 ECTS)**

Provide appropriate theoretical and analytical tools to facilitate a broad understanding of microeconomic theory, with particular emphasis on interpreting the economic behaviour of individuals and firms.

**MBE 5102 Economics of Innovation and R&D Spending (4.0 ECTS)**

The microcosm of the innovation process, its practicalities and the funding that makes it happen are not fully accounted by microeconomic theory. This course will bridge the gap between the traditional microeconomics approach and the more modern study of innovation processes, allowing the student to come to grips with terms and issues that he/she needs in order to fully understand Module 2 and Module 3 courses. Students are expected to familiarise themselves with classic and modern perspectives on the economics of innovations and their impact to economic activity and public policy. The course will give particular emphasis on the analysis of case studies related to innovation, through which the students will be encouraged to think as if they were actually involved in the innovation process.

**MBE 5103 Data Analytics and Quantitative Methods (4.0 ECTS)**

Learning basic skills required for the empirical analysis of financial phenomena using descriptive and inferential statistics. The course aims to prepare to train executives and managers to combine knowledge in business administration, analysis and data management techniques and analytical tools based on statistical and econometrics to optimise business decisions. The increasing level of complexity in today's business. The world requires decision makers to base their choices on a correct appraisal of quantitative information. Students will be trained to describe and analyse business data in order to take informed decisions.

**MBE 5104 Behavioral Economics (4.0 ECTS)**

The mastering and comprehension of psychological findings related to decision making. The development of tools in order to analyse economic issues from a non-standard perspective.

**MBE 5201 Finance & Accounting for Decision Making (4.0 ECTS)**

The course purpose, objectives and strategy consist of 3 basic components:

- **Part I - Financial reporting:** Financial reporting provides companies, investors, regulators, and other financial markets participants, with a standardized way to describe the financial performance of an entity.
- **Part II - Capital budgeting:** Capital budgeting is the planning process used to determine, whether an organisation's long-term investments, such as new machinery, plants, products and R&D projects are worth the funding of cash, through the firm's capital structure.
- **Part III Corporate valuation:** Corporate valuation is a process used to estimate the economic value of a firm. It is exploited by the people involved, to determine the price they are willing to pay or receive, in order to effect a sale of a business. In addition, corporate valuation may resolve disputes related to tax issues, divorce litigation etc.

**MBE 5202 Marketing & Management for Innovative Firms (4.0 ECTS)**

To provide appropriate theoretical and analytical tools to facilitate a broad understanding of marketing management and strategy with an emphasis on creating customer value and building customer relationships.

**MBE 5203 Competitive Decision Making and Negotiations (3.0 ECTS)**

The course develops and analyses key negotiation skills and strategies which are essential for managers if they wish to be effective negotiators. It starts by describing and analysing how to prepare before the actual negotiation and moves on to present effective strategies for distributive negotiation. It then presents strategies for expanding the negotiation pie leading to win-win negotiations and analyses the challenges created in multiple party negotiations, cross-cultural negotiation, social dilemmas and negotiating via information technology. Finally, a number of advanced negotiation skills and strategies are described and analysed.

**MBE 5204 Financial Management for Innovative Firms (3.0 ECTS)**

The course learning objectives are to acquaint students with the theory and practice of financial management of industrial and other companies. Material covered includes:

- Time value of money, compounding and discounting
- Loan analysis
- Net Present Value techniques
- Investment Timing issues, selection of mutually exclusive investments, capital rationing.
- Sensitivity and Break-Even Analysis, Decision Tree Analysis.
- Interest Rates, Bond Valuation, Forward Rates and Futures, Swaps.
- Options and Valuation of Options.
- The Use of Options for Valuation of Investments.

**MBE 5205 Global Economic Challenges (4.0 ECTS)**

Through a series of lectures, cases, readings and exercises students learn and develop their critical thinking skills on how international markets work and how global conditions and dynamics affect business outcomes.

**MBE 5206 Firm Performance Evaluation (4.0 ECTS)**

For SMEs and new innovative ventures like start-ups the ability to quantify productivity is invaluable in providing a control mechanism to monitor the performance of production units. To this end, this course will develop appropriate tools to facilitate a broad understanding of performance evaluation and productivity measurement. Students will use empirical tools and real datasets to perform on-hands measurement of performance indicators analysing the role of technological innovations in productivity growth.

**MBE 5301 Strategy for R&D Intensive Firms (4.0 ECTS)**

Provide appropriate theoretical and analytical tools to facilitate a broad understanding of the strategic choices faced by firms competing in innovative, R&D-intensive industries.

**MBE 5302 Decision Making for Innovative Ventures (4.0 ECTS)**

To provide appropriate theoretical and analytical tools to facilitate broad understanding on the central issues involved in innovation throughout the product lifecycle.

**MBE 5303 Intellectual Property Rights and Technology Transfer (4.0 ECTS)**

Business management requires understanding Intellectual Property (IP) rights both as a value creation mechanism and as
part of a good risk management plan. The course offers an understanding of the ways that patents, copyright, trademarks and designs can be used as a strategic tool according to the market and the technology in question. The student is introduced to ways of calculating the business value of IP, and understand the main information in a patent, trademark and design document. They are expected to understand when and why a business may seek IP protection, how the existence of third-party IP may affect business plans, and how to structure IP business deals. The course is taught through case studies and students are expected to engage in interactive presentations. Professionals in private practice will contribute to the course as guest lecturers.

**MBE 5304 Use of Innovation and Knowledge in R & D Intensive Firms (4.0 ECTS)**

Having artificial intelligence as a benchmark technology, a series of 5 lectures will provide the student with an array of case studies and exercises that aims in developing the competencies needed for implementing innovation strategy projects as an SME. The focus of these lectures is in understanding the strategic implications of current and emerging technologies, and managing knowledge and change.

**MBE 5305 Skills for Small Firm Development (3.0 ECTS)**

Through a series of lectures, cases, readings and exercises students get a comprehensive coverage in areas of entrepreneurship such as family businesses, corporate, international and social entrepreneurship, and develop competencies in launching and growing small businesses. In particular, students get key skills on understanding the implications of a continuously changing business environment, for identifying key problems, and for implementing business solutions.

**MBE 5306 New Technology Ventures (3.0 ECTS)**

The course aims at providing students with a solid understanding of the process of developing new technology ventures, focusing on emerging technologies opportunities, market analysis, competition, managing innovative teams, intellectual property rights, legal and regulatory issues, and entrepreneurial finance. Company valuation methods will enable students to adopt an investor's perspective for assessing venture.

Through a series of lectures, cases, readings and exercises students develop competencies in launching and growing of technology-based new ventures, with particular emphasis on understanding the implications of current and emerging technologies for decision-making and entrepreneurship, and for identifying key problems and reviewing related information to develop and evaluate options and implement solutions.
RESEARCH INTERESTS OF THE ACADEMIC STAFF

Elena Andreou, Professor
Financial Econometrics, Time series econometrics.

Eleni Aristodemou, Lecturer
Theoretical and Applied Econometrics, Applied Industrial Organisation.

Andri Chassamboulli, Associate Professor
Search and matching, Immigration, Macroeconomics, Labour economics.

Louis Christofides, Emeritus Professor
Labour economics, Macroeconomics, Applied econometrics.

Sofronis Clerides, Professor
Industrial organisation, Applied microeconomics and international trade.

Panayiota Fliri – Lyssiotou, Associate Professor
Public economics, Labour economics, Applied microeconomics and microeconometrics, Interhousehold and intrahousehold behaviour.

Costas Hadjiyiannis, Associate Professor
International trade, Game theory, Industrial organisation, Microeconomics.

Christis Hassapis, Associate Professor
Macroeconomics and banking international finance.

Ioannis Kasparis, Associate Professor
Time series econometrics, Specification testing, Asymptotic statistical theory.

Andros Kourtellos, Professor
Econometrics, Socioeconomic inequality and mobility, Economic growth, Macroeconomics, Forecasting.

Philippos Louis, Assistant Professor
Game theory, Experimental economics, Institutional and market design, Organisational economics.

Theofanis P. Mamuneas, Professor
Applied microeconomics and econometrics and public economics, Infrastructures, R&D spillovers and productivity, Growth.

Michael S. Michael, Professor
International trade, Environmental economics, Public economics.

Christoforos Pissarides, Professor
Macroeconomics, especially search theory, Unemployment, growth and Structural change.

Nicos Theodoropoulos, Associate Professor
Labour economics, Econometrics.

Andreas Tryphonides, Lecturer
Applied and quantitative macroeconomics, Econometrics.

Nikolaos Tsakas, Assistant Professor

Dimitrios Xefteris, Associate Professor
Political economics, Social choice, Applied game theory, Micro-economic theory.

Marios Zachariadis, Professor
Macroeconomics, Open economy macroeconomics, Economic growth.

Nicholas Ziros, Associate Professor
Microeconomic theory, General equilibrium theory

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ECONOMICS RESEARCH CENTRE

General Information

The Economics Research Centre (CypERC) belongs to the Department of Economics at the University of Cyprus. The Centre aims at high quality policy-oriented research in economics. The CypERC is financed by organisations in Cyprus and the European Union such as the Economics Research Council grants through competitive funding procedures, as well as monetary contributions from the Ministry of Finance, the Central Bank of Cyprus, the National Research Innovation and Promotion Foundation, banking institutions, government and other private institutions.

The Centre is managing a number of high-impact projects and has a team of experts and researchers to respond effectively and timely to economic policy questions and research needs in a rapidly changing economy. The Centre benefits from the expertise offered by established academics in Cyprus and internationally who participate in the Centre as Research Associates and Fellows.

The Centre has hosted three prestigious Economic Research Council (ERC) grants as well as an ERC Chair, among others. In addition, the Centre aims at encouraging economists of high calibre to become involved in research on subjects of interest to the Cyprus economy. It also aims at serving as a channel for directing local and European research funds to economic research. Among the objectives of the CypERC is to study subjects of wider economic interest and publish articles in international academic journals as well as to contribute to economic policy formulation in Cyprus using the current state of the art techniques. Recent example is the Economic Impact Assessment of the National Recovery and Resilience Plan (RRP).

The research activities at the Centre are divided into the following categories:

- Economic Policy Modelling and Analysis
- Economic Activity Indices and Macroeconomic Forecasts
- Employment and Labour Conditions
- Financial and Banking Modelling and Analysis
- Income Distribution and Social Mobility
- Productivity and Competitiveness Analysis
- Welfare and Social Provision

The research output of the above is disseminated by publications distributed to a large number of electronic subscribers and used by economic policy makers. These publications are also placed on CypERC’s webpage.

Research

The Economics Research Centre (CypERC) produces rigorous analyses on issues of the Cypriot economy using novel and state-of-the-art methodologies and building upon the in-depth institutional knowledge of the local economy the Centre has acquired over the years. The analyses produced at the Centre are communicated to a wide range of audiences, including the scientific and business community, governmental organisations, NGOs, trade unions and the media. Research activities are divided into the following sectors:

Microeconomic and welfare analysis

The sector analyses topics regarding the economic welfare of households, the role of the state and productivity. Topical issues which are currently on the research agenda of the sector include the impact of social policy, the public-private pay gap in Europe, the effects of the tax system on differences in labour supply outcomes across countries, competitiveness and the construction of productivity indices for the Cypriot economy. The responsibilities of the sector also include the maintenance and updating of the tax-benefit microsimulation model for Cyprus which is part of the European model EUROMOD and the coordination of the field research conducted for the collection of data for individuals aged 50 and over as part of the European research project SHARE. The research outcomes of the sector address a wide audience including academics, researchers and policy makers and are published in the CypERC Economic Policy/Analysis Papers, in peer-reviewed academic journals or as policy reports.

Macroeconomic Forecasts and Analysis

The sector focuses on the development of models/tools for macroeconomic analysis of the Cypriot economy and the construction of forecasts for macroeconomic indicators, both at the aggregate and sectoral level. Details about the methodologies employed for macroeconomic analysis and forecasting are published in the Economic Analysis/Policy Papers series of the Centre.

GDP growth and inflation forecasts are published on a quarterly basis along with an analysis of recent developments and outlook for the Cypriot economy in the bulletin Economic Outlook.

Moreover, the sector coordinates the programme for the measurement of economic confidence in Cyprus via the conduct of surveys among business executives in different sectors of the economy, and among consumers. Business and Consumer Surveys in Cyprus are carried out within the framework of the Joint Harmonised EU Programme of Business and Consumer Surveys. The Surveys record business executives’ and consumers’ perceptions of current economic conditions as well as their expectations concerning the evolution of economic variables. The results of the Surveys are published on a monthly basis in the bulletin Business and Consumer Surveys.

Research in the above two sectors is partially sponsored by the Central Bank of Cyprus, the European Union and the Ministry of Finance.
Employment

This field of research at CypERC was pursued under the project “Employment in Europe” funded by the European Research Council (Advanced Grant) for the period 2013 - 2018 and coordinated by the Nobel Laureate Prof C. Pissarides. It focused on the study of employment and unemployment in Europe and examined issues such as: job creation by sector; wage inequality; public sector employment and wage subsidisation relative to the private sector; the compatibility of welfare state with EU targets for employment and the number of jobs vis-à-vis the hours worked for each job.

Project team members at CypERC: Vasiliki Bozani (Ph.D. in Economics, University of Crete), Robert-Duval Hernandez (Ph.D. in Economics, Cornell University), Neophyta Empora (Ph.D. in Economics, University of Cyprus), Chryssilla Kapetaniou (Ph.D. in Management, University of Kent), Georgia Katsifarakis (Master in Business Administration, University of Cyprus), Paris Nearchou (Ph.D. in Economics, University of Cyprus).

Other Research Projects

Research Grant category «Research Hubs» of the research programme RESTART 2016-2020 with title “Mixed Data Sampling (MIDAS) models: Theory and Application” funded by the Research Promotion Foundation. Research Coordinator: Prof. Elena Andreou

The objective of the proposed project is twofold. The first objective is to develop novel econometric models that extend current state-of-the-art techniques for modelling the dynamic behaviour of economic time series which are useful in macroeconomic forecasting as well as economic policy making. The new models apply the Mixed Data Sampling (MIDAS) idea to develop further Factor type models with mixed frequencies which have broad applications in macroeconomics and financial economics. The second objective is to develop novel econometric techniques for evaluating and monitoring financial indicators and structural changes which are useful in periods of financial distress and economic crises, and which can be early warning indicators of instability in economies. These techniques will develop sequential change-point tests which test on-line, with the arrival of new data, the stability of economic indicators, capitalizing on the mixed frequencies and properties of financial variables in producing early warning indicators of financial distress in economies or financial institutions. Forecasting and monitoring key economic variables is one of the main activities of financial and government institutions, economic forecasting agencies, investment companies and is useful to economic policy makers.

Research Grant category "DIDAKTOR" of the research program RESTART 2016-2020 with title "Dynamic consumer behaviour in car ownership" funded by the Research Promotion Foundation. Research Coordinator: Prof. Sofronis Clerides

Understanding consumer behaviour is an important task of economics. An automobile is the largest item most individuals will ever purchase (besides a home), hence economists have dedicated much effort in analysing the factors that determine automobile purchase decisions. One of the limitations of existing research is that it relies primarily on aggregate data as there is no information on consumers’ purchasing patterns over their lifetime. The proposed project aims to contribute to the literature by exploiting a unique dataset that records every vehicle registered in Cyprus since 1970. As of 1987, the dataset also records transfers of ownership and an identification number for the vehicle’s owner. Thus, we can track every vehicle’s entire ownership history and each individuals’ automobile holdings over time. A comprehensive descriptive analysis of this unique dataset will provide valuable insights into consumer behaviour in durable good markets and will inform the development of tractable but also realistic dynamic models of consumer behaviour.

Research Grant of the research programme RESTART 2016-2020, International Collaborations Dual Targeting with title “Group Factor Models” funded by the Research Promotion Foundation. Research Coordinator: Prof. Elena Andreou

This project will develop novel models, tests and tools for Group Factor models to analyse big data of different categories/classes and/or of different sampling in order to provide new results in econometric theory and macro/finance applications which are useful for economists and economic policy makers. The project aims at establishing a strong research team between universities and financial institution policy makers Cyprus and the USA. The research project is funded by the Research Promotion Foundation (RESTART 2016-2020, International Collaborations Dual Targeting). The Principal Investigator of the project is Professor Elena Andreou.

Research Programme "Composite Leading Indicator" funded by the Hellenic Bank, Research Coordinator: Prof. Elena Andreou

The Composite Leading Indicator (CLI) or Leading Economic Index (LEI) for each country is one of the key indices monitored internationally by economists, policy makers, financial organisations and the public, since it provides leading information about the state of the economy. The CLI/LEI is an index designed to provide early signals of turning points in business cycles showing fluctuation of the economic activity around its long-term potential level. State-of-the-art econometric techniques will be applied in order to develop a CLI/LEI index for the Cyprus economy comparable with the corresponding indicators in other countries. The research project is funded by Hellenic Bank.

Research Grant of the Marie Skłodowska-Curie Individual Fellowships (SOCIENTITY_PR, Grant agreement: 894128) "The Role of Social Identity on Preferences for Redistribution". Supervisor: Associate Professor Andros Kourtellos, Researcher: Dr. Kyriakos Petrou

The goal of the action is to understand and uncover the role of social identity on the formation of preferences for redistribution. The fellowship entails the mobility of the
researcher to the University of California, Los Angeles for 24 months and his/her return to the University of Cyprus for 12 months. The research objectives of the proposed research are twofold: (1) Investigate the effect of social identity on preferences for redistribution and (2) Investigate the existence of multiple regimes and parameter heterogeneity on preferences for redistribution. The fellowship will result in high-quality research and targeted policy papers to eliminate several negative social phenomena impacting the academic community, the Cypriot and European policymakers, and the general public.

In addition to the five areas listed above, research at CypERC is further diversified through the study of specialised topics, such as long-term energy planning in Cyprus, the evolution of car ownership in Cyprus, determinants of bank lending standards in Cyprus, technological progress, trade and conflict.

Research Grant "SInnoPSis" of the research programme H2020-WIDESPREAD-2018-2020 with title "ERA Chair in Science and Innovation Policy & Studies" funded by Horizon2020. Research Coordinator: Prof. Zacharias Maniadis

The challenge of understanding the processes of research and innovation requires strong interdisciplinary collaboration. The ERA Chair in Science and Innovation Policy & Studies aims to tackle this important challenge by bringing to UCY an interdisciplinary research team with the purpose of conducting cutting-edge research and facilitating cross-fertilisation between departments. The focus of research is on understanding research institutions and the incentives they engender. The main objective of the SInnoPSis is to evolve into a highly international and outward-oriented research unit, organizing interdisciplinary activities that will enhance networking and international collaborations.

Research Grant for an "Economic Policy Modelling Hub- Cyprus Recovery and Resilience Plan 2021-2026". Research Coordinator: Prof. Elena Andreou

The project aims at developing current state-of-the-art models/tools for the evaluation and impact of economic policies/reforms which are important for the public sector and other organisations for policy-making as well as the monitoring of policies and new growth models.

The investment will be comprised of 3 actions:

**Action 1:** Economic Policy Modelling Hub at the Economics Research Centre: New Models, Tools and Data for Economic Policy Analysis and Evaluation

**Action 2:** Transfer knowledge and training of public sector employees at the Ministry of Finance. Upgrade the public sector tools and skills for economic policy analysis and evaluation (e.g. economic impact assessments, economic evaluation and monitoring of reforms)

**Action 3:** Development of big data and data analytics (collection and linkages of different databases in collaboration with the government) for informing and monitoring economic policies, especially in real-time, also useful for modelling, nowcasting and forecasting.

Additional information for the project and the Cyprus Recovery and Resilience Plan can be found at the website of the Directorate General Growth, Ministry of Finance.

**Director**
Elena Andreou, Professor

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MASTER IN BUSINESS ADMINISTRATION, MBA

The Accounting and Finance and the Business and Public Administration Departments jointly offer a Master in Business Administration (MBA) programme on both a full- and part-time basis. The aim of the Programme is to develop students’ management skills and decision-making abilities in a rapidly changing business environment. The Professional MBA Programme (part-time study) is a two-year, evening programme that meets the needs of professionals who are currently working and who wish to enhance their leadership abilities and effectiveness in their organisations, as well as acquire the tools for further professional development. The duration of the Programme (full-time study) is twelve months. In order to qualify for the MBA degree, students must complete a total of at least 90 ECTS.

The Programme is offered jointly by the Department of Business and Public Administration, the Department of Computer Science, and the Department of Mathematics and Statistics. It is offered in English. Data Science is an inter-disciplinary field that uses scientific methods, processes, algorithms and systems to extract knowledge and insights from Big Data. Data Science is quickly becoming a field of central importance to the strategy of modern organisations. There is an increasing need for highly trained employees, who can think across disciplines to transform data into actionable insights. The objective of the Programme is to provide students with a strong understanding of basic and advanced methods in statistical inference, machine learning, data visualisation, and data mining, which are the essential skills a modern data scientist needs to possess. The completion of the Programme requires 90 ECTS and the duration is 1.5-year. The Programme offers 3 tracks (Computer Science Track/Statistics Track/Business Analytics Track). The first two semesters will be dedicated to core courses, while students will select a track at the end of the second semester.

1. The Professional MBA Programme (part-time study)

The Professional MBA Programme is a two-year, evening programme that meets the needs of professionals who are currently working and who wish to enhance their leadership abilities and effectiveness in their organisations, as well as acquire the tools for further professional development.

To qualify for the MBA degree, students must complete a total of 90 ECTS. A total of 57 ECTS constitute the core curriculum, the intent of which is to introduce students to the fundamentals of the business disciplines. Students can customise their programme according to their professional needs and interests through elective courses (maximum 12 ECTS). A list of courses is available from the Department. Finally, the Applied Business Project (21 ECTS), which takes place during the last three terms, focuses on a real-life case within a corporate or government environment, and brings together teams of students with sponsor companies.

Structure

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Title</th>
<th>ECTS</th>
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<tbody>
<tr>
<td>August</td>
<td>MBA 502</td>
<td>Introduction to Accounting*</td>
<td>1</td>
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<tr>
<td></td>
<td>MBA 503</td>
<td>Introduction to Statistics*</td>
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<tr>
<td>September - October</td>
<td>MBA 544</td>
<td>Business Statistics</td>
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<td></td>
<td>MBA 561</td>
<td>Leading and Managing Organisations</td>
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<tr>
<td>November - December</td>
<td>MBA 511</td>
<td>Financial Accounting for Management Decisions</td>
<td>4</td>
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<td></td>
<td>MBA 531</td>
<td>Business Economics</td>
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<tr>
<td>January - February</td>
<td>MBA 521</td>
<td>Financial Management</td>
<td>4</td>
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<tr>
<td></td>
<td>MBA 542</td>
<td>Managing Operations</td>
<td>3.5</td>
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</table>
2. The MBA Programme (full-time study)

The duration of the Programme is twelve months. In order to qualify for the MBA degree, students must complete a total of at least 90 ECTS.

Courses equivalent to 57 ECTS constitute the core curriculum, which will introduce students to all areas of business administration. The courses also enable students to improve their analytical thinking and decision-making skills.

Programme participants must choose elective courses equivalent to 12 ECTS from a list of courses that are offered by the Department. The elective courses cover all fields of Business Administration.

The Applied Business Project (21 ECTS) takes place during the last three terms and enables students to apply the knowledge acquired during the programme to an organisation. The Applied Business Project reflects one of the central themes of the Programme, which is teamwork. The complexity of the business environment forces managers to seek the integration of knowledge through collaboration.
Elective Courses for the MBA Programmes (part and full-time)

<table>
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<tr>
<th>Course Name</th>
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<tr>
<td>MBA 513 Corporations and Capital Markets</td>
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<td>MBA 516 Corporate Governance</td>
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<td>MBA 530 From Theory to Practice</td>
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<td>MBA 535 Machine Learning in Management</td>
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<td>MBA 536 Technology and Business Transformation</td>
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<td>MBA 565 Human Resource Management</td>
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<td>MBA 567 Managing Change</td>
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<td>MBA 568 Negotiations</td>
<td>2</td>
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<td>MBA 569 Crisis Management</td>
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<td>MBA 570 Creativity and Innovation</td>
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<td>MBA 573 Emotional Intelligence</td>
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<td>MBA 576 Managing Diversity</td>
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<td>MBA 577 Creativity and Organisations</td>
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<td>MBA 552 Digital Marketing</td>
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<tr>
<td>MBA 557 Sales Management</td>
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<tr>
<td>MBA 558 Consumer Behaviour</td>
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<tr>
<td>MBA 545 Service Management</td>
<td>4</td>
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Core Course Descriptions for the (part and full-time)

**MBA 502 Introduction to Accounting (1 ECTS)**

This course is designed to familiarise students with basic accounting concepts. The course will introduce students to basic accounts, the accounting equation and the financial statements. We will then look at how numerous transactions affect different accounts and examine the advantages and limitations of the accrual basis of accounting and the resulting year-end adjusting entries. The course will then explain how to apply the above information to merchandising companies.

**MBA 503 Business Mathematics and Statistics (1 ECTS)**

The course reviews the fundamental mathematical concepts that will be required for subsequent MBA courses. Topics covered include Basic Calculus (functions, differentiation, and integration) and Linear Algebra (systems of equations and inequalities). The course also examines basic topics in statistics, such as elements of probability theory, probability distributions, measures of central tendency and dispersion.

**MBA 511 Financial Accounting for Management Decisions (4 ECTS)**

The major objective of this course is to provide a framework for understanding the role and usefulness of financial information provided by: a) organisations through their annual reports or through other means of communication, b) other capital market participants, such as financial analysts, credit analysts, managers and c) the financial press. This course is designed to enable students to understand financial statements intelligently, and make well-informed business decisions based on the financial information incorporated in the major financial statements. Throughout the course, students are expected to undertake the role of the decision maker or the role of any other major capital market participant (e.g. credit analyst or banker, manager, financial analyst) and make decisions based on the relevant financial information. All the aforementioned issues will be applied extensively to the Cypriot and international capital markets.

**MBA 512 Managerial Accounting (3.5 ECTS)**

The course concentrates on the use of accounting information for costing, decision making and control in the firm. The first part introduces the principles of management accounting pertaining to cost behaviour, costing products and services, and using cost data in decision-making. The second part addresses accounting as a vehicle for exercising control in the firm, and focuses on understanding the budgetary process, divisional performance measurement, compensation incentive systems, and the role of management accounting information in corporate governance.

**MBA 521 Financial Management (4 ECTS)**

The course provides an introduction to Corporate Financial Management. It is designed to introduce students to the concepts and techniques necessary to analyse and implement optimal investment and financing decisions by firms. The course emphasises the effects of time and uncertainty on decision-making. Topics include basic discounting techniques, stock and bond valuation, capital budgeting, asset pricing models, efficient markets, corporate governance, and debt policies.

**MBA 522 Capital Markets and Investments (4 ECTS)**

The course focuses on the functioning of capital markets, the pricing of various financial instruments, and selecting and evaluating investment strategies in terms of their risk/return characteristics. The course emphasises the fundamental principles of asset valuation and financing in competitive markets. Topics covered include capital markets, passive and active portfolio management, the CAPM and APT pricing models, basic option pricing, portfolio construction and performance evaluation.

**MBA 531 Business Economics (3.5 ECTS)**

The course focuses on the application of economic principles and methodologies to business decision problems by introducing the microeconomic and macroeconomic tools used in the analysis of business problems. Students will deepen their understanding of economics and learn a variety of techniques that will allow them to solve business problems relating, among other things, to costs, prices, revenues, profits, and market structure. Students will also use computer simulation exercises to examine how the macro economy works (inflation, unemployment, deficits, etc.) and the difficulties confronting economic policy makers using monetary and fiscal policies.

**MBA 541 Methods for Management Decisions (4 ECTS)**

The course focuses on scientific and systematic approaches to decision-making and presents techniques for formulating and solving models for quantitative business problems. Tools and techniques presented include: decision trees, mathematical programming (optimisation), network flow models, elements of queuing theory and simulation, time series analysis and forecasting. These are then applied to practical problems in resource allocation, production, inventory control, operations planning, finance and marketing.
MBA 542 Managing Operations (3.5 ECTS)
The course examines all activities related to the management of the resources required to produce the goods and services provided by the organisation. Topics examined include: introduction to operations management, operations strategy, process analysis, product design and process selection in manufacturing and services, strategic capacity, facility location, facility layout, Just-In-Time systems, introduction to supply chain management, production planning, quality management, and inventory systems.

MBA 543 Management Information Systems (4 ECTS)
Information systems (IS) are pervasive in all business functions. The course examines the various types of IS encountered in modern businesses, their roles in supporting operations, managerial functions and competitive needs, challenges from the proliferation of IS and their strategic prospects. Technical issues related to IS infrastructure, hardware, software, networks and organisation of data resources are examined with an emphasis on managerial issues related to the development, effective deployment, management and strategic business uses of IS resources.

MBA 544 Business Statistics (3.5 ECTS)
The course presents the use of descriptive and inferential statistics in decision making. Topics covered include: describing and summarising data, measures of central tendency and dispersion, probability distributions, the normal probability distribution, sampling methods and the central limit theorem, estimation and confidence intervals, hypothesis testing, analysis of variance, regression and correlation analysis. Emphasis is placed on practical applications using statistical analysis software.

MBA 551 Marketing Management (4 ECTS)
This course provides an overall view of marketing’s role in contemporary organisations and explores its relationship to other business functions. It presents the marketing planning process and shows that effective decision-making builds on a thorough analysis and understanding of the marketing environment. It emphasizes how to determine the organisation’s marketing mix, including product, pricing, promotion and distribution strategies. It discusses the main challenges currently faced by marketing managers and presents recent developments in marketing theory and practice.

MBA 561 Leading and Managing Organisations (4 ECTS)
This course is designed to enhance students’ leadership and management skills by giving them a framework for understanding how organisations function and how their individual staff members and work groups behave. Diversity, continuous application of new technologies and ever-greater interdependence – between individuals, work groups, and organisations – drastically challenge the skills and creativity of modern managers.

MBA 562 Corporate Social Responsibility and Ethics (2 ECTS)
This course examines the foundations of moral reasoning and analyses the ethical issues that arise in a wide range of contemporary business practices. The central aim of the course is to enable students to develop a framework through which to recognise, critically analyse, and appropriately respond to the social, ethical, and political challenges and dilemmas as they arise in their careers.

MBA 563 Entrepreneurship (4 ECTS)
The purpose of the course is to explore the many dimensions of new venture creation and growth. While most examples will be drawn from new venture formation, we will also examine cases in entrepreneurship, social and non-profit entrepreneurship. The class sessions will be devoted to conceptualising, developing, and managing successful new ventures, ideas or products with the goal of creating a business plan.

MBA 564 Strategic Management (3.5 ECTS)
The course explores a wide range of strategic issues facing businesses, focusing particularly on the sources of sustainable competitive advantage and the interaction between industry structure and organisational capabilities. It introduces a variety of modern strategy frameworks and methodologies and builds on core topics such as economics, organisational processes, operations and marketing.

MBA 566 Leadership (4 ECTS)
This course discusses the fundamental aspects of Leadership, starting from the premise that Leadership is a process, not a position. The course focuses on the interaction among the leaders, the followers and the situation as a model for studying the leadership process, and it examines the traits and values of leaders, charismatic leadership, the problems encountered by current leaders and the role of emotional intelligence in dealing with these problems. Special emphasis is placed on “surviving leadership.”

MBA 574 Principles of Business Communication (2 ECTS)
Effective communication is an important skill in business. This course develops an awareness of the complexity involved in the communication process so that current and prospective managers learn to communicate effectively both verbally and nonverbally within a business setting. Emphasis is placed on: developing a business communication plan; correctly identifying one’s audience; the importance of communication in regards to company image. The elements of successful internal and within-group communication are also examined.

MBA 590 Applied Business Project (21 ECTS)
The applied business project is the highlight of the programme, as students must put into practice the knowledge and tools acquired from the MBA Programme. During the first part of the project, students will develop their research questions, as identified through an exploratory study. Upon completion of the first part of the project, students will have developed a course of action to examine the issues that need to be resolved (in the collaborating organisation). The project will first be designed as a team effort supervised by a faculty member, and then will be implemented by the student teams. Teams collect and analyze information from the organisation and propose applicable solutions. During this part, teams complete the writing of their applied business project and present their results to a committee.
Faculty of ENGINEERING
DEPARTMENTS

Architecture
Civil and Environmental Engineering
Electrical and Computer Engineering
Mechanical and Manufacturing Engineering
Introduction

Architecture has many aspects, as aesthetic, technological, social, cultural, economic and political issues define the human environment. The Department of Architecture consequently has an important role to play in producing architectural skills and knowledge through research, in providing high quality education to students and practitioners of architecture alike. It will also enhance the much-needed dialogue among the parties directly or indirectly involved in its production.

The aim of the Department of Architecture is the education of architects who can successfully perform worldwide, but who also have the knowledge and sensitivity to respond and influence positively the built environment of Europe. In support of this, the Department of Architecture provides high quality degree programmes at both undergraduate and postgraduate levels. These programmes emphasise fundamental principles, that prepare architects concerned with the challenges of meeting society’s needs in a rapidly changing environment. Students participate in research, planning and design in an academic environment, in cooperation with the faculty, research and professional organisations.

The Department of Architecture admits graduate students each year at the doctoral level (Ph.D. in Architecture).

Research Areas

- Architectural History and Theory
- Architectural Communication Media
- Architectural Technology
- Urban Design
- Digital Architectural Design and Fabrication
- Energy and Environmental Design of Buildings
- Research by Design
- Architectural Conservation

For more details on the research part of the Programme, please refer to the website of the faculty at: www.ucy.ac.cy/arch/people/academic-staff/en.

Financial Support

The University of Cyprus supports many graduate students through teaching assistantships, the number of which fluctuates according to the needs of each year’s programme of studies. There are also additional funding opportunities, information on which is available through the Student Welfare Service. Additionally, a number of students can be financially supported through research programmes.

DOCTOR OF PHILOSOPHY DEGREE (Ph.D.)

Graduate students are awarded a Doctoral degree by the Department of Architecture, after successfully completing the required course of study and successfully defending and writing their Ph.D. thesis. The minimum duration of the Ph.D. Programme in Architecture for full-time students is 6 semesters.

Admission Requirements

Applicants to the Programme must possess an Architecture Degree (5-year course of study), or the equivalent of a Master (M.A. or M.Sc. in an area of Architecture, Philosophy, Social Sciences, Fine Arts, Applied Arts, Civil Engineering, Environmental Engineering, Electrical Engineering, Mechanical Engineering, Informatics, Administration or Economic Sciences), from an accredited university.

Candidates must submit an application form to the Department of Architecture, within the announced time limits.

For more information on the application and registration procedures, please refer to the Admission and Attendance Regulations– Application Requirements, or please consult the Graduate School or the Department Secretariat.

In addition to the general requirements, candidates are requested to state their intended focus area and expectations from their doctoral studies in their statement of purpose when applying. They are also requested to submit any other supportive documentation as evidence of their qualifications.

Applications are evaluated by the Graduate Admissions Committee of the Department of Architecture, which
makes suggestions to the Departmental Council for final approval of the selected candidates for doctoral studies. The applicants to the Programme are selected according to the following criteria:

- Quality of the applicant’s background in breadth and depth, and past performance in his/her undergraduate and graduate studies.
- Indications of ability for original and innovative research in the proposed area of study.
- Relevance of the proposed field of research to the interests of the department, the university and society.
- Availability of graduate positions in the doctoral programme and the necessary infrastructure and resources to support the proposed doctoral work.
- Excellent knowledge of the English language is required for admission to the Doctoral programme.

Programme of Study

The programme of study leading to the Ph.D. Degree in Architecture requires the completion of a minimum of 240 ECTS in graduate level courses and research work, as follows:

Graduate Courses (a total of 80 ECTS)

Graduate courses related to the Ph.D. thesis (students can be credited depending on their Terminal degree).

Ph.D. Thesis Research (160 ECTS)

Students must select, in consultation with their advisors, the courses that will help them in the completion of their Ph.D. thesis. Any undergraduate courses and/or courses outside the programme of Architecture are recognised only after prior approval by the Graduate Committee of the Department of Architecture, following a justified petition by the student, signed by his/her academic advisor. In order to comply with the Ph.D. programme requirements, the Graduate Committee of the Department of Architecture must approve the petition before the student registers for the respective course.

Ph.D. Thesis

Comprehensive Examination (CE)

Admission to candidacy for the Ph.D. programme is granted, when the student has satisfactorily passed a CE (written and oral), intended to evaluate fundamental ability and knowledge in Architecture, as well as specialised knowledge and understanding of the intended research area.

The CE covers three relevant subject areas from the main areas in architectural theory and history, architectural communication media, architectural technology and urban design. For the written examination, a grade of at least 50% in all three areas is required. The oral examination must be taken by the seventh semester of studies.

Research Proposal (RP)

Candidates need to prepare a brief written proposal for the proposed research and present it to the Examining Committee. The proposal needs to demonstrate an understanding of the content/theme of the research, knowledge of relevant bibliography, the methodology and in general all the work undertaken by the candidate up to this point. The presentation of the proposal (APH 613) takes place up to four semesters after the success in the comprehensive examination.

Doctoral Dissertation

The doctoral dissertation must address current and valid theoretical, scientific and/or technical issue(s) primarily by fundamental research, leading to the creation of new architecturally specific knowledge. Applied research and development aspects, leading to a prototype or an application of this basic research, may also be included as a secondary component of the dissertation. The research must be novel and original, and of the highest scholarly standards, qualifying it as acceptable for publication in international academic journals.

The intellectual merit of the dissertation must be based on significant research findings by the doctoral candidate, distinguished clearly from the work of others, testifying to the candidate’s personal contribution and scholarship, and acknowledging support by others in or outside the University. In addition, the broader impacts of the research must be highlighted in the dissertation, in terms of opening new related areas or issues, and generating new theoretical, and/or technical applications and innovations.

Dissertation Defence

Each doctoral candidate is required to defend the research during an oral dissertation defence before a five-member Examining Committee.

For more information on the comprehensive examination, the dissertation proposal, the doctoral dissertation and the dissertation defence, please refer to the Admission and Attendance Regulations – Application Requirements or please consult the Graduate School, or the Department Secretariat.

Categories of Graduate Courses

Students must successfully take a number of courses that are related to their graduate programme of studies in Architecture, that will credit them with the required number of ECTS according to their programme requirements. The following list presents the courses that may be offered from the programme of graduate studies in Architecture depending on the availability, and the educational and research interests of the faculty.
Courses Description

The ECTS are followed by three numbers that indicate the hours required for lectures including exercises, labs or studio work and homework (preparation and problem sets), respectively.

List of Courses

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<th>Constrained Elective Courses</th>
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<th>Architectural History and Theory</th>
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<th>Architectural Technology</th>
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<th>Urban Planning / Urban Design</th>
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<th>Research Courses</th>
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<td>ARH 700</td>
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Compulsory Courses

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<th>ARH 500 Research Methodologies (8 ECTS: 3-0-12)</th>
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<td>The aim of the course is to introduce students to methodological approaches of Architectural research. It focuses on a thorough presentation and discussion concerning a) the philosophy of knowledge in general and with a particular emphasis on architecture; b) the definition of architectural research and theory and the identification of the conceptual background of research in relation to social values and their evolution c) the dependence of conceptual tools and the research body on research intentions; and d) a comparison of methodologies.</td>
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<th>ARH 502 Design Research Methods (8 ECTS: 3-10-2)</th>
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<td>The course offers an overview of design research methods. Through specific examples, it allows students to think of creative ways to conduct and (re)present their own research, encouraging them to invent their own personal approach. The course attempts to combine theory with practice and to show how architectural synthetic thinking—as a combination of written and design discourse—can become a research method leading to the production of new or the expansion of existing knowledge. The widely understood architectural creative practice is perceived as a way of questioning and critique, rather than as a response to given problems.</td>
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<th>ARH 504 Independent Study (8 ECTS)</th>
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<td>Individual Independent Study or research supervised by academic staff.</td>
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<th>ARH 510 Theories of Architecture (8 ECTS: 3-0-12)</th>
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<td>Investigation of written architectural theory through specifically architectural works, as well as through a wider framework. Interpretation of selected texts from Vitruvius to the twenty-first century. The relationship between theory and the larger social and practiced context of each age. Architectural theories and their implications in relation to tradition, change, innovation and revolution.</td>
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<th>ARH 511 Architecture and the Critical History of Ecology (8 ECTS: 3-0-12)</th>
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<td>How have concepts of “Nature” and “Environment” influenced architectural thought and practice? This history-theory of architecture course situates the development of ecological awareness, debate and practice in architecture within the larger historical and theoretical context of modern architecture. It covers topics from 19th century back-to-nature movements to early 20th century community experiments, to mid-twentieth century debates on science, technology, urbanisation, postcolonial modernisation, and international development, all of which resonate with today’s debates on environmental responsibility, and shaped current notions of eco-development, green architecture, sustainability, etc. The course requires basic knowledge of modern architectural history.</td>
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<th>ARH 512 Architecture in Philosophy (8 ECTS: 3-0-12)</th>
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<tr>
<td>Consideration of the reciprocal relation between Architecture and Philosophy, throughout the historical and geographic spectrum of the western tradition. Discussion of thought from the Pre-Socratics to Husserl, Heidegger, Baudrillard, Merleau-Ponty, Foucault, Ricoeur, Derrida, Deleuze and others in conjunction with developments in Architecture. Architectural theories and their influences on the intellectual advances of various ages.</td>
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</table>
ARH 514 Theories of Architectural Design and Review of Design Applications (8 ECTS: 3-0-12)
Analysis of changes in theoretical approaches to architectural design. Comparison of theories, ideologies and practices of design in different eras.

ARH 516 Buildings in History (8 ECTS: 3-0-12)
In-depth research, analysis and documentation of individual buildings or groups of structures and spaces in local and regional contexts for conservation purposes. Development of critical observation and interpretative skills in the study of past Architectures.

ARH 517 History and Critical Analysis of Conservation (8 ECTS: 3-0-12)
The course includes a diachronic overview of the history of conservation and an in-depth critical analysis on the most recent trends on the conservation of historic buildings. The course employs a critical analysis of international charters and declarations regarding conservation and a systematic analysis on remarkable conservation works of historic buildings and works of the modern movement. The course aims to develop a critical analysis of contemporary trends and theories on conservation through the investigation of various criteria, bringing forth the general principles of and an interdisciplinary methodology for the comprehensive protection of outstanding buildings of various periods.

ARH 518 History, Historiography and Criticism (8 ECTS: 3-0-12)
Analysis of the cultural, political and theoretical framework of modern and contemporary architectural history and historiography. Comparisons of methodologies that guide architectural history, theory and design.

ARH 519 Advanced Topics in Architectural Theory and History (8 ECTS: 3-0-12)
Subjects in the course will vary according to emerging student needs or requests and the educational and research interests of the faculty.

Architectural Communication Media

ARH 520 Theoretical Investigations in Visual Communications (8 ECTS: 3-0-12)
Theory and examination of the role that the visual occupies in art, architecture, cinema and related fields. Search for and discussion of common threads of development and common practices of dissemination in these related but distinct disciplines of cultural production.

ARH 522 Advanced Computer Aided Design Topics (8 ECTS: 3-0-12)
Review of computer aided design and programming techniques. Modelling, visualisation and computerised production of architectures. Discussion and presentation of examples such as traditional building structures, large area systems, experimental web environments, and emerging hybrid typologies. Integrated project models including seamless information linkages between designers and manufacturers (CAD/CAM).

ARH 524 Virtual Reality and the Built Environment (8 ECTS: 3-0-12)
Examination of the concept of the virtual within contemporary urban experience. Theoretical engagement of the competition of visual clues with spatial and other signs in the city in the conception and construction of present and future visions of the built. Urban totalities as unavoidably part material and part virtual environments.

ARH 526 Perception and Cognition in Architecture (8 ECTS: 3-0-12)
Investigation of the perceptual and cognitive horizons within the experience of Architecture. Discussion and criticism of binary thought commencing with perception/cognition and engaging wider dualities such as nature/culture, structure/orament, beauty/taste, etc.

ARH 529 The Moving Image as Design Research Tool (8 ECTS: 3-0-12)
The module draws on a spectrum of visual methodologies that relate to the understanding of the moving image as a tool for design research in architecture. Filming is approached as a spatial practice for the study and observation of architecture and urban phenomena, and for creatively documenting and reconstructing space and its lived experience as a dynamic environment. The module introduces a series of transdisciplinary methodologies, theories and practices from architecture, cinematic language, experimental documentary, essay film, narrative and non-narrative structures, visual ethnography, participatory design and performance. These methods enable the collection, documentation, transcription and interpretation of spatio-temporal and socio-political facts, relations, events and narratives. Bringing together filming practice and mixed media drawings (animations), the module aims to develop students’ knowledge and skills for the critical use of the moving image in design research projects that concern the study, interpretation and communication of architectural ideas and spatial narratives where time plays a crucial role. Subjects in the course will vary according to emerging student needs or requests and the educational and research interests of the faculty.

Architectural Technology

ARH 530 Advanced Building Technology (8 ECTS: 3-0-12)
Case studies and architectural design analysis derived mainly from structural engineering issues. Introduction to architectural works with emphasis on structural, construction and environmental design aspects. A design project emphasising structural and construction design is required from each student. Integrated course with CEE graduate Programme.

ARH 532 Construction Design (8 ECTS: 3-0-12)
Integration of architectural technology with the process of design and its objectives through construction design. Technology transfer in search of appropriate prototype applications in design projects. Construction detailing.

ARH 534 Structural Building Design (8 ECTS: 3-0-12)
Structural systems for special loading cases such as earthquakes and/or long-span structures and tall buildings. Architectural integration and investigation of the structural properties and systems behaviour and efficiency. Case studies analysis and individual design projects.

ARH 536 Advanced Construction Materials Technology (8 ECTS: 3-0-12)
Advanced studies in metals, adhesives, glasses, plasters, etc. and their effects on the present and future building industry and environment. Case studies in advanced materials applications and innovative building systems, addressing leading technologies, processes and applications.

ARH 538 Environmental Building Design (8 ECTS: 3-0-12)
This course aims to deepen the theoretical and applied knowledge of students on the Environmental Design of Buildings and to highlight the role of the architectural design, construction and appropriate technical support in order to ensure proper living conditions for the users of a building.
minimizing energy consumption and reducing adverse environmental impacts. The course covers issues concerning the bioclimatic architecture, which aims to improve the comfort conditions of users – thermal, visual, acoustic comfort, air quality – in the indoor built environment; issues that have to do with energy design aiming to the minimisation of energy consumption of the building envelope as well as issues of ecological construction regarding the minimisation of the ecological footprint.

**ARH 539 Advanced Topics in Architectural Technology (8 ECTS: 3-0-12)**
Subjects in the course will vary according to emerging student needs or requests and the educational and research interests of the faculty.

**ARH 550 Special Topics on Recording and Documenting Buildings and Sites (8 ECTS: 3-0-12)**
The course provides basic and advanced knowledge on recording and documenting buildings and sites using conventional and contemporary digital techniques. It aims at introducing research tools and methodological approaches of in-situ recording of buildings, sites and individual building elements, while it includes methodologies for the evaluation and processing of monitoring data. Moreover, the course refers to the recording and analysis of the indoor comfort and energy efficiency of buildings. Among others, it refers to the documenting of functional particularities and to specific comfort requirements of buildings, while it includes quantitative recordings and analysis of the parameters defining comfort conditions.

**Urban Planning/Urban Design**

**ARH 528 Architecture’s social practices and their political agencies (8 ECTS: 3-0-12)**
The seminar studies the public role of architecture (architecture as critical urban practice) in a contemporary globalised everydayness. It also studies the role of the architect in expanded groups of action in collaboration with visual artists and urbanists. Students become acquainted with forms of negotiation regarding the transformation of urban limits into thresholds for exchange in the contemporary city. They realise how architecture could operate as agent beyond physical building. The seminars unfold the political dimension of architecture in peripheral, see contested urban conditions (geographical, urban but also social).

**ARH 540 Mediterranean Cities and Social Phenomena (8 ECTS: 3-0-12)**
The course focuses on the understanding of the ways in which urban social phenomena both influence and are influenced by the morphology and planning of the city. Students are encouraged to critically address specific themes each year exploring the relation between architectural research, architectural practice and society. Emphasis is given on the formulation of novel readings, methodologies and interpretations of the multiple and complex cultural practices in Mediterranean urban space in an attempt to enrich and broaden knowledge and urban design processes.

**ARH 542 Design and Urban Ecologies (8 ECTS: 3-0-12)**
Critical reframing of the study of cities and urbanisation through strategic design and justice-centred approaches. Study of urban transformations based on the combination of ecology, design, policy, activism, and community engagement. Critical thinking and formulation of analytical approaches to make visible relations, interdependencies and entanglements of human and more than human entities in ecological urbanism.

**ARH 544 Urbanism in History (8 ECTS: 3-0-12)**
Examination of specific topics in the history of Urbanism through the study of its intellectual and social context. Focus oscillates between utopian and theoretical to religious and political manifestations of Urban Design. Content and methodology emphasize as well as rely on an inter-disciplinary approach to the subject, and are inclusive, but not exhaustive of, literature, poetry, painting, music, and cinema.

**ARH 546 Urban Design and Planning (8 ECTS: 3-0-12)**
Investigation of planning principles necessary for the communication between architects, urban designers and urban planners when dealing with contemporary urban complexity. Discussion of the complementary nature of Architecture, Urban Design and Urban Planning. Reports and projects of theoretical and applicable proposed models of cooperation in specific cities in Cyprus and surrounding countries and regions.

**ARH 548 Landscape Architecture and the Urban (8 ECTS: 3-0-12)**
The nature of Nature. Engagement and study of various natural and constructed landscapes. Theory, site analysis and landscape design both in the local as well as the regional urban context. Consideration of themes such as climate, water shortage, topography, geology, natural vegetation and culture in Cyprus and surrounding countries and regions.

**ARH 549 Advanced Topics in Urban Planning (8 ECTS: 3-0-12)**
Subjects in the course will vary according to emerging students’ needs or requests and the faculty’s educational and research interests. The coursework consists of a workshop and a survey course based on best practices in sustainable urban design and development, with a particular focus on the challenges facing the Eastern Mediterranean region. The coursework is organised in the form of a workshop and includes thematic presentations, the analysis of cases studies, role playing and visioning exercises and a final master-planning exercise in a location to be specified by the instructor.

**Research Courses**

**ARH 602-609 Ph.D. Research**
*(ECTS units assigned by the thesis advisor)*

**ARH 610-611 Writing Stage**
*(ECTS units assigned by the thesis advisor)*
Writing stage of the dissertation.

**ARH 613 Dissertation Proposal (0 ECTS)**
Comprehensive oral presentation on the proposed work before the Dissertation Committee.

**ARH 700 Comprehensive Examination (0 ECTS)**
Comprehensive Examination (written and oral), intended to evaluate fundamental ability and knowledge in Architecture, as well as specialised knowledge and understanding of the intended research area.
Konstantinos Avraamides, Lecturer
Research by design; Architectural design; Architectural communication; Art and/in urban space; Visual culture; Cultural landscapes.

Nadia Charalambous, Associate Professor
Theories on space and society, Public Space, Urban segregation, Transdisciplinary Architectural pedagogy, Evidence-based design

Christos Hadjichristos, Associate Professor
The relationship between architectural theory, knowledge, pedagogy and practice, Existing and alternative media of communication in architectural design, the house as an architectural and social project, Architectural and urban spatial configurations, Layering as a design tool.

Popi Iacovou, Lecturer

Odysseas Kontovourkis, Assistant Professor
Computational design and robotic fabrication, Robots in sustainable construction, Computer-aided design/Computer-aided manufacturing (CAD/CAM), Parametric-associative design and physics-based computer modelling, Pedestrian movement behaviour modelling and circulation design, Adaptation and interaction in architectural systems.

Aimilios Michael, Assistant Professor
Energy and environmental design of buildings, Architectural technology, Integrated architectural design and technology, Advanced building envelope design, Innovative & sustainable construction components and materials.

Maria Philokyprou, Associate Professor
Architectural conservation; Vernacular architecture of Cyprus; Preservation and promotion of the built environment, Environmental features of vernacular architecture; Traditional architectural technology; Traditional building materials.

Marios C. Phocas, Professor
Architectural technology, Technology-driven design: Integrated architectural design, Interdisciplinary performance-based design, Structural and construction design, Kinetic structures: Reconfigurable structures, adaptive Compliant structures, Earthquake engineering: Passive structural control and seismic isolation.

Panayiota Pyla, Professor
History-theory of modern architecture, Planning history and development politics, Social dimensions of sustainable design, Cultural heritage and conflict in the Middle East.

Andreas L. Savvides, Associate Professor
Sustainable urban design, Regional and urban planning and development, Regeneration of underperforming and underutilized urban cores, Housing - environmental and the cultural factors pertaining to redevelopment, Planning for transit-oriented development.

Socrates Stratis, Associate Professor
Urban design and planning, Critical spatial practices, Research by design, Architecture as politics, Contested spaces and conflicts, Urban commons.

Contact Details
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DEPARTMENT SECRETARIAT
Christina Pambori
Tel.: +357 22892980
E-mail: architecture@ucy.ac.cy
www.ucy.ac.cy/arch/en
Introduction

Civil and Environmental Engineering plays a significant role in building modern society. The field of Civil and Environmental Engineering encompasses the design, construction, management and maintenance of the infrastructure on which society relies. In addition to the buildings in which we live and work, the roads and the bridges we use every day, society depends on civil and environmental engineers for providing clean water, energy, waste management and to protect the natural environment.

The Department of Civil and Environmental Engineering (CEE) provides high quality degree programmes at both undergraduate and postgraduate levels. These programmes emphasise fundamental principles that prepare young engineers concerned with the challenges of meeting society’s needs in a rapidly changing environment. CEE students undertake investigation, research, planning and design in an academic environment that is based on cooperation between faculty, students, industry, research and professional organisations. Students study in a dynamic environment and are given the opportunity to work with and learn from research teams working at the forefront of knowledge.

The aim of the graduate programmes of the CEE Department is to promote scholarly research which leads to discovery, learning and innovation according to international standards of excellence, in the broader discipline of CEE, as well as in related multi-disciplinary and interdisciplinary fields. The Department’s graduate programmes are research-oriented in order to support and strengthen the research and educational activities of the Department and the University. Moreover, the research focuses on areas that serve the interests of Cypriot society, by identifying and providing solutions to local issues and by promoting opportunities for local development and for the improvement of life in Cyprus.

Research Areas

The major research areas of the CEE Department are the following:

- Materials and Mechanics
- Structural and Earthquake Engineering
- Construction Management
- Computational Mechanics
- Computer-Aided Civil Engineering
- Geomechanics
- Transportation Systems
- Management of Water Resources
- Water/Wastewater Treatment and Management
- Environmental Pollution Control
- Environmental Management Systems
- Environmental Biotechnology

Financial Support

The CEE Department supports several graduate students through scholarships, teaching assistantships, and research grants.
MASTER’S PROGRAMMES (M.Sc., M.Eng.)

The CEE Department offers two levels of graduate studies at the Master’s level, namely, the Master of Engineering (M.Eng.) and the Master of Science (M.Sc.) in Civil Engineering or Environmental Engineering. The Master of Science focuses on research, having a smaller number of courses to attend and placing emphasis upon the completion of a research thesis with higher demands. A transfer between the two academic tracks is allowed only after an application by the student and approval by the Departmental Council. The Department also reserves the right to mandate a student transfer between the two academic tracks (from M.Sc. to M.Eng.), if the student’s academic performance during the required M.Sc. academic work is unsatisfactory, and his/her advisor recommends it.

Civil Engineering: Specialisations

The Master of Engineering and Master of Science (M.Eng. and M.Sc. respectively) in Civil Engineering is offered in five thrusts of specialisation as listed below; to specialise and emphasise upon the completion of a research thesis with higher demands. A transfer between the two academic tracks is allowed only after an application by the student and approval by the Departmental Council. More specifically, for the Master of Engineering and Master of Science Degrees (M.Eng. and M.Sc.), courses are grouped in four categories from which each student must successfully attend a specific number, in order to fulfil the requirements of the specialty thrust selected, as follows:

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<thead>
<tr>
<th>Categories</th>
<th>Description</th>
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<tbody>
<tr>
<td>A</td>
<td>Core Specialisation Graduate Courses</td>
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<tr>
<td>B</td>
<td>Elective Specialisation Graduate Courses</td>
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<tr>
<td>C</td>
<td>CEE Graduate Courses other than those in Categories A and B</td>
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<tr>
<td>D</td>
<td>UCY Graduate Courses</td>
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</tbody>
</table>

For the Master of Engineering and Master of Science Degrees (M.Eng. and M.Sc.) in Civil Engineering, for each of the five thrusts, a number of successfully completed courses is required, as follows:

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<tr>
<th>Courses:</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.Eng.</td>
<td>≥5</td>
<td>≥3</td>
<td>≤1</td>
<td>≤1</td>
</tr>
<tr>
<td>M.Sc.</td>
<td>≥4</td>
<td>≥1</td>
<td>≤1</td>
<td></td>
</tr>
</tbody>
</table>

Therefore, completion of an M.Eng. degree in Civil Engineering in any particular thrust which requires successful passing of 10 graduate courses, the requirements correspond to at least 5 graduate courses from group A and up to 5 graduate courses from group B, while up to 1 course is allowed from group C and up to 1 course from group D, as specified for the particular of specialisation. For example, a student could take 6 courses from group A and 4 courses from group B, or 5 courses from group A, 4 courses from group B and 1 course from group C or D, as specified for the particular specialisation. Respectively, for a Master of Science in Civil Engineering, which is more research-oriented and requires only 7 successfully completed graduate courses, at least 4 graduate courses are required from group A, up to 3 graduate courses are allowed from group B and up to 1 graduate course is required either from group C or D. For example, a student could select 5 graduate courses from group A and 2 courses from group B, or 4 courses from group A, 2 courses from group B and 1 course either from group C or D.

Environmental Engineering

For the Master of Engineering and Master of Science (M.Eng. and M.Sc.) in Environmental Engineering 10 and 7 graduate courses respectively, must be successfully completed, while only one of these courses cannot be part of the course-catalogue for Environmental Engineering. After approval given by the student’s research supervisor, a second course that is not included in the catalogue can be taken.

Admission to the Master’s Programmes

Applicants to the Master’s programmes must possess the equivalent of a B.Sc. Degree in Civil and/or Environmental Engineering, or in a related field of science or engineering, from the University of Cyprus or other accredited institution or programmes.

Candidates must submit an application to the Department within a specific time frame. For details on the application procedure and the evaluation of the candidates, please refer to the Admission and Attendance Regulations – Application Requirements or consult the Graduate School, or the Department Secretariat.

In addition to the general admission requirements, the Department requests from the applicant a statement on his/her goals and objectives, an intended focus area and expectations from the graduate studies and other supportive documentations regarding the applicant’s qualifications.

Applications are evaluated by the Graduate Committee of the CEE Department, which makes suggestions to the Departmental Council for final approval of the selected candidates. Applicants to the Master’s programmes are selected according to the following criteria, while the CEE Department reserves its right to fill only as many announced graduate student positions as the Department considers appropriate:

- Quality of the applicant’s background in breadth and depth, and past performance in undergraduate or graduate studies.
• Evidence of ability for original and innovative research in the proposed area of study.
• Relevance of the proposed field of research to the interests of the Department, the University and the society.
• Availability of graduate positions in the Programme and the necessary infrastructure and resources to support the proposed M.Sc. research work.
• Good knowledge of the English language.

MASTER OF SCIENCE DEGREE (M.Sc.)
The M.Sc. Degree is awarded to graduate students of the Department of Civil and Environmental Engineering, upon successful completion of the required number of courses and ECTS units, according to the graduate programme of studies, and upon writing and presenting a successful defence of the M.Sc. thesis. The student is awarded either an M.Sc. Degree in Civil Engineering or an M.Sc. Degree in Environmental Engineering, depending on the research area of the student’s thesis. The minimum duration of the M.Sc. programme for full-time students is three semesters, including the summer between the two academic years. The maximum duration allowed for completion of the M.Sc. degree is eight semesters.

Programme of Studies for the M.Sc. Degree
The programme of study leading to the M.Sc. degree in Civil Engineering and M.Sc. degree in Environmental Engineering requires the completion of at least 110 ECTS of graduate course, seminars and research work, distributed as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coursework</td>
<td>56</td>
</tr>
<tr>
<td>Graduate Courses (56 ECTS)</td>
<td></td>
</tr>
<tr>
<td>CEE 610 Graduate Seminar (8 attendances) (0 ECTS)</td>
<td></td>
</tr>
<tr>
<td>Thesis Research (CEE 680)</td>
<td>54</td>
</tr>
<tr>
<td>Grand Total</td>
<td>110</td>
</tr>
</tbody>
</table>

The course Independent Study (CEE 650) can be counted as one graduate course for the specialisations in Civil Engineering or Environmental Engineering (Annex-3) and must focus on a different topic from that of the M.Sc. research. For the M.Sc. in Civil Engineering, the Independent Study may be counted for any specialisation as a course of group A or B. A student may be credited with a maximum of 8 ECTS under the Independent Study course. If a student has successfully attended graduate courses in the framework of another postgraduate programme, they can be credited with up to 16 ECTS, provided that these courses have not been taken into consideration in order to acquire another postgraduate title.

MASTER OF SCIENCE (M.Sc.) THESIS
The M.Sc. Degree requires the successful completion of original research work and a corresponding M.Sc. Thesis (CEE 680), which must be successfully presented and examined. The topic of the student’s research is chosen in consultation with his/her advisor (supervisor). The student must submit copies of the thesis to the members of the Thesis Committee at least 1 week prior to its defence. The thesis defence is open to the public and consists of a presentation by the candidate, which must not be longer than 30 minutes, followed by an open discussion and a closed session with the Thesis Committee. The Thesis Committee is responsible for approving the candidate’s thesis and defence presentation and if these are deemed inadequate, the Committee will suggest the appropriate revisions to the thesis and a corresponding timeline for the candidate to make/complete those revisions.

For the completion of this process, the candidate must submit two original copies of the thesis (one for the CEE Department records and one for the UCY Library) bound and signed in accordance with the University regulations, as well as one electronic copy of the thesis for dissemination purposes.

If the thesis is rejected, the candidate may request a second opportunity to defend his research. In that case, the time and terms for resubmission and defence are determined by the Thesis Committee in writing.

M.Sc. theses may be graded as “Excellent”, “Very Good”, “Good” or “Inadequate”. The intellectual merit of the thesis must be based on research findings by the M.Sc. candidate, distinguished clearly from the work of others, testifying to the candidate’s personal contribution and acknowledging support by others within or outside the University.

Research Advisor (Supervisor)
After the M.Sc. student and his/her academic advisor have mutually agreed to pursue their research collaboration, the student must submit a memorandum of understanding to the Graduate Studies Committee, signed by the academic advisor who has taken the student under his supervision. The academic advisor supervises the student’s research or other work and offers the necessary guidance. He/She is also responsible for recommending the members of the student’s Thesis Committee to the Department’s Faculty Council for approval, through the Graduate Studies Committee. The Thesis Committee consists of the thesis advisor as the head of the Committee and at least another faculty member, either from within or outside the University of Cyprus. External committee members can only be faculty members of other accredited institutions or research centers or other qualified experts holding a Ph.D. degree.

For more information on the procedure of submitting and defending the thesis, please refer to the Admission and Attendance Regulations – Application Requirements.
or consult the Graduate School, or the Department Secretariat.

Indicative Programme of Studies

The following programme of studies for the Master of Science in Civil Engineering or in Environmental Engineering (M.Sc.) may be completed in 1.5 academic years, provided that students undertake their research during the summer months between the second and third academic semesters.

MASTER OF ENGINEERING DEGREE (M.Eng.)

The Master of Engineering (M.Eng.) in Civil Engineering in one of the aforementioned specialisations, or Master of Engineering (M.Eng.) in Environmental Engineering is awarded to graduate students of the Department upon successful completion of the M.Eng. programme of studies, depending on the nature of the graduate courses the student has completed.

Programme of Studies for the M.Sc. Degree

The required workload for the Master of Engineering in either Civil or Environmental Engineering corresponds to the successful completion of 90 ECTS of graduate courses and seminars as follows:

<table>
<thead>
<tr>
<th>Coursework</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate Courses (80 ECTS)</td>
<td>56</td>
</tr>
<tr>
<td>CEE 610 Graduate Seminar (8 attendances) (0 ECTS)</td>
<td></td>
</tr>
<tr>
<td>Thesis Research (CEE 680)</td>
<td>54</td>
</tr>
<tr>
<td>Grand Total</td>
<td>110</td>
</tr>
</tbody>
</table>

Indicative Programme of Studies

The following programme of studies for the Master of Engineering in Civil Engineering or in Environmental Engineering (M.Eng.) may be completed in 1.5 academic years.

<table>
<thead>
<tr>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester (Fall)</td>
</tr>
<tr>
<td>4 Graduate Courses (4x8)</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Second Semester (Spring)</td>
</tr>
<tr>
<td>4 Graduate Courses (4x8)</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Third Semester (Fall)</td>
</tr>
<tr>
<td>2 Graduate Courses (2x8)</td>
</tr>
<tr>
<td>CEE Graduate Seminar 0</td>
</tr>
<tr>
<td>CEE 689 Research Project</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

DOCTOR OF PHILOSOPHY DEGREE (Ph.D.)

A graduate student is awarded a doctorate degree by the Department, upon completion of the required programme of study and successful writing and defence of a Ph.D. thesis. Depending on the research area of the thesis, the student is awarded either a Ph.D. in Civil Engineering or a Ph.D. in Environmental Engineering.

Admission to the Ph.D. Programme

The applicants to the Ph.D. programme must possess the equivalent of a B.Sc. or M.Sc. degree in Civil and/or Environmental Engineering, or in a related field of science or engineering, from the University of Cyprus or another accredited university.

Candidates must submit an application to the Department of Civil and Environmental Engineering within the announced deadline. For more information on the application procedure and the evaluation of the candidates, please refer to the Admission and Attendance Regulations – Application Requirements or consult the Graduate School, or the Department Secretariat.

In addition to the general requirements, candidates are requested to submit a statement of purpose detailing their motivation, goals and objectives, an intended focus area and expectations from the doctoral studies, three letters of recommendation from academics familiar with their past work and future promise, as well as other supportive documentation as evidence of their academic qualifications.

Applications are evaluated by the Graduate Committee of the CEE Department and the selection criteria are the same as for the M.Sc. or M.Eng. programmes (see relevant paragraph above).
Programme of Study

The programme of study requires the successful completion of at least 240 ECTS, through a combination of graduate courses, seminars and research work. The minimum length of study for full-time students is six academic semesters and the maximum allowable length of study is eight academic years. The 240 ECTS required for the Ph.D. degree are distributed as follows:

<table>
<thead>
<tr>
<th></th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coursework</td>
<td>80</td>
</tr>
<tr>
<td>Graduate Courses in CEE related to the Ph.D. Programme</td>
<td>48 ECTS</td>
</tr>
<tr>
<td>CEE 610 Graduate Seminar (16 attendances)</td>
<td>0 ECTS</td>
</tr>
<tr>
<td>Thesis Research (CEE 680)</td>
<td>160</td>
</tr>
<tr>
<td>Grand Total</td>
<td>240</td>
</tr>
</tbody>
</table>

Courses from the first course group (Graduate CEE courses related to the Ph.D. research) must all be from the list of courses relevant to the degree sought (civil engineering or environmental engineering).

The course Independent Study (CEE 650 or CEE 651) counts as a course of the second category (Graduate courses in/outside CEE programmes) and must focus on a different topic from that of the Ph.D. research. A maximum of 8 ECTS of Independent Study may be credited towards the Ph.D. degree. Courses outside the CEE department may be selected, but only upon the approval of the student’s academic advisor.

Students who have joined the doctoral programme after successfully completing a relevant Master’s programme, can be credited with a maximum of 56 ECTS for graduate courses that they have successfully attended previously. These 56 ECTS count towards the fulfilment of the required 80 ECTS coursework. The maximum number of ECTS that can be credited to students with a graduate degree in Civil or Environmental Engineering is 56, while the maximum number of ECTS that can be credited to students with a graduate degree in other fields of study is 32. The crediting of ECTS is not automatic; it is subject to the approval of the Department’s Council based on recommendations made by the CEE Graduate Studies Committee. The Committee’s recommendations follow a well-documented petition by the student and relevant recommendation by his/her academic advisor. For the fulfilment of the required 80 ECTS coursework, the student must choose and successfully attend courses that are not the same or similar with those credited from previous studies.

Students must select, in consultation with their advisors, the courses that will help them toward the completion of their Ph.D. thesis. Graduate courses from outside the CEE Department may be accepted, subject to prior approval from the CEE Graduate Studies Committee and upon application by the student which has been approved by his/her advisor. For the selected courses to count towards the requirements for the Ph.D. programme, the CEE Graduate Studies Committee must approve the petition before the student registers for the respective courses.

Qualifying Examination

Admission to candidacy for the Ph.D. programme is granted, when the student has successfully passed a written qualifying examination, which intends to assess fundamental knowledge and ability in Civil or Environmental Engineering, as well as more specialised knowledge and understanding of the intended research area.

The topics in the qualifying examination cover three areas of study and are set by at least three faculty members, with equal score weight (1/3) for each topic. The weight per member of the Qualifying Exam Committee of the total score of an exam should not exceed 40%. The Ph.D. candidates’ written solutions to the exam questions are evaluated by the Qualifying Exam Committee. The areas of study examined and the Qualifying Exam Committee for each candidate are assigned by the Departmental Council, upon recommendation from the CEE Graduate Studies Committee based on a written application by the candidate’s academic advisor. The CEE Graduate Studies Committee must ensure that the topics per examination area and student are of equal depth and level of difficulty at each examination period. The qualifying exam lasts for 4 hours. The results of a candidate’s qualifying exam are considered successful when the candidate earns a total score of at least 60%. In the event of not meeting the 60% minimum passing grade, a Ph.D. candidate is allowed to retake the exam one more time prior to the completion of the 5th academic semester of study in the Ph.D. programme. In this re-examination, the student can only be examined in those areas where the score attained in the first examination was less than 50%, provided that a score of at least 40% was obtained in all areas.

The exam is given in the beginning of the fall and spring semesters (it is usually scheduled during the second week from the start of each academic semester).

Dissertation Proposal

Each doctoral student must prepare a brief written proposal of the intended doctoral research and make a comprehensive oral presentation on the proposed work, that demonstrates a sound understanding of the dissertation topic and awareness in depth of the relevant literature, the research methodology that is necessary. The proposal presents the work done on the topic by the student to date, as well as the intended steps to be taken toward the completion of the doctoral thesis.

The proposal must be scheduled according to the Regulations of Graduate Studies. The written proposal
must be submitted to the candidate’s three-member Doctoral Examination Committee, at least one week before the date of the examination. This Committee is assigned for each candidate by the Departmental Council upon recommendation by the CEE Graduate Studies Committee, based on a written petition by the candidate’s academic advisor. One of the Committee’s members may be from another academic department of the University of Cyprus in a field of study relevant to the doctoral candidate’s thesis research, or from another university, or research centre. The oral presentation given to the three-member Doctoral Examination Committee must not exceed the time limit of 30 minutes and be followed by a discussion with the members of the Committee. If the Committee members have concerns about either the substance of the proposal or the student’s understanding of the topic, then the student will have to prepare a second presentation that focuses on the areas of concern. The second presentation has a tentative duration of 15 minutes and is followed by a new discussion with the Committee members. Students can continue their research only if the proposal is approved.

**Doctoral Dissertation**

A Doctoral degree requires the successful completion of original research work and a thesis. A doctoral candidate’s research topic is selected in collaboration with the candidate’s academic advisor. The level of quality of doctoral theses is warranted through the fulfilment and satisfaction of basic conditions, as these are stated by the University’s Senate (Study Regulations and Graduate Studies Regulations). It is therefore imperative that all doctoral students study these guidelines carefully.

**Dissertation Defence**

Each doctoral candidate is required to defend the originality and quality of his research during an oral dissertation defence, which is administered by the Examination Committee consisting of at least five members. This Committee is assigned by the Departmental Council upon recommendation of the Department’s Graduate Studies Committee, in consultation with the candidate’s academic advisor. The Examination Committee includes three CEE faculty members (one of which is the candidate’s academic advisor), one member from another university or research institute and one member from the faculty of another department of the University, who has relevant knowledge to the Ph.D. research topic or from another university or research institute. The Examination Committee is chaired by a member of the CEE Department, but not the thesis advisor.

The candidate is required, at least one month prior to the thesis defence, to submit a copy of the dissertation to each member of the Examination Committee. At the same time, the candidate must make an additional copy available to any member of the University Community, wishing to read the dissertation prior to the defence, and must also arrange for the issuance of a public notification of the upcoming defence by the CEE Graduate Studies Committee.

A thesis defence, consists of three stages: (a) a public presentation of the doctoral research work by the candidate with a maximum duration of 60 minutes, which is followed by public discussion, (b) a discussion on the thesis work with the Examination Committee members, and (c) a concluding closed session of the Examination Committee for making a collective assessment of the doctoral work.

The Examining Committee will determine the acceptability of the candidate’s dissertation and oral performance, and propose modifications to the written dissertation if appropriate, as well as a time plan for the candidate to address such changes in mutual agreement with the thesis advisor.

Upon the completion of the candidate’s doctoral defence, the Examination Committee submits in writing to the CEE Chairman its justified recommendation, together with possible comments on the candidate’s thesis. The Chairman forwards the Committee’s recommendation to the University Senate for approval. If the Examination Committee recommends modifications or improvements to the doctoral thesis in question, final approval by the Senate is granted only after the academic advisor confirms in writing the successful compliance to the Committee’s comments. The candidate must then submit two original hard copies of the dissertation, one to the University library and one for the CEE Department records, as well as an electronic version of the dissertation to the CEE Department for documentation and dissemination. If the dissertation is rejected, the candidate is entitled to request a repetition of the defence one more time. In this case, the terms for resubmission of the dissertation must be set out in writing by the Examination Committee.

For more information on the procedures for the comprehensive examination, the dissertation proposal, the doctoral dissertation, the dissertation defence and the composition of the Committees, please refer to the Admission and Attendance Regulations – Application Requirements or consult the Graduate School, or the Department Secretariat.

**Graduate Level Courses**

Students must successfully take a number of courses related to their graduate programme of study, i.e. civil or environmental engineering, that will credit them with the required number of ECTS according to their programme requirements. The following tables indicate the two groups of courses that correspond to civil and environmental engineering, from which students may select the relevant courses. The related tables also define the courses of categories A and B, with regards to the five specialisations of the Civil Engineering Degrees.
### Civil Engineering Courses

#### Earthquake Engineering and Structural Analysis

<table>
<thead>
<tr>
<th>Category-A (Basic Courses)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEE 501 Advanced Computer-Aided Structural Analysis</td>
</tr>
<tr>
<td>CEE 521 Structural Dynamics and Earthquake Engineering</td>
</tr>
<tr>
<td>CEE 522 Advanced Topics in Earthquake Engineering</td>
</tr>
<tr>
<td>CEE 523 Passive and Active Control of Structural Systems</td>
</tr>
<tr>
<td>CEE 531 Seismic Behaviour and Assessment of Reinforced Concrete Structures</td>
</tr>
<tr>
<td>CEE 537 Rehabilitation and Strengthening of Structures</td>
</tr>
<tr>
<td>CEE 545 Nonlinear Structural Analysis</td>
</tr>
<tr>
<td>CEE 555 Soil Dynamics and Engineering Seismology</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category-B (Relevant Courses)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEE 500 Engineering Applications with Software Development</td>
</tr>
<tr>
<td>CEE 512 Risk Analysis in Civil and Environmental Engineering</td>
</tr>
<tr>
<td>CEE 526 Finite Element Methods</td>
</tr>
<tr>
<td>CEE 532 Advanced Technology of Materials</td>
</tr>
<tr>
<td>CEE 533 Local and Traditional Building Materials</td>
</tr>
<tr>
<td>CEE 535 Plasticity Theory</td>
</tr>
<tr>
<td>CEE 538 Experimental Methods in Structural Engineering</td>
</tr>
<tr>
<td>CEE 540 Behaviour and Design of Reinforced Concrete Structures</td>
</tr>
<tr>
<td>CEE 543 Bridge Engineering</td>
</tr>
<tr>
<td>CEE 547 Masonry Structures</td>
</tr>
<tr>
<td>CEE 556 Advanced Foundation Engineering</td>
</tr>
</tbody>
</table>

Course categories: A – Basic, B – Relevant, C – CEED, D - UCY

### Novel and Traditional Construction Materials

<table>
<thead>
<tr>
<th>Category-A (Basic Courses)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEE 532 Advanced Technology of Materials</td>
</tr>
<tr>
<td>CEE 533 Local and Traditional Building Materials</td>
</tr>
<tr>
<td>CEE 534 Physical properties and related durability problems of construction materials</td>
</tr>
<tr>
<td>CEE 535 Plasticity Theory</td>
</tr>
<tr>
<td>CEE 538 Experimental Methods in Structural Engineering</td>
</tr>
<tr>
<td>CEE 539 Advanced Topics in Novel and Traditional Construction Materials</td>
</tr>
<tr>
<td>CEE 546 Building Physics</td>
</tr>
<tr>
<td>CEE 547 Masonry Structures</td>
</tr>
<tr>
<td>CEE 562 Asphalt Materials</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category-B (Relevant Courses)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEE 526 Finite Element Methods</td>
</tr>
<tr>
<td>CEE 531 Seismic Behaviour and Assessment of Reinforced Concrete Structures</td>
</tr>
<tr>
<td>CEE 536 Energy Efficiency of Buildings</td>
</tr>
<tr>
<td>CEE 537 Rehabilitation and Strengthening of Structures</td>
</tr>
<tr>
<td>CEE 540 Behaviour and Design of Reinforced Concrete Structures</td>
</tr>
<tr>
<td>CEE 586 Sustainable Built Environment</td>
</tr>
</tbody>
</table>

Course categories: A – Basic, B – Relevant, C – CEED, D - UCY

### Geotechnical Engineering

<table>
<thead>
<tr>
<th>Category-A (Basic Courses)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEE 509 Computational Mechanics</td>
</tr>
<tr>
<td>CEE 526 Finite Element Methods</td>
</tr>
<tr>
<td>CEE 535 Plasticity Theory</td>
</tr>
<tr>
<td>CEE 555 Soil Dynamics and Engineering Seismology</td>
</tr>
<tr>
<td>CEE 556 Advanced Foundation Engineering</td>
</tr>
<tr>
<td>CEE 557 Coastal and Offshore Geotechnical Engineering</td>
</tr>
<tr>
<td>CEE 558 Advanced Topics in Geotechnical Engineering</td>
</tr>
<tr>
<td>CEE 574 Environmental Geotechnics</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category-B (Relevant Courses)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEE 500 Engineering Applications with Software Development</td>
</tr>
<tr>
<td>CEE 534 Physical Properties and Related Durability Problems of Construction Materials</td>
</tr>
</tbody>
</table>

### Construction and Transport Infrastructure Management

<table>
<thead>
<tr>
<th>Category-A (Basic Courses)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEE 511 Construction Engineering and Management</td>
</tr>
<tr>
<td>CEE 516 Building Information Models</td>
</tr>
<tr>
<td>CEE 517 Operations Research in Civil and Environmental Engineering</td>
</tr>
<tr>
<td>CEE 560 Advanced Transport Planning</td>
</tr>
<tr>
<td>CEE 563 Advanced Topics in Traffic Engineering and Intelligent Transport Systems-ITS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category-B (Relevant Courses)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEE 512 Risk Analysis in Civil and Environmental Engineering</td>
</tr>
<tr>
<td>CEE 513 Specifications and Conditions of Construction Contracts</td>
</tr>
<tr>
<td>CEE 515 Advanced Topics in Construction Management</td>
</tr>
<tr>
<td>CEE 561 Highway Design and Road Safety</td>
</tr>
<tr>
<td>CEE 562 Asphalt Materials</td>
</tr>
<tr>
<td>CEE 564 Civil/Transport Economics and Finance</td>
</tr>
<tr>
<td>CEE 565 Multi-Modal Systems and Logistics</td>
</tr>
<tr>
<td>CEE 566 Transit Systems</td>
</tr>
<tr>
<td>CEE 567 Advanced Topics in Transport Infrastructure</td>
</tr>
<tr>
<td>CEE 581 Environmental Risk Assessment</td>
</tr>
</tbody>
</table>

Course categories: A – Basic, B – Relevant, C – CEED, D - UCY
Environmental Engineering Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEE 500</td>
<td>Engineering Applications with Software Development</td>
</tr>
<tr>
<td>CEE 512</td>
<td>Risk Analysis in Civil and Environmental Engineering</td>
</tr>
<tr>
<td>CEE 534</td>
<td>Physical properties and related durability problems of construction materials</td>
</tr>
<tr>
<td>CEE 536</td>
<td>Energy Efficiency of Buildings</td>
</tr>
<tr>
<td>CEE 571</td>
<td>Computational Hydraulics</td>
</tr>
<tr>
<td>CEE 572</td>
<td>Groundwater Hydrology</td>
</tr>
<tr>
<td>CEE 574</td>
<td>Environmental Geotechnics</td>
</tr>
<tr>
<td>CEE 576</td>
<td>Environmental Fluid Mechanics</td>
</tr>
<tr>
<td>CEE 580</td>
<td>Dynamics of the Atmosphere and Air Pollution Dispersion</td>
</tr>
<tr>
<td>CEE 581</td>
<td>Environmental Risk Assessment</td>
</tr>
<tr>
<td>CEE 582</td>
<td>Solid and Hazardous Waste Management</td>
</tr>
<tr>
<td>CEE 583</td>
<td>Physicochemical and Biological Processes for the Treatment of Wastewater</td>
</tr>
<tr>
<td>CEE 584</td>
<td>Advanced Topics in Environmental Engineering</td>
</tr>
<tr>
<td>CEE 585</td>
<td>Experimental methods in water and wastewater analysis and treatment</td>
</tr>
<tr>
<td>CEE 586</td>
<td>Sustainable Built Environment</td>
</tr>
<tr>
<td>CEE 587</td>
<td>Coastal Zone Engineering and Management</td>
</tr>
<tr>
<td>CEE 596</td>
<td>Marine and Wind Energy</td>
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Courses Description

**CEE 500 Engineering Applications with Software Development (8 ECTS)**

From Procedure-Oriented to Object-Oriented Programming (OOP). OOP with Java. Development of OOP software for solving engineering problems utilizing classes and objects, inner and anonymous classes, interfaces, inheritance and polymorphism. webpage development including Java applets. software development with graphical-user interfaces and graphical components. events and exception handling. Utilizing multithreading. Design patterns for developing extendable Software Applications.

**CEE 501 Advanced Computer-Aided Structural Analysis (8 ECTS)**


**CEE 509 Computational Mechanics (8 ECTS)**

Basic concepts and solution techniques: Preliminaries, non-linear finite element analysis, Geometrically non-linear analysis, solution techniques in quasi-static analysis, solution techniques for non-linear dynamics. Computational analysis with damage mechanics, plasticity models and time-dependent material models. Coupled problems: Pore pressure - deformation analysis.

**CEE 511 Construction Engineering and Management (8 ECTS)**


**CEE 512 Risk Analysis in Civil and Environmental Engineering (8 ECTS)**

Advanced topics is stochastic analysis in civil and environmental engineering. Probability and statistics, data analysis, risk assessment and analysis, hypothesis testing, multi-factored analysis, decision trees, neurofuzzy systems, regression, system reliability, Markov chains and simulation of civil and environmental systems. Applications from the field of Civil and Environmental Engineering.

**CEE 513 Specifications and Conditions of Construction Contracts (8 ECTS)**

General Issues of Contract Law (offer, acceptance, consideration, legal relations, terms and conditions, construction of contracts). Conditions of construction contracts, business risk allocation, breach of a contract and claims examination. Conditions of contracts for construction, conditions of subcontracts, design contracts, design and build contracts, public – private – partnership. Tender documents and procedures for awarding public work contracts, general issues for technical specifications for construction works and dispute resolution procedures.

**CEE 515 Advanced Topics in Construction Management (8 ECTS)**

Advanced and contemporary topics in construction engineering and management. The topics include, among other, offerings on Fully Integrated and Automated Project Processes (FIAPP), 3D/4D computer-aided modelling of construction processes, decision-support systems in construction, construction and the law, etc.

**CEE 516 Building Information Models (8 ECTS)**

Building Information Models (BIM) and FIAPP in construction engineering and management. Development of relational database management systems for BIM, model-centric and data-centric BIM architectures. Application of BIM in design, quantity take off, costing, scheduling, resource productivity and management, structural analysis and energy efficiency of buildings. Use of specialized BIM software (Revit, Primavera, SQL/ODBC, Ecotect).

**CEE 517 Operations Research in Civil and Environmental Engineering (8 ECTS)**

Examples (structural analysis and design, construction management and scheduling, transportation, environmental issues, etc.) and practical applications with software usage.

**CEE 521 Structural Dynamics and Earthquake Engineering (8 ECTS)**

**CEE 522 Advanced Topics in Earthquake Engineering (8 ECTS)**
The course does not have specific course material, but it is offered circumstantially by specialists in the specification with visiting Faculty or a specialist covering scientific topics in the field of Earthquake Engineering.

**CEE 523 Passive and Active Control of Structural Systems (8 ECTS)**

**CEE 526 Finite Element Methods (8 ECTS)**

**CEE 528 Advanced Topics in Structural Analysis (8 ECTS)**
The course does not have specific course material, but it is offered circumstantially by specialists in the specification with visiting Faculty or a specialist covering scientific topics in Structural Analysis.

**CEE 531 Seismic Behaviour and Assessment of Reinforced Concrete Structures (8 ECTS)**
The course deals with the strength and deformation capacity of reinforced concrete structures, the hierarchy of mechanisms of resistance and failure of structures, the effects of large amplitude cycling and consequent strength degradation of the hysteretic performance of structures. ADPS spectra – damping – local vs global demands. Chord rotation (relative drift ratio) in reinforced concrete structures. Typical deficiencies of old-type lightly reinforced construction. Available deformation capacity, Evaluation of beam-column joints, anchorages and lap-splices, short-columns, identification of the weak link in the structural system, establishing the pushover (resistance) curve of the structure. Lateral stiffness, strength at yielding and at failure, examples of direct assessment of structures damaged in past earthquakes, forensic investigation of collapse. Maximum tolerable ground acceleration in existing structures limiting collapse.

**CEE 532 Advanced Technology of Materials (8 ECTS)**

**CEE 533 Local and Traditional Building Materials (8 ECTS)**
Natural building and decorative stones and stone structures, Properties of local stones, Decay and protection of stone, imported stone carbon footprint, Local aggregates: characteristics and their effect on the quality of composite materials, Fired clay bricks, binders, mortars and plasters, local and traditional mortars, earthen architecture and adobe, timber.

**CEE 534 Physical Properties and Related Durability Problems of Construction Materials (8 ECTS)**
Porosity and porous media, saturated and unsaturated flow, one dimensional flow, sorptivity, sharp front theory, applications of sharp front theory, evaporation and drying, salt crystallisation, rising ramp.

**CEE 535 Plasticity Theory (8 ECTS)**

**CEE 536 Energy Efficiency of Buildings (8 ECTS)**
Basic principles of energy efficiency of buildings, methodology of energy analysis, steady and unsteady heat transfer in two- and three-dimensional analysis of structural materials and components with conduction, convection and radiation, prerequisites of energy efficiency, materials for thermal insulation, simulation methods for energy efficiency, certification, European and Cypriot standards and codes for energy efficiency, assessment of energy efficiency, optimized technologies for energy efficient design, passive cooling and heating, case studies in buildings (residential, offices, organisations etc.).

**CEE 537 Rehabilitation and Strengthening of Structures (8 ECTS)**
CEE 538 Experimental Methods in Structural Engineering (8 ECTS)

CEE 539 Advanced Topics in Novel and Traditional Construction Materials (8 ECTS)
This course does not have specific course material, but it is offered circumstantially by specialists in the specification with visiting faculty or specialists covering scientific topics in novel and traditional construction materials.

CEE 540 Behaviour and Design of Reinforced Concrete Structures (8 ECTS)

CEE 541 Structural Stability (8 ECTS)

CEE 545 Nonlinear Structural Analysis (8 ECTS)
The aim of the course is to introduce students to Nonlinear Structural Analysis through practical simulation applications for static and dynamic analysis, design and assessment of structures. The course is based on the learning and usage of modern structural analysis software and consists of a series of computational lab sessions, during which the way to simulate each application is described and the basic relevant theory is given. The structure types examined include trusses, planes and space frames made of steel or reinforced concrete, as well as masonry structures. The course is concerned with the evaluation of the limit load and the collapse mode of a structure, the exploitation of various material models for structural steel, reinforced concrete and masonry, the use of concentrated or distributed plasticity, the implementation of nonlinear static (pushover) and dynamic time-history structural analysis, etc.

CEE 546 Building Physics (8 ECTS)
Fundamental and applied topics in Building Physics: transfer of heat and moisture, air flow indoors and outdoors, natural ventilation mechanisms. The course focuses on the design of structural components such as foundations, windows, roofs for issues of heat and moisture transfer, energy saving, as well as issues of climate, thermal comfort and indoor air quality.

CEE 547 Masonry Structures (8 ECTS)
Masonry Materials (stone, adobe/earth-based brick, mortar, timber) and their mechanical behaviour. Masonry Types and construction techniques (unreinforced, reinforced, tier-laced, confined-masonry). Mechanical behaviour of Masonry in compression, tension, bending, shear due to in/out-of-plane actions (mainly as a result of gravitational and seismic loads). Behaviour of interfaces within the Masonry and force transfer mechanisms. Construction details of Masonry buildings (lintels, arches, etc.). Evaluation of mechanical characteristics of Masonry and its constituent materials (in situ or at lab). Assessment, damage/pathology and retrofit/strengthening of Masonry buildings. Eurocodes and other codes for designing/assessing Masonry walls and buildings. Simulation of Masonry structures and static/dynamic analysis using finite element software.

CEE 550 Soil Dynamics and Engineering Seismology (8 ECTS)

CEE 556 Advanced Foundation Engineering (8 ECTS)

CEE 557 Coastal and Offshore Geotechnical Engineering (8 ECTS)

CEE 558 Advanced Topics in Geotechnical Engineering (8 ECTS)
This course does not have specific course material, but it is offered circumstantially by specialists in the specification with visiting faculty or specialists covering scientific topics in Geotechnical Engineering.

CEE 560 Advanced Transport Planning (8 ECTS)
This is a course that examines the complex relationship between transportation, land use and urban form as well as the varied methods and concepts available to planners seeking to influence this relationship. The course provides an overview of alternatives available to transportation planners, as they attempt to (a) avoid long and unnecessary motorized travel and (b) shift the movement of people to socially efficient modes such as walking, biking and public transit. Moreover, the course looks at how transportation planners craft projects and policies that are both technically sound and feasible at the same time, introducing (and critiquing) some of the tools and skills used by professionals in this field. The course is quantitatively-based and aims to develop advanced modelling skills.
The course aims at the advanced concepts, tools and technologies concerning the design of roadways. An emphasis is given on the G design, as well as on the equipment that is used in contemporary highway design. Moreover, the elements of risk and safety are introduced, covering related practical and methodological aspects. This course consolidates knowledge from highway design, traffic engineering and safety research in a contemporary and comprehensive framework.

**CEE 562 Asphalt Materials (8 ECTS)**

Identification and physical properties of asphalt materials, asphalt refining, uses and properties, physical properties of aggregates, aggregate testing, hot mix asphalt (HMA), cold mix asphalt, HMA design methodology, factors affecting HMA, HMA material characterisation, quality control, equipment and construction, behaviour of flexible pavements and typical distresses, maintenance of HMA pavements, pavement rehabilitation, recycling of HMA and special mixes and additives.

**CEE 563 Advanced Topics in Traffic Engineering and Intelligent Transport Systems-ITS (8 ECTS)**

The course aims at deepening the understanding of the traffic flow phenomenon and the analytical models that are used in this area. The perspective of the course will lead to the technological aspects of contemporary traffic networks surveillance, operations and control as those are incorporated in the broad area of Intelligent Transportation Systems (ITS). Students with interest in engineering, transportation systems, communication systems, vehicle technologies, transportation planning, transportation policy and urban planning are encouraged to participate since ITS refers to information and communication technologies, as applied to transportation infrastructure and vehicles, improving transportation sector’s efficiency, safety and the environmental conditions. The recent availability and accessibility of mobile technology suggests that ITS applications is an area of rich academic and industrial opportunities. It is noted that ITS is an international methodological paradigm intended to improve the effectiveness and efficiency of surface transportation systems through advanced technologies in information systems, communications, and sensors. In addition to discussions that have to do with technology, the course will include topics related to policy, economics, security, as well as urban and rural planning.

**CEE 564 Civil/Transport Economics and Finance (8 ECTS)**

The content covers a wide variety of topics relating to the economic aspects of transportation, government regulatory policies regarding transportation, and issues that concern transportation industry planners. The unifying theme concerns the application of economic theory and/or applied economic methodologies to transportation questions. Methods of funding and financing transport network maintenance, improvement and expansion are debated extensively and form part of the transport economics field. Funding issues relate to the ways in which money is raised for the supply of transport capacity. Taxation and pricing of transport services will also be included covering issues of loans, bonds, public-private partnerships and concessions, as well as other methods of financing transport investment.

**CEE 565 Multi-Modal Systems and Logistics (8 ECTS)**

This course will cover the fundamental analytic tools, approaches, and techniques which are useful in the design and operation of multimodal transport, logistics systems and integrated supply chains. The material is offered from a managerial perspective with an emphasis on where and how specific tools can be used to improve overall performance and reduce the total cost of a supply chain. A strong emphasis is given on the development and use of fundamental and advanced models to illustrate the underlying concepts involved in both intra and inter-company multimodal and logistics operations. While the main objective is to develop and use models to help us analyse these situations, extended use of examples from industry and realistic illustrations of the concepts in practice will be provided. This is neither a purely theoretical nor a case study course, but rather an analytical course that addresses real problems encountered when theory is put into practice.

**CEE 566 Transit Systems (8 ECTS)**

This course covers the strategic and operational planning and design of transit systems both within the urban (bus, tram and metro systems) as well as in the means of mass transportation in interurban space. Issues related to capacity, level-of-service, optimal design and management, routing, scheduling (of rolling stock as well as of personnel), technological developments, pricing strategies and the particularities emerging in alternative transit systems are analysed. Competitiveness and complementarity among means of transport is also covered, while new organisation schemes (e.g. demand responsive systems, dedicated transit systems, taxi market organisation) are discussed. Special care for paratransit systems is taken. The course balances the theoretical and practical aspects of transit systems with an emphasis on modelling and decision-making.

**CEE 567 Advanced Topics in Transport Infrastructure (8 ECTS)**

This course covers several topics of Transport Infrastructure, like terminal design, transit systems, railways and metro/tram systems, pipelines and a lot of other related issues that are not covered in other courses.

**CEE 571 Computational Hydraulics (8 ECTS)**

Principles of Computational Hydrodynamics with emphasis on finite differences and finite volumes. Application Examples include open channel flows, rivers, lakes, and open seas as well as hydrodynamic loading of structures.

**CEE 572 Groundwater Hydrology (8 ECTS)**


**CEE 574 Environmental Geotechnics (8 ECTS)**

CEE 576 Environmental Fluid Mechanics (8 ECTS)


CEE 580 Dynamics of the Atmosphere and Air Pollution Dispersion (8 ECTS)


CEE 581 Environmental Risk Assessment (8 ECTS)

Introduction to risk assessment, definitions, methodology (problem formulation, hazard identification, exposure assessment, exposure-response assessment, risk characterisation), basic knowledge in chemistry and biology, fate of pollutants in environmental media, mass and energy balances, toxic organic compounds, heavy metals, physicochemical properties (ideal gas law, Dalton’s law, Raoul’s law, Henry’s law, Le Chatelier’s principle), sorption, adsorption, evaporation, hydrolysis, photochemical transformations, biological transformations, bio-concentration, bioaccumulation, uncertainties in risk assessment, case studies. The course covers topics related to characterizing source areas, linking fate and transport mechanisms, evaluating exposure pathways and applying toxicology data to evaluate environmental risk in a variety of differing contexts.

CEE 582 Solid and Hazardous Waste Management (8 ECTS)

Management of solid and hazardous waste (definitions, legislative framework, waste generation and characterisation, classification and labelling). Analysis and design of waste collection and treatment systems: Recycling, resource recovery, mechanical, thermal and biological treatment processes. Landfills for solid and hazardous waste (design principles, hydrology, geotechnical aspects, gas production, management of leachates, environmental risks, operation and monitoring, closure, aftercare and final use).

CEE 583 Physicochemical and Biological Processes for the Treatment of Wastewater (8 ECTS)


CEE 584 Advanced Topics in Environmental Engineering (8 ECTS)

Special Advanced Topics in Environmental Engineering, such as: Advanced wastewater treatment technologies, advanced water treatment technologies, aquatic chemistry, ionic equilibrium, solubility and pH calculations in water, monitoring of solid waste disposal, development of management systems for special waste, energy recovery from biomass, monitoring and control of industrial emissions, integrated management systems of water resources, advanced environmental fluid dynamics including geophysical and coastal fluid dynamics, weather forecasting systems, climate change prediction, atmospheric dynamics and air pollution dispersion, dynamics of atmospheric boundary layer, monitoring and control of atmospheric pollution.

CEE 585 Experimental Methods in Water and Wastewater Analysis and Treatment (8 ECTS)

Sampling, samples transport and preservation, laboratory analytical methods, quality assurance and quality control. Water analysis (organoleptic methods, volumetry, nephelometry, spectrophotometry, spectroscopy, chromatography, mass spectrometry), microbiological analysis, the physics, chemistry and biology of water. Water and wastewater characterisation (fresh water / potable water / industrial wastewater / urban wastewater). Treatability of wastewater (e.g., sedimentation, coagulation-floculation (jar tests), oxidants demand). Biological treatment (membrane bioreactor), Chemical treatment (UV/H2O2, homogeneous and heterogeneous photocatalysis, ozonation), Ultrafiltration. Eco- and phyto-toxicity tests.

CEE 586 Sustainable Built Environment (8 ECTS)

Holistic approach and lateral integration of fundamental aspects and current challenges in the sustainable design of the built environment. Includes: Climate change, urban physics, environmental pollution, global energy demands, sustainable building materials, rational water use, waste management, renewable/alternative energy technologies, perception of human comfort, ecological energy technology analysis, legal framework, environmental and operational management & strategies. The course also demonstrates examples of both sustainable and unsustainable aspects of current design practice of the built environment, and how international policy frameworks can act as both drivers and barriers to sustainable solutions.

CEE 587 Coastal Zone Engineering and Management (8 ECTS)

Coastal Zone Engineering and Management module focuses on the study and understanding of (1) the physical phenomena and the mechanisms dictating the morphodynamical evolution of the coastal zone, (2) the engineering methodologies and works for protecting and managing the coastline, and (3) the impact of a deteriorating coastal zone to the natural and anthropogenic environment and system. In particular, the module introduces the students to the theory and application of waves and nearshore hydrodynamics and morphodynamics, to the design principles and approaches for ‘hard’ and ‘soft’ coast protection schemes, and to the basic strategies and requirements for an integrated coastal zone management.
CEE 596 Marine and Wind Energy (8 ECTS)
The module is addressed to students coming from various backgrounds, with an interest in the marine environment and an aspiration to specialize in renewable energy. The aim is to introduce the technical, environmental and, to a lesser degree, financial and legislative challenges of marine (mostly wind and wave) renewables. This aim is achieved through:
1. Examining the natural variation of marine renewable energy sources.
2. Learning about the principles of such energy conversion.
3. Analysing the design fundamentals of marine and wind energy systems.
4. Exploring a range of environmental and financial constraints.

CEE 597 Environmental Biotechnology (8 ECTS)
Environmental Biotechnology focuses on the utilisation of microbial processes in liquid and solid waste treatment and bioremediation. The course aims at understanding the basic principles of cellular biology and bioengineering and their contribution to sustainability and bio-economy. Students will be trained in the analysis, design, control and optimisation of bioprocesses and on the use of waste streams for the formation of industrially useful products.

CEE 598 Biotechnological Production of Biofuels and Bioenergy (8 ECTS)
Biotechnological production of biofuels and bioenergy focuses on the use of waste to produce energy and fuels aiming at the reduction of environmental pollution. The course aims at understanding the basic processing of microbial fuel cells, biofuels production (bio-gas, hydrogen, bioethanol, biodiesel, bio-electricity generation) and the biotechnological processing of waste towards that direction. The students will be trained in analysis, design, control and optimisation of bioprocesses for biofuels and bioenergy production, as well as (bio) processing of waste.

CEE 610 Seminars for Graduate Students (8 ECTS)
Graduate seminars organised by the CEE Department on contemporary research issues of local and international interest. The list of seminars is announced at the beginning of each academic semester (approximately 6-7 seminars per semester) and graduate students (MEng/MSc) are required to attend at least 8 seminars during their course of studies. Doctoral candidates are required to attend at least 16 seminars during their course of studies, in addition to presenting one seminar themselves in relation to their doctoral research. (0 ECTS.)

CEE 650 Independent Study (8 ECTS)
Individual study, research, or laboratory investigations under faculty supervision.

CEE 680-683 M.Sc. Research
Programme of Graduate Research leading to the defence and writing of an M.Sc. thesis (ECTS units are assigned by the thesis advisor).

CEE 689 Research Project (10 ECTS)
Individual research project leading to the completion of the M.Eng. Degree.

CEE 690-696 Ph.D. Research
Graduate research within the Ph.D. Programme.

CEE 697-699 Ph.D. Thesis Authoring
Authoring of the Ph.D. thesis. These courses are only taken upon completion of all ECTS units required under the Ph.D. Research course-codes (ECTS units are assigned by the Thesis Advisor).

CEE 701-702 Examination of the Research Proposal for the Doctoral Thesis
Examination of the research proposal for the doctoral thesis, by the 3-member doctoral Committee, according to the Graduate Studies Regulations of the UCY.
Dimos C. Charmpis, Associate Professor
His research interests cover various topics of computational mechanics and aim toward the exploitation of innovative computing systems and numerical methods for the analysis and design of structures under static or seismic loading.

Symeon Christodoulou, Professor
Construction engineering and management, fully integrated and automated project processes, Information technology, Risk analysis and management of urban water distribution systems, Artificial intelligence for civil engineering and Construction applications.

Ioannis Ioannou, Professor
His research interests have a particular emphasis on studies of water movement in porous construction materials and the associated problems of material durability.

Loukas Dimitriou, Assistant Professor
Design and analysis of civil and transportation infrastructure, The use of advanced methods and techniques for optimizing systems' design and performance and in developing frameworks for supporting decisions in his fields.

Despo Fatta-Kassinos, Professor
Environmental pollution monitoring, water and wastewater treatment, wastewater management, contaminants of emerging concern, environmental risk assessment.

Nicolas Hadjipantelis, Lecturer
Steel Structures. Wire Arc Additive Manufacturing. Prestressed Steel Structures. Structural Stability. Experimental (e.g. full-scale, member and material testing), numerical (e.g. finite element modelling) and analytical (e.g. energy methods and structural mechanics) methods

Petros Komodromos, Associate Professor
Modern earthquake resistant design and seismic isolation, Computer-aided engineering. Utilization of information technology in engineering.

Dimitrios Loukidis, Associate Professor
Foundation engineering, Computational geomechanics, Constitutive modelling, Geotechnical earthquake engineering, Expansive ground, Landslides.

Marios Mavros, Lecturer

Marina Neophytou, Professor
Environmental fluid mechanics (atmospheric pollution dispersion, environmental turbulence modelling, computational fluid dynamics modelling at the local and urban scales, indoor air pollution, buoyancy-driven flows, building ventilation, sustainable building design.

Panos Papanastasiou, Professor
Applied and computational mechanics with applications in constitutive modelling of cohesive-frictional materials, micro-mechanics, fracture mechanics, environmental geomechanics, petroleum engineering and finite element analysis.

Michalis Petrou, Professor
Civil engineering materials and experimental methods, including behaviour of reinforced and prestressed concrete, self-compacting concrete, high performance concrete, fibre reinforced polymer composites, high performance steel, laboratory and field testing of structures, structural modelling, and repair/strengthening of structures.

Panayiotis Roussis, Assistant Professor
Earthquake engineering and structural dynamics with a focus on the development and implementation of seismic-isolation and energy-dissipation systems, earthquake-simulator testing.

Dimtris Stagonas, Lecturer
Coastal and offshore engineering and energy with emphasis on flow-structure interaction, climate change impacts in coastal infrastructure, and solutions for marine renewable energy vectors.

Argyro Tsipa, Lecturer
Environmental Biotechnology, Bioremediation, Waste and wastewater biodegradation, Formation and characterization of high added-value products by bio-processes, Metabolomics and Transcriptomics.

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Electrical and Computer Engineering is a key discipline, at the heart of the technology frontier. It concentrates on the design and analysis of electrical, electronic, and optical devices, and the processing, control, and transmission of information and energy. The scientific disciplines used in Electrical and Computer Engineering include, amongst others, the theory and application of electrical, electromagnetic and optical phenomena, systems theory, control theory, communications theory, information theory, integrated circuit design, instrumentation and sensors and computational hardware and software.

The Department offers the following graduate degrees:

- Master and Doctoral Degrees in Electrical Engineering
- Master and Doctoral Degrees in Computer Engineering
- Master of Science in Intelligent Critical Infrastructure Systems (in English)
- Master in Energy Technologies and Sustainable Design (Interdepartmental Programme of the Faculty of Engineering)
- Master in Artificial Intelligence (Interdepartmental Programme of the Department of Electrical and Computer Engineering and the Department of Computer Science).

Applications must be submitted to the Department and are considered for evaluation by the Postgraduate Studies Committee which makes suggestions to the Departmental Council for final approval. Upon acceptance to the programme, students are assigned a faculty member as their academic advisor, whom they must consult on academic and issues. In addition, students who are admitted to the M.Sc. or Ph.D. programmes are assigned a research supervisor, whom they consult on all research related issues concerning their theses work.

For more information on the postgraduate programmes, please refer to the Attendance Regulations and Application Requirements. The Department requires the following for admission:

1. A completed application form, which can be found on the Graduate School’s website and is submitted online.
2. A Curriculum Vitae indicating the student’s education, academic and research experience, any publications, awards, etc.
3. A short statement (at most two pages) outlining the reasons the candidate wishes to join the programme, the candidate’s professional and research experience, future goals, etc.
4. At least three letters of recommendation from academic or professional advisors.
5. Copies of representative publications, if any (no more than three).
6. Copies of all degrees and transcripts. If applicable, a letter from the Registrar of the student’s current university, verifying the expected graduation date (as described above).
7. Copies of any other supporting material, such as exams, honours, awards, etc. Applications must be submitted in English.

Evaluation Criteria
The criteria for the evaluation of the candidates are the following:

• Academic background.
• Research background.
• Recommendation letters.
• Additional qualifications.
Familiarity with the English language is strongly recommended.

Graduate Degree Programmes
The Department offers seven graduate degrees, as shown below. The official language of all graduate degree programmes is English.

• M.Sc. in Electrical Engineering
• M.Eng. in Electrical Engineering
• M.Sc. in Computer Engineering
• M.Eng. in Computer Engineering
• M.Sc. in Intelligent Critical Infrastructure Systems
• Ph.D. in Electrical Engineering
• Ph.D. in Computer Engineering
• M.Sc. and M.Eng. in Energy Technologies and Sustainable Design (Interdepartmental Programme)
• M.Sc. in Artificial Intelligence (Interdepartmental Programme)

MASTER OF SCIENCE (M.Sc.) AND MASTER OF ENGINEERING (M.Eng.) DEGREES IN ELECTRICAL ENGINEERING/ COMPUTER ENGINEERING
To be awarded the M.Sc. or M.Eng. degree in Electrical or Computer Engineering, students must complete at least 90 ECTS of graduate-level coursework.

For the M.Sc. Degree these units are distributed as follows:

• At least 56 ECTS of graduate-level courses.
• 4 ECTS of graduate-level seminars (ECE 701).
• At least 30 ECTS of original research work, documented by an M.Sc. thesis.

The following rules apply:

• Of the 56 ECTS required, at least 38 must be fulfilled by graduate-level courses in the ECE Department.
• A maximum of 8 ECTS of the total 56 ECTS for courses can be completed by directed/independent study courses (ECE 711 or ECE 713).
• Students may enrol in graduate courses offered by another department in the University of Cyprus or any other accredited university. Units outside the Department must be approved by the Graduate Studies Committee and are not to exceed 18 ECTS unless approved by the Departmental Council.
• Of the 56 ECTS required for graduate-level courses, up to 18 ECTS can be completed by courses which the student completed as part of another postgraduate degree, upon approval by the Departmental Council.
• To satisfy the 4 ECTS requirement for seminars, students must attend at least 25 departmental graduate seminar presentations during their time registered in the ECE graduate programme. The graduate seminar coordinator is responsible for assigning the final grade.

For the M.Eng. Degree, ECTS are allocated as follows:

• At least 80 ECTS of graduate-level courses.
• 2 ECTS of graduate-level seminars (ECE 705).
• 8 ECTS from the individual study course (ECE 723-724).

The following rules apply:

• Of the 80 ECTS required, at least 48 ECTS must be completed by graduate-level courses in the ECE Department.
• A maximum of 8 ECTS of the total 80 ECTS for courses can be completed by directed/independent study courses (ECE 711 or ECE 713).
• Students may enrol in graduate courses offered by another department in the University of Cyprus or any other accredited university. Units outside the Department must be approved by the Graduate Studies Committee and are not to exceed 18 ECTS unless approved by the Departmental Council.
• Of the 80 ECTS required for graduate-level courses, up to 18 ECTS can be completed by courses which the student completed as part of another postgraduate degree, upon approval by the Departmental Council.
• To satisfy the 2 ECTS requirement for seminars, students must attend at least 12 departmental graduate seminar presentations during their time registered in the ECE graduate programme. The graduate seminar coordinator is responsible for assigning the final grade.

Students admitted into the M.Sc. or M.Eng. Programme in Computer Engineering must enrol in the three following core graduate courses:

• ECE 654 Advanced Computer Networks
• ECE 656 Advanced Computer Architecture
• ECE 651 Advanced Iterative Methods

Students admitted to the M.Sc. or M.Eng. Programme in Electrical Engineering, without having completed an undergraduate Electrical Engineering degree, must...
possess fundamental knowledge of basic concepts in the following areas: Signals and systems, electromagnetics and microwaves, circuits and electronics. Similarly, students admitted to the M.Sc. or M.Eng. programme in Computer Engineering, without having completed an undergraduate Computer Engineering, degree must possess fundamental knowledge of basic concepts in the following areas: Computer architecture and organisation, operational systems and algorithms. The academic advisor of each student must determine if, and what, additional coursework is required. This may require completion of up to a maximum of four additional courses from the Department’s curriculum, most probably at the undergraduate level, in the aforementioned areas.

DOCTOR OF PHILOSOPHY (Ph.D.)

Graduate students become candidates for a Ph.D. degree after successfully taking the comprehensive examination. For the fulfilment of a Doctor of Philosophy Degree, the requirements are:

1. Successful completion of 240 ECTS, corresponding to graduate courses (at least 56 ECTS), seminars (at least 4 ECTS), and research (at least 180 ECTS). Students with an M.Sc. or equivalent degree may be partially exempt from the course requirements (up to 32 ECTS), after a recommendation by the Graduate Studies Committee, and subject to approval by the Department Council. Out of the 56 ECTS that correspond to courses, at most 16 can correspond to directed/independent study courses (ECE 751/ECE 752/ECE 753/ECE 754).

2. The 180 ECTS requirement for the dissertation research must be completed by taking Ph.D. research stages (ECE 761-764, 30 ECTS units each), Ph.D. research courses (ECE 765-768, 15 ECTS units each) and/or Ph.D. writing stages (ECE 771-773, 30 ECTS units each). The Ph.D. research stages ECE 761-764 are compulsory for all Ph.D. students and can only be taken one-by-one per semester, for four consecutive semesters. The research stage courses ECE 765-768 are optional and can be taken in parallel with other graduate courses. If, after completing all research stages, the student has not defended his/her doctoral dissertation, then he/she is required to sign up for ECE 771-782.

3. Passing the comprehensive examination from the third until the seventh semester of the programme.

4. Thesis Proposal. The candidate must submit a thesis proposal, outlining the proposed research project in a comprehensive and structured manner. The presentation of the proposal takes place two to four semesters after succeeding in the comprehensive examination.

5. Doctoral Dissertation. The dissertation must include significant research findings and must contain elements which testify to the candidate’s personal contribution.


7. To satisfy the 4 ECTS requirement for seminars, each student must attend at least 25 seminar presentations, during the time registered in the ECE graduate programme. In addition, the student must give a presentation in the seminar series on a research topic of his/her choice. The completeness of the presentation and the thoroughness of the understanding of the subject will be evaluated, and feedback will be given to the student in case the subject of the presentation is related directly to his thesis research work. The graduate seminar coordinator is responsible for assigning the final grade.

The maximum duration allowed for a Ph.D. degree is currently eight (8) academic years. For more information on the requirements for the completion of the Ph.D. degree, please refer to the postgraduate prospectus of the Department.

Research Areas

Research focuses on the following areas:

- Embedded Systems and Hardware
- Computational Intelligence and Robotics
- Computer Networks
- Biomedical Engineering
- Power and Renewables
- Telecommunication Systems and Networks
- Waves and Optics
- Intelligent Systems and Control
- Instrumentation, Sensors and Nanotechnology
- Electronics

Financial Support

The University supports graduate students through teaching assistantships, the number of which depends on the needs of the Department. Most doctoral students are financially supported through competitive research programmes of the Research and Innovation Foundation and the European Union. There are also additional funding opportunities, such as scholarships provided by the University, information on which is available through the Graduate School and through the Academic Affairs and Student Welfare Service.
### Courses Offered

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### Course Descriptions

**ECE 601 Supplementary Autonomous Study for Master Students (2 ECTS)**
Research project related to topics covered by courses offered at the Department. The supervising faculty in consultation with the student decides the area/subject of the research project.

**ECE 621 Random Processes (8 ECTS)**
Fundamentals of random processes: Definition of random processes, continuous and discrete random processes (Poisson, Markov, Gaussian, Wiener and others), stationarity and ergodicity. Analysis and processing of random signals: power spectral density, linear system response, optimum linear systems and the Kalman filter, Minimum mean-square estimation; Kalman filter of Gaussian systems; Markov Chains: discrete and continuous Markov chains, classes of states, recurrence properties, and limiting probabilities. Introduction to Queueing theory: Little’s theorem, the M/M/1 and M/M/k/k queues.

**ECE 622 Information Theory (8 ECTS)**

**ECE 623 Digital Signal Processing (8 ECTS)**
Discrete-time signals and systems; Fourier and Z-transform analysis techniques, sampling of continuous-time signals, elements of FIR and IIR filter design, filter structures; the discrete Fourier transform (DFT); computation of the DFT; Fourier analysis of signals using the DFT.
**ECE 624 Principles of Digital Communications (8 ECTS)**

Elements of communication theory and information theory applied to digital communication systems. Characterisation of communication signals and systems: Representation of band-pass signals and systems, signal space representation, representation of digitally modulated signals, spectral characteristics. Optimal receivers for Gaussian channel with additive white noise, performance of optimal receivers. Carrier and symbol synchronisation, channel capacity and coding. Block and convolutional channel codes.

**ECE 625 Wireless Communication Networks I (8 ECTS)**

Introduction to information theory, path-loss and shadowing, statistical multipath channel models, capacity of wireless channels, diversity, multiple antennas and space-time communications, multi-user systems.

**ECE 626 Image Processing (8 ECTS)**

Review of signals and systems. Two-Dimensional (2-D) signals and Fourier transform; 2-D Z-Transform and stability testing; 2-D DFT, DCT, FFT; 2-D FIR filter design and implementation; image processing basics; edge detection; rank order (median) filtering, motion estimation; image enhancement; image restoration; image coding; advanced topics.

**ECE 627 Machine Vision (8 ECTS)**

Overview of the basic principles of how machines understand and interpret visual information; principles of image formation, characteristics and information mining, object recognition as well as motion and scene analysis; algorithms for object detection and recognition; applications in robotics and intelligent systems; analysis of computer vision and object recognition applications, image formation and processing methods, Bayesian theory, application of statistical methods in object recognition, sensors and image capture machines, as well as man-machine interaction.

**ECE 628 Advanced Communication Systems (8 ECTS)**

Review of basic concepts in communications, including Shannon theorem, Nyquist sampling, basic configurations, and optimal detection in Gaussian channels with additive white noise. Source and channel coding; synchronisation in time and frequency; adaptive equalisation; performance of analog and digital communication systems in the presence of noise; advanced multichannel modulation techniques; introduction to advanced communications technologies such as OFDM and multi-input and multi-output (MIMO) systems; spread spectrum technology; applications to certain practical wireless and wired systems.

**ECE 629 Fibre Optic Communications Systems and Networks (8 ECTS)**


**ECE 630 Optical Networks (8 ECTS)**

Current and future trends in wavelength division multiplexed (WDM) optical networks. Topics include routing and wavelength assignment techniques, fault detection and isolation, fault protection and restoration techniques, switch fabric, node, and network architectures, traffic grooming, service availability, operational aspects of optical mesh networking, optical packet/label/burst switching, optical access networks, optical control plane.

**ECE 631 Systems Theory (8 ECTS)**

Algebraic structures, review of vector spaces and linear algebra; topological structures; optimisation; review of numerical analysis; state-space and input-output descriptions of systems; observability, controllability, and matrix fraction descriptions; observable, controllable canonical forms, and minimum realisations; linear quadratic regulator, pole placement, observers and compensators.

**ECE 632 Security of Computer Systems and Networks (8 ECTS)**

Overview of security threats and problems; introduction to security: Security properties, attacks and threats categories, security design at various network layers; cryptography: Symmetric and asymmetric encryption; secure hash algorithms, digital signatures, key management; access control: authentication, design of authentication protocols, applications (Kerberos, public key infrastructure), certificates management, CRLs management, authorisation; IPsec/TLS/SSL; key management protocols; future developments.

**ECE 634 Introduction to Computational Intelligence (8 ECTS)**

Introduction to the theory, methods and tools of computational intelligence for the analysis, design and optimisation of knowledge representation and decision support systems. Topics include the following: Introduction to optimisation theory including convexity theory, mathematical programming (e.g. linear, quadratic, mixed-integer), unconstrained and constrained optimisation, gradient methods, duality theory, multi-objective optimisation; evolutionary computation including genetic algorithms, genetic programming, evolutionary strategies and differential evolution; computational swarm intelligence including particle swarm optimisation, and ant colony optimisation; artificial immune systems; metaheuristic search techniques including tabu search, simulated annealing and very large-scale neighbourhood search; fuzzy systems including fuzzy sets, and fuzzy logic and reasoning.

**ECE 635 Optimisation Theory and Applications (8 ECTS)**

Basic tools and concepts of the theory of optimisation. The course covers the following topics: Formulation of optimisation problems. Problems such as optimal economic dispatch, optimisation of queuing networks, optimal metering rate and optimal flow will be examined. Unconstrained optimisation: Necessary conditions and sufficient conditions; general optimisation algorithms; line search methods; the gradient algorithm; Newton algorithm; conjugate gradient methods; quasi-Newton methods; methods without derivatives. Constrained optimisation: Necessary conditions and sufficient conditions; the notions of regularity and of complementarity; penalty functions methods; Augmented Lagrangian method; recursive quadratic programming. Global optimisation: methods for Lipschitz functions; deterministic methods; stochastic methods. Optimisation on graphs and integer programming.

**ECE 636 Systems Identification (8 ECTS)**

Random/stochastic variable and signals, stochastic signals and linear systems, properties and models of linear and nonlinear systems, nonparametric linear systems identification in the time and frequency domain, linear regression, properties of least square methods, parameter estimation, experimental design:
Open- and closed-loop systems, data pre-processing, model order selection and validation, nonlinear systems identification: Volterra-Wiener models and block-structured models.

**ECE 643 Radio and Microwave Wireless Systems (8 ECTS)**

Antennas: Radiation from elementary dipoles, patterns and the far field, directivity, gain, efficiency, polarisation, monopoles and dipoles; patch antennas, antenna arrays/beam-steering; wireless propagation and links: Friis transmission equation, diffraction and propagation over obstacles, multipath propagation in urban environments, antenna diversity; introduction to smart antennas, link equation and link budgets, radio/microwave links; receivers: Receiver figures of merit (sensitivity, dynamic range, intersymbol interference, intermodulation, etc.), noise in cascaded systems, noise figure, noise temperature, heterodyne and homodyne receiver architectures, image-reject receivers; wireless systems: Fixed wireless access, wireless cellular concept; personal communication systems, satellite communications, GPS, radars, remote sensing and radiometers.

**ECE 644 Intelligent Control Systems (8 ECTS)**

The aim of the course is to provide students with the basic tools for research in computational intelligence and intelligent control systems.

**ECE 645 Optics and Photonics (8 ECTS)**

Introduction to photonics: physical models of light propagation (geometrical optics, wave optics, electromagnetic optics, photon optics); coherent and incoherent light; optical waveguides (slab waveguide) and optical fibres (wave-guiding, attenuation, dispersion, polarisation and nonlinearity; optical emission from semiconductors; the light emitting diode; basic operating principles of optical resonators and lasers; optoelectronics, lasers and fibre-optics; rate equations; semiconductor lasers (Fabry-Perot, distributed feedback, distributed Bragg reflector); photodetection; PIN photodiodes and avalanche photodiodes; electro-optic modulators; lithium niobate Mach-Zehnder modulators; introduction to integrated photonics (both on silicon and compound semiconductors); fundamental principles of optical link design; power and rise-time budget.

**ECE 646 Advanced Antenna Theory (8 ECTS)**


**ECE 649 Electromagnetic Waves and Antenna Theory (8 ECTS)**

Review of Maxwell’s equations and the wave equations. Solution of the wave equations in free space, wave velocity, wave impedance, Poynting’s vector and polarisation. Retarded potential functions, EM wave generation with a conducting current, the short uniform current dipole, the small uniform current loop, the radiated electric and magnetic fields. Near and far field expressions for E and H, Radiation pattern and radiation resistance of the dipole and the loop. Radiation lobes, half power beamwidth, beam angle, beam efficiency, directivity, directive gain, power gain, antenna efficiency, frequency bandwidth, antenna input impedance. Short and long dipoles, Folded dipoles, loops, monopoles, ground plane considerations. Travelling wave antennas, broadband antennas, and frequency independent antennas. Spiral antennas, log periodic antennas, array antennas. Yagi Uda arrays. Reflector antennas, feed configuration for parabolic antennas. Arrays, array factors, AM broadcast antenna, TV and FM antennas. Array patterns, amplitude patterns, phase patterns. Feed methods, balanced feeds, coaxial feeds, waveguide feeds, impedance matching, stub tuners, baluns, horns.

**ECE 650 Machine Learning (8 ECTS)**

In this course, students will gain foundational knowledge of different types of machine learning algorithms and practical experience in how to train their own machine learning models. Students will understand the problems that the machine learning can help to solve and provide an overview on modern machine learning models, including supervised learning (multiple linear regression, logistic regression, neural networks, and decision trees), unsupervised learning (clustering, dimensionality reduction) as well as reinforcement learning. The course will also examine the best practices for artificial intelligence and machine learning development (evaluating and tuning models, taking a data-centric approach to improving performance, etc.).

**ECE 651 Advanced Iterative Methods (8 ECTS)**

Introduction to advanced iterative methods for solving computationally hard practical engineering problems or efficiently approximating them if they are intractable. Specific topics include representation and searching of graphs, minimum-weight spanning trees, single-source and all-pairs shortest paths, maximum flow networks, graph colouring, NP-complete problems, proofs of NP-completeness, usage of efficient approximation algorithms for NP-complete problems.

**ECE 652 Advanced Embedded Real-Time Systems (8 ECTS)**

Basic computer architecture and hardware elements relevant to the study of real-time issues; low-level input/output devices, interrupt controllers, and CPU cores; programmable logic controllers, PID controllers, software design and specification methods such as flowcharts, state transition diagrams (finite state automata), and Petri nets; real-time kernels, including task scheduling, interrupt latency, and communication and synchronisation of tasks; system performance; evaluation and verification; embedded intelligence.

**ECE 654 Advanced Computer Networks (8 ECTS)**

The course covers advanced principles of computer networks. Topics include network architecture, direct link networks, packet switching networks, internetworking, network protocols, flow control, congestion control, traffic management, resource allocation, pricing and applications. The course will also provide a systems and control perspective into communication networks research. It will emphasise on
fundamental systems issues in networking and survey a variety of techniques that have recently been used to address them, including, queuing theory, optimisation, large deviations, Markov decision theory, and game theory.

**ECE 655 Advanced Operating Systems (8 ECTS)**

In-depth investigation of the major areas in the design and analysis of modern and future operating systems, with focus on virtualisation, distributed operating systems, multiprocessor systems, recovery management, protection and security. Investigation of case studies concerning the design principles underlining three main operating systems, namely, Windows 7, Linux, and Android. The course will also discuss, through research papers, the design principles of operating systems in emerging paradigms such as the Cloud and the Internet-Of-Things.

**ECE 656 Advanced Computer Architecture (8 ECTS)**

The format of the class is lecture and discussion. Students will work on a project related but not limited to a topic discussed in the course. Students can work on design and implementation of several real-world problems such as network processors and embedded systems, microprocessor architectures and energy-efficient and reliable systems. The projects can lead to operational prototype systems and/or publishable papers. Most importantly, experiences from the projects will benefit the student in future job search and career development.

**ECE 657 Computer Aided Design for VLSI (8 ECTS)**

Introduction to Application Specific Integrated Circuits (ASICs) and electronic design automation; basic CMOS technology and design rules; overview of hardware modelling with VHDL; graph concepts, algorithms and their efficiency; simulation; high-level synthesis: Datapath and control synthesis; logic-level synthesis and optimisation of combinational and sequential circuits; testing (fault modelling, simulation, test generation) and design for testability; physical design automation (placement, floor planning, routing); timing analysis; verification. Lab/project component: Usage of existing academic and commercial CAD tools for the above problems. Development in C/C++ of selected CAD algorithms.

**ECE 658 Computer Systems Performance Evaluation and Simulation (8 ECTS)**

Poisson process. Markov chains: birth and death processes. Basic queuing theory. Little’s Law. Intermediate queuing theory: M/G/1, G/M/m queues. Advanced queuing theory: G/G/m queue, priority queue, network of queues, etc. Queuing applications in computer systems. Simulation of queuing systems.

**ECE 660 VLSI Test (8 ECTS)**

VLSI testing process and Automatic Test Equipment (ATE): test economics and product quality; fault modelling; logic and fault simulation; combinational and sequential circuit test generation (ATPG); memory and delay testing; design-for-testability (DFT); built-in self-test (BIST); system and core-based design test; system reliability.

**ECE 661 Deep Learning (8 ECTS)**

In this course students will look at the most recent machine learning techniques focusing on deep learning and state-of-the-art architectures as well as applications in vision and natural language processing. Students will study the theory of deep learning, namely of modern, multi-layered neural networks trained on big data. In addition, the course will examine concepts from online learning that allow machines to learn while in. The course will cover generative machine learning as well as self-supervised learning which are emerging learning approaches. Finally, the course will cover computational aspects of model machine learning algorithms to better understand practical deployment challenges.

**ECE 663 Advanced Distributed Systems (8 ECTS)**

The course will cover advanced concepts and techniques in distributed systems and associated applications. Topics such as system models, peer to peer systems (both structured and unstructured), transactions and concurrency control, distributed transactions, replication management, distributed file systems and cloud computing will also be covered. The course will also cover the design of practical distributed systems focusing on Google systems as a case study including the overall architecture and design philosophy, underlying communication paradigms, data storage, coordination services and distributed computation services.

**ECE 664 Digital Design with FPGAs (8 ECTS)**

The course aims in teaching modern rapid prototyping techniques using state-of-the-art software and hardware design principles. Students taking the course will learn how digital systems are designed from specifications to a fully functional and working prototype. By using FPGAs prototyping boards, students will proceed to design, develop, synthesise, implement, test, debug and deliver a complete FPGA design project.

**ECE 665 Instrumentation and Sensors (8 ECTS)**

Basic measurement theory (precision, accuracy, resolution, validity, reliability, static and dynamic measurements, dynamic range, measurement errors, hysteresis), principle of sensor and transducer operation (resistive, inductive, capacitive, piezoelectric, thermo-electric, radiation, optical) and calibration, sensor types (temperature, light, force, displacement, motion, sound), bridge circuits, signal amplification via op-amp circuits, data acquisition and conversion, signal measurements and analysis, signal sources and practical issues. Signals and circuit noise analysis, Bio signal origins, biopotential electrodes and electrical stimulation, safety aspects of instrumentation (physiological effects of electricity, shock hazards, measures to mitigate shock risk in instrumentation design).

**ECE 666 Microwave Circuits (8 ECTS)**

The wave equation; losses in conductors and dielectrics; RF/microwave transmission lines; impedance matching; planar lines (microstrip, strip line, coplanar waveguide); scattering parameters; 3- and 4-port devices (power dividers/combiners, couplers, isolators & circulators); coupled lines and devices; RF/microwave filters; microwave active circuits (RF amplifiers, mixers, receiver front ends).

**ECE 671 Neurophysiology and Senses (8 ECTS)**

Advance study of neurophysiology, sensory systems and higher functions. The physiology of excitable cells with emphasis on cellular mechanisms, sensory integration, signal processing, and sensory/motor interactions in nervous systems. Computer simulations with neural signals.

**ECE 680 Power Systems Analysis (8 ECTS)**

The course provides basic and advanced concepts of power system analysis. Development of analytical skills to perform analysis of power systems. Analyse balanced and unbalanced systems using symmetrical components. Study transformers and per unit sequence models, transmission line modelling, power flow solution techniques, bus impedance and
admittance matrices, power system stability. Projects and term papers to develop a deep understanding of the operation of power systems so that the students are well prepared to enter the workforce as network engineers or to perform research in this area.

**ECE 681 Power Systems Operation and Control (8 ECTS)**

Basic principles of generation and control in power systems. Economic dispatch, unit commitment, automatic generation control. Linear and dynamic programming and solution of problems. Steam and hydro units, fuel scheduling, production costing, observability, state estimation, power flow, deregulation.

**ECE 682 Renewable Sources of Energy – Photovoltaics (8 ECTS)**


**ECE 683 Power Electronics (8 ECTS)**

Introduction to power electronics, switching converters, concept of steady state, ideal switches. Semiconductor devices, I-V characteristics and limitations. Analysis of basic dc-dc converters, buck, boost, buck-boost, SEPIC and Cuk converters, Voltage rectifiers, Power quality issues, single phase and three phase rectifiers Power factor correction circuits (PFC). Thyristor converters, single phase and three phase full bridge converters. Basic magnetic circuits, applications in converters. Analysis of converters with electrical isolation, forward, fly-back, push-pull and full-bridge converters. Synthesis of DC and low frequency sinusoidal AC voltage, bi-directional switching power pole, pulse width modulation, single and three phase inverters. Thermal management, EMI. Applications of switch-mode power supplies, Control of DC and AC motors, uninterruptible power supplies. Applications of power electronics in distributed generation systems, wind, solar and storage systems, in HVDC links. Introduction to flexible AC transmission systems.

**ECE 685 Power System Plant and Operation (8 ECTS)**

A power system plant embraces all the equipment, including structural members that constitute a unit power source. The module aims to introduce the overall design of power plant systems, focusing both on the system and on the component design. It will consequently provide an overview of the manufacturing, operating and thermal aspects of systems and the decisions necessary to deduce an optimal power plant design. Therefore, this unit aims to put into context the fundamentals of the plant parameters, by specifically introducing the following concepts: Overhead transmission lines: Design and operation; underground power cables: Design and operation; power transformers: Design and operation; technical and economical assessment of power systems.

**ECE 686 Power System Modelling (8 ECTS)**

A number of events and challenges exacerbated at the onset of the 21st century, as well as future challenges, require thorough understanding of the operating principles and key features of a power system plant which is fundamentally important to power engineers. The module embraces the following simulation-based exercises: Overhead line design and parameter evaluation; thermal rating of HV underground power cables; electric field stress on the insulation material on power cables through finite element modelling; modelling of non-linear properties of transformers' core characteristics and design; losses evaluation on transformer structural components under saturation conditions. Final comprehensive exercise (real case scenario).

**ECE 687 Building Integration of Photovoltaic (PV): Towards Nearly Zero Energy Buildings (NZEB) (8 ECTS)**

Introductory graduate-level course on building integration of photovoltaics (BIPV) in a Nearly Zero Energy Building (NZEB) context. Review of current policy, directives, regulation, and goals on building energy efficiency and NZEBs. Available advanced components, technologies, tools, systems, techniques, and theories in modelling a building for achieving NZEB design and incorporating BIPV. Calculation of the size and cost of a system to offset building energy use. Study of smart systems for energy management and grid integration: Monitoring consumption, RES generation, environmental conditions, case studies of smart meter projects.

**ECE 690 Fault Tolerant Systems (8 ECTS)**

The course offers an exposure to advanced concepts in the design of fault-tolerant digital systems, including combinational and dynamic systems. The course blends together techniques from coding and complexity theory, digital design, and control, automata and system theory. The topics addressed include fault models and error manifestations, module and system level fault detection and identification mechanisms, techniques for reliability/availability assessment, information redundancy and coding in computer systems, reconfiguration techniques in multiprocessor systems and VLSI processor arrays, and software fault tolerance techniques.

**ECE 701/704 Graduate Seminar M.Sc. and Ph.D. (4 ECTS)**

Seminars exploring current research and topical issues in electrical and computer engineering, focused on the general theme of innovation. Seminars are organised in blocks with related content and are presented by prominent outside speakers as well as by faculty members and graduate students. Each seminar includes a presentation, in addition to wide-ranging discussions among speakers, faculty, and students. Discussions involve issues such as relations between presented research areas, requirements for further advances in the state-of-the-art, the role of enabling technologies, the responsible practice of research, and career paths in engineering. The course requires participation in at least 25 seminar presentations. The graduate seminar coordinator is responsible for assigning a pass/fail grade.

**ECE 705 Graduates Seminars for M.Eng. Students (2 ECTS)**

Seminars exploring current research and topical issues in electrical and computer engineering, focused on the general theme of innovation. Seminars are organised in blocks with related content and are presented by prominent outside speakers as well as by faculty members and graduate students. Each seminar includes a presentation, in addition to wide-ranging discussions among speakers, faculty, and students. Discussions involve issues such as relations between presented research areas, requirements for further advances in the state-of-the-art, the role of enabling technologies, the responsible practice of research, and career paths in engineering. The course requires participation in at least 12 seminar presentations. The graduate seminar coordinator is responsible for assigning a pass/fail grade.
ECE 711 Directed Study for M.Sc. Students (8 ECTS)
Opportunity for individual study at the Master level, on topics related to electrical and computer engineering not covered by other courses offered by the Department. Students can initiate the arrangements and file a proposal, in consultation with a faculty member. The course requires a final report describing the material examined and the work performed.

ECE 713-714 Independent Study for M.Sc. Students I and II (4 ECTS)
Opportunity for individual study at the Master level, on topics related to electrical and computer engineering not covered by other courses offered by the Department. Students can initiate the arrangements and file a proposal, in consultation with a faculty member. The course requires a final report describing the material examined and the work performed.

ECE 721-722 M.Sc. Thesis I and II (15 ECTS)
Graduate research work leading to a dissertation on a specific topic of interest. Topic is arranged by the students and their research supervisors. The students write and present their thesis in front of an audience and are evaluated by the Master Thesis Committee. For more information, please refer to the Postgraduate Studies Regulations.

ECE 723-724 Project for M.Eng. EE and CE students (8 ECTS)
The course is mandatory for M.Eng. students and aims at the implementation of an individual project. The topic of the project is decided by the course instructor in collaboration with the student. The course has a duration of one semester, at the end of which the student must present/demonstrate the results of the project. In addition to the project work, presentations are also made on general issues of interest to engineers (e.g. issues of open access, ethics, copyright, project management, product management, etc.), as well as literature review on different areas of interest and presentation of the literature reviews.

ECE 731-732 Ph.D. Comprehensive Examination I and II (0 ECTS)
Ph.D. students must register for ECE 731 during the semester the examination takes place. In the event of failure, a student is permitted to take a second and final examination. In this event, the student must register for ECE 732. Please refer to the Doctor of Philosophy Degrees Section of the Postgraduate Studies Rules for additional information.

ECE 751-752 Directed Study for Ph.D. Students (8 ECTS)
Opportunity for individual study at the Ph.D. level, on topics related to electrical and computer engineering not covered by other courses offered by the Department. Students can initiate the arrangements and file a proposal, in consultation with one of the faculty. The course requires a final report describing the material examined and the work performed.

ECE 753-754 Independent Study for Ph.D. Students I and II (4 ECTS)
Opportunity for individual study at the Ph.D. level, on topics related to electrical and computer engineering not covered by other courses offered by the Department. Students can initiate the arrangements and file a proposal, in consultation with one of the faculty members. The course requires a final report, describing the material examined and the work undertaken.

ECE 761-764 Research Stage of Ph.D. Dissertation I, II, IIIA and IVA (30 ECTS)
Graduate research leading to a doctoral dissertation. The topic is determined by the research supervisor in consultation with the student. Please refer to the Doctor of Philosophy Degrees Section of the Postgraduate Studies Rules for additional information.

ECE 765-768 Research Course for Ph.D. Dissertation IIB, IIB, IIIIB and IVB (15 ECTS)
Graduate research leading to a doctoral dissertation. The topic is determined by the research supervisor in consultation with the student. Please refer to the Doctor of Philosophy Degrees Section of the Postgraduate Studies Rules for additional information.

ECE 771-776 Writing Stages of Ph.D. Dissertation I-VI (30 ECTS)
Graduate work leading to the written doctoral dissertation (arranged by the research supervisor in consultation with the student). Please refer to the Doctor of Philosophy Degrees Section of the Postgraduate Studies Rules for additional information.

ECE 777-782 Writing Stages VII-XII (30 ECTS)
Graduate work leading to the written doctoral dissertation (arranged by the student and his/her research supervisor). Please refer to the Doctor of Philosophy Degrees Section of the Postgraduate Studies Rules for additional information.

ECE 783 Ph.D. Research Proposal Examination (0 ECTS)
Graduate work leading to the Ph.D. Thesis Proposal defence (arranged by the supervising professor and the Evaluation Committee of the research proposal in consultation with the student). Please refer to the Doctor of Philosophy Degrees Section of the Postgraduate Studies Rules for additional information.

ECE 795 Pattern Recognition (8 ECTS)
The course provides a strong background in pattern recognition with a variety of methods. The course includes the following topics: Probability and decision theory overview, Bayesian inference, linear regression and classification models, nonlinear classification and neural networks, core vector machines and supported vector machines, Bayesian networks and random Markov fields, principal and independent component analysis, mixture models and expectation maximisation, sampling methods.

ECE 798/799 Special Topics in Electrical and Computer Engineering (0 ECTS)
Specialised topics in the field of Electrical and Computer Engineering. Opportunity for postgraduate students and instructors to investigate a topic of common interest. The subject and the instructor are announced after a topic of interest has been defined.

MASTER OF SCIENCE (M.Sc.) IN INTELLIGENT CRITICAL INFRASTRUCTURE SYSTEMS

The M.Sc. Programme in Intelligent Critical Infrastructure Systems (CIS) is offered by the Department of Electrical and Computer Engineering at the University of Cyprus, in collaboration with the UCY KIOS Research and Innovation Centre of Excellence (KIOS CoE) and Imperial College London (ICL), both international leaders in research and innovation activities in the topics of this M.Sc. Programme.

Critical infrastructures are assets or systems, which are essential for the maintenance of vital societal functions. The principal examples are electric power systems, water distribution networks, telecommunication networks, and transportation systems. Without these, other basic infrastructures (e.g. banking, hospitals, schools, tourism, etc.) cannot operate as intended. Critical infrastructures provide the foundation on which communities are built...
and, when properly functioning, they enable economic growth and social well-being. As urbanisation increases, critical infrastructures worldwide are expanding and are becoming more complex, necessitating greater efficiency and improved capabilities in order to sustain their effective operation.

The main objective of the M.Sc. Programme is to teach highly innovative methods, tools, and technologies for the monitoring, control, management, and security of CIS for a competent workforce, and help students to be recruited by local and regional authorities and international companies seeking to make CIS more reliable, safe, resilient, efficient, and sustainable. In addition, the programme aims to transfer knowledge on the research and innovation challenges faced by modern CIS and cultivate students' interest in pursuing a career path in research and innovation, thus contributing to the transformation of the research and innovation culture of Cyprus and the Mediterranean-Middle East region. The programme is open to students from different technical backgrounds, spanning the different areas of science and engineering. The language of instruction is English.

Minimum Requirements for Admission
1. A Bachelor's Degree in an Engineering or Science discipline.
2. English Language Certification or any other accepted International Standard. Proficiency in English can be demonstrated through one of the following: C-grade at English GCSE; IELTS score of 6.5 or above; Test of English as a Foreign Language (ETS TOEFL®) with a minimum score of 550 (paper based), 213 (computer based) or 80 (internet-based).

Curriculum

The programme involves coursework of 92 ECTS in total, with 8 compulsory courses (60 ECTS), an M.Sc. Thesis (30 ECTS), and graduate – level seminars and workshop (2 ECTS). The structure of the programme is summarised in the table below, on a semester basis.

<table>
<thead>
<tr>
<th>ECTS</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>ECE 801 Monitoring and Estimation</td>
</tr>
<tr>
<td>7</td>
<td>ECE 802 Optimisation of CIS</td>
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<tr>
<td>7</td>
<td>ECE 803 Security for CIS</td>
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<tr>
<td>9</td>
<td>ECE 807 CIS Applications I – Fundamentals</td>
</tr>
<tr>
<td>7</td>
<td>ECE 804 Industrial Control</td>
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<td>7</td>
<td>ECE 805 Machine Learning</td>
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<tr>
<td>7</td>
<td>ECE 806 Innovation and Entrepreneurship</td>
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<td>9</td>
<td>ECE 808 CIS Applications II - Advanced</td>
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<td>30</td>
<td>ECE 809-810 M.Sc. Thesis for Intelligent CIS I &amp; II</td>
</tr>
<tr>
<td>2</td>
<td>ECE 811 M.Sc. Seminars &amp; Workshop</td>
</tr>
</tbody>
</table>

Course Descriptions

**ECE 801 Monitoring and Estimation (7 ECTS)**
The purpose of the course is to familiarise students with the main techniques for estimating the state of a dynamical system and use the state of estimation to detect faults in the system's components such as sensor faults and water leaks. Topics include classical estimation theory, observer design, Kalman filters, and fault diagnosis. The students will learn to design and implement (in MATLAB) state estimators and fault detection algorithms for various systems, as well as to model faulty components. Infrastructure (small-scale testbed and simulation software) from the KIOS Laboratory for Power Systems and Renewable Energy will be used in the teaching of estimation theory and observer design. Furthermore, an in-house developed platform on intelligent vehicle routing will be integrated in the teaching of Kalman Filter algorithm, while the KIOS platform for smart water networks will be used in the teaching of fault diagnosis methods.

**ECE 802 Optimisation of CIS (7 ECTS)**
The course introduces finite-dimensional optimisation and decision theory and basic optimisation algorithms. The formulation of optimisation problems arising in CIS is presented together with worked out examples. After the course, the students will be able to formulate optimisation problems, design computer algorithms for finding minima and maxima in a wide range of optimisation problems involving smooth criteria and, just as importantly, to interpret, and if necessary, modify, the algorithms found in standard computer packages. The students will also be able to formulate and solve decision making problems and problems involving graphs. Finally, the students will be capable of formulating optimisation problems arising in CIS and to compute their solutions.

**ECE 803 Security for CIS (7 ECTS)**
The aim of the course is to cover the underlying principles and techniques used in securing CIS and to give examples of how they are applied in practice. At the end of the course, the students will be able to comprehend the themes and challenges of CIS security and the current state of the art, they will have developed a critical approach to the analysis of CIS security and will be able to bring this approach to bear on future decisions regarding security. Finally, students will be able to appreciate the main threats, attack techniques and defences relevant to the security of CIS, to identify potential vulnerabilities and propose countermeasures and to design secure critical infrastructure systems.

**ECE 804 Industrial Control (7 ECTS)**
The aim of the course is to provide basic elements of industrial control systems as well as a glimpse of advanced multi-variable control of generic large-scale systems related to critical infrastructures. Insight on basic concepts of multi-variable control is given with emphasis on optimal and model-predictive control approaches, as well as insight on the basic architectures of modern multi-level software automation architectures. The automation SW architectures and technologies are put in the context of CIS use cases where appropriate. The students, at the end of the course, should know the basic principles governing the analysis and design of multivariable control systems in the context of large-scale systems. They should be able to carry out the static and dynamic analysis characterisation of models to be used in the design of multi-variable control systems. Moreover, they should be able to evaluate, among several options, how to configure...
and design the architecture and the controller of a multi-variable automatic control system starting from requirements and considering technological constraints.

**ECE 805 Machine Learning (7 ECTS)**

The course introduces the theory, methods and applications of the field of Machine Learning. The objectives of the course are the presentation of the core principles and algorithms of supervised, unsupervised and reinforcement learning, the explanation of the application of these algorithms for the solution of regression, classification, clustering and decision-making problems and the demonstration of practical machine learning tools suitable for the analysis of data sets and the solution of machine learning problems. Special emphasis will be placed on real-world critical infrastructure systems applications. By the end of the course, students should be able to understand the principles of supervised, unsupervised and reinforcement learning, to design and implement a wide variety of machine learning algorithms, to analyse raw data to create representations that are more suitable for machine learning algorithms and to solve and evaluate the performance of classification, regression, dimensionality reduction and clustering problems that arise in critical infrastructure systems using state-of-the-art machine learning tools.

**ECE 806 Innovation and Entrepreneurship (7 ECTS)**

The purpose of the course is to explore the many dimensions of new venture creation and growth. While most examples will be drawn from new venture formation, the course examines cases in ICT-related entrepreneurship, as well as social and non-profit entrepreneurship. The course also focuses on the challenges involved in attempting to profit from both incremental routine information and more radical revolutionary changes in products and processes. It highlights the importance of innovation to new ventures as well as established firms, and explores the organisational, economic and strategic problems that need to be tackled in order to ensure innovation as a long-term source of competitive advantage. The course will give students a thorough knowledge of where innovation can be found within the organisation, how to recognise it, and how it can be used for competitive advantage. Moreover, will provide students an understanding of how they, as future leaders of innovative organisations, can recognize and harness creativity.

**ECE 807 CIS Applications I – Fundamentals (9 ECTS)**

The course provides a solid understanding on the fundamentals of the following critical infrastructure systems: electric power systems, telecommunication networks, water distribution networks, and transportation networks. To understand how to model and simulate simple instances of these networks, it introduces general tools for modelling such systems (automata, Petri-nets, graph theory, conservation laws, differential and algebraic equations, partial differential equations) and general tools for simulating and analysing such systems (discrete event simulation, steady-state methods, state-space, design of algorithms). By the end of the course, students will obtain the fundamental skills required to model the most important critical infrastructure system components and the systems. They will also be able to simulate simple cases for these systems under steady state and faulty conditions.

**ECE 808 CIS Applications II – Advanced (9 ECTS)**

The purpose of the course is to provide a solid understanding of the following critical infrastructure systems: electric power systems, telecommunication networks, water distribution networks, and transportation networks. The course aims to model and analyse these systems using advanced network simulators, help students understand the practical problems in the control and management of these systems, and to obtain practical skills related to the design and operation of these systems under normal and faulty conditions. Students must be able to model the most important critical infrastructure system components and be able to analyse them under steady state conditions. Moreover, they should be able to design and simulate these systems according to given operational criteria and constraints. Finally, students should understand the technical, economic, and environmental implications of the design and operation of critical infrastructure systems.

**ECE 809/810 M.Sc. Thesis for Intelligent CIS I and II (30 ECTS)**

The M.Sc. thesis is a final-year project which enables students to carry out research to deepen their scientific and applied knowledge and skills in a specific topic in Intelligent Critical Infrastructure Systems (CIS). Through their research, students will understand technical and management features in Intelligent CIS, learn to deal with challenges in Intelligent CIS and obtain experience in research methods, including technical writing and communication skills, as well as project management.

**ECE 811 M.Sc. Seminars & Workshop (2 ECTS)**

Seminars exploring current research and topical issues in the areas of monitoring, control, management, and security of CIS, as well as other related electrical and computer engineering disciplines, focused on the general theme of innovation. Seminars are organised in blocks with related content and are presented by prominent external speakers as well as by faculty members and graduate students. The course requires participation in at least 15 seminar presentations over the course of the M.Sc. programme. Students must attend at least 5 non-technical seminar presentations. Students must participate in a dedicated workshop, organised at the University of Cyprus, which will be exploring specific research and innovation topics related to their M.Sc. programme. The workshop will include prominent speakers from the academia and industry. During the workshop, students must show the work for their M.Sc. thesis, attend the presentations by other fellow M.Sc. students, and discuss their research work and exchange ideas with other students and faculty.

Each year, the Programme offers a number of scholarships to new students based on merit. Additional information with regards to the scholarship opportunities can be found at the following website: [https://www.mscsis.ucy.ac.cy/cost-2/opportunities-for-financial-aid/](https://www.mscsis.ucy.ac.cy/cost-2/opportunities-for-financial-aid/).

For detailed information regarding the M.Sc. in Intelligent Critical Infrastructure Systems, please refer to the following contact details:

**Contact Details**

Tel.: +357 22893460
E-mail: mscsis@ucy.ac.cy
[www.mscsis.ucy.ac.cy/en](http://www.mscsis.ucy.ac.cy/en)
RESEARCH INTERESTS OF THE ACADEMIC STAFF

Chrysaﬁs Andreou, Assistant Professor
Nano-totechnology and nanomedicine, Biomedical and molecular imaging, Chemical detection, Microﬂuidic devices, and bioﬂuid analysis.

Themistoklis Charalambous, Assistant Professor
Networked control systems, combining theory and applications from control theory, communications, networks, and distributed optimisation.

Charalambos A. Charalambous, Associate Professor
High and low frequency transient phenomena in the power network, Power system plant modelling and visualisation (for extreme operating conditions), Power transformers ferro resonance, Earthing and control of DC and AC corrosion, Effect of climate change on power system infrastructure, System protection schemes for distributed generation.

Charalambos D. Charalambous, Professor
Stochastic Systems, Information Theory, large deviations and optimisation with applications in robust control, estimation, decision, telecommunications, sensor networks.

Margarita Chli, Assistant Professor

Georgios Ellinas, Professor

George E. Georghiou, Professor
Electromagnetic ﬁeld measurements and compatibility testing, Utilization of electromagnetic ﬁelds in emerging technologies (transcranial magnetic stimulation, DNA microchip electrophoresis, Electronic manipulation of nano-particles, microwaves and RF for heating and food processing), Plasma processes and gas discharges (plasma sources at atmospheric pressure for biomedical applications, utilization of gas discharges for plasma production), Wireless power applications, Numerical modelling of Multiphysics problems (development of serial and parallel algorithms, computational electromagnetics calculations), Renewable sources of energy.

Julius Georgiou, Professor
Low-power analog and asynchronous-digital application speciﬁc integrated circuits (ASICs), Implantable biomedical devices, Bioinspired electronic systems, Silicon-on-insulator design, Sub-threshold circuits and systems, Sensors and related systems.

Christoforos Hadjicostis, Professor
Fault-tolerant dynamic systems, Error control coding, Reliable and trustworthy design of large-scale systems and networks, Distributed control and monitoring, Discrete event systems, Communication and signal processing systems, Algebraic system analysis.

Stavros Iezekiel, Professor
Microwave photonics: High-speed laser diodes, photodiodes and modulators, mm-wave fibre radio systems, microwave-photonic packaging, light wave measurements, all-optical microwave ﬁlters.

Ioannis Krikidis, Professor

Angelos Marnerides, Assistant Professor

Maria K. Michael, Associate Professor
Dependability and security in embedded and IoT-based cyber-physical systems: Test and reliability in VLSI and (safety-critical) embedded systems; Reliability and security of resource-constrained edge-based ML/Accelerators; Resource allocation and optimisation in AI/ML edge intelligence; Graph theory and (parallel) algorithms for automation tools; decision diagrams and SAT.

Chrysostomos Nicopolous, Associate Professor
Multi/multicore computer architecture, Packet-based networks-on-chip (NoC), NoC router architectures for chip multi-processors (CMP) and heterogeneous multi-processor systems-on-chip (MPSoC), On-chip interconnection architectures, Three-dimensional (3D) system architectures, Embedded system architectures, and VLSI digital system design.

Christos Panayiotou, Professor
Optimisation and control of discrete-event systems with applications to computer communication networks, Manufacturing systems and transportation networks.

Mathaios Panteli, Assistant Professor
Grid integration of renewable energy sources, Techno-economic reliability, resilience and ﬂexibility assessment and planning of future smart energy systems, Climate change impact on power systems, Optimisation and machine learning techniques applied to power systems, Integrated modelling and analysis of co-dependent critical systems.

Constantinos Pitis, Professor
Options and biomedical imaging. The underlying goal of this research is the introduction of new technologies in clinical applications for the improvement of the diagnostic and therapeutic options of modern health care systems to directly impact patient prognosis and outcome.

Marios Polycarpou, Professor
Systems and control, Adaptive and intelligent control, Neural networks and computational intelligence, Fault diagnosis and cooperative control.

Theocharis Theocharides, Associate Professor
High-performance, Reliable and energy-efﬁcient systems-on-chip design and embedded systems architectures, Interconnection architectures, Design of hardware architectures for multimedia, artiﬁcial intelligence, signal processing and machine vision applications, Computer arithmetic, Low power and reliable architectures and VLSI design.

Stelios Timoteou, Associate Professor
Optimisation, Machine learning, Computational intelligence, Statistical data processing, Fault diagnosis, Information and decision systems, Monitoring and control, Intelligent transportation systems, Connected and automated vehicles, Wireless communication systems, Simultaneous wireless information and power transfer.

Contact Details
DEPARTMENT SECRETARIAT
Tel.: +357 22892240, +357 22892251, +357 22892271
E-mail: ece@ucy.ac.cy
www.ucy.ac.cy/ece/en
Since the time of Hephaistos, Daedalos, Archimedes and Heron, Mechanical and Manufacturing Engineering has played a key role in serving the needs of modern society. Manufacturing Engineering focuses on inventing, designing and producing a wide variety of novel and useful products such as airplanes and spacecraft, robots and computer chips, sporting goods and medical instruments. Mechanical Engineering deals with studying, understanding and improving their operation. The field of Mechanical and Manufacturing Engineering is also the gateway for rising interdisciplinary areas of research, such as Nanotechnology and Biomedical Engineering, which can dramatically transform our lives and society in the future. In addition to automobiles, air conditioners and water-bikes that we use in our everyday life, society depends on mechanical and manufacturing engineers to provide new technologies and tools for health, safety, information, industry, space exploration, transportation, agriculture and food, and power production, along with education, research, and professional employment of young people.

Materials Technology studies the fundamental physical and chemical basis for the controlled combination of atoms to form new compounds, phases, and microstructures, as well as the characterisation of the resulting structures and properties, aiming at understanding the structure-processing-properties relationships in the final product. Materials Technology focuses on the synthesis of materials in useful quantities, and on the processing of materials in engineering products. Materials Technology draws heavily on the fundamental knowledge gained from materials science and adapts the processes involved for the scale and requirements of the application. Materials Technology is an interdisciplinary research area appearing in an autonomous and legible form. During the last few decades we have witnessed a significant revolution in the applications of novel materials. Examples of this revolution include the explosive evolution of microelectronics, the extended use of synthetic polymers, the development of high-strength steels capable of operating at elevated temperatures, the development of new biocompatible materials, as well as the applicability of highly transparent glasses used in optical-fiber telecommunications. Furthermore, the area of Nanotechnology, i.e. the Science and Technology of Nanostructures, has come to the fore at an international

The Department offers a high-quality graduate programme, both at the Master and Ph.D. levels. The programme emphasises fundamental principles that prepare students for leadership roles in a challenging and rapidly changing technological world. Research and innovation are encouraged in an environment that fosters cooperation among faculty, students, industry, and research organisations. The faculty is comprised of experienced and distinguished academicians with expertise in a wide range of research fields pertinent to Mechanical and Manufacturing Engineering.

The objective of the postgraduate programme is to provide scientists with up-to-date knowledge and techniques in the field of Mechanical and Manufacturing Engineering. The students are specialised in one of the research areas of the programmes, aiming to prepare students for a successful professional career in the public or private sector, in industry, academic institutions or research organisations.


The department offers the following postgraduate degrees:

- Master of Science (M.Sc.) in Mechanical and Manufacturing Engineering
- Master of Science (M.Sc.) in Advanced Materials and Nanotechnology
- Master in Energy Technologies and Sustainable Design (Inter-departmental programme, Master of Engineering or Master of Science)
- Doctor of Philosophy (Ph.D.) in Mechanical and Manufacturing Engineering
- Doctor of Philosophy (Ph.D.) in Advanced Nanomaterials and Nanotechnology

All graduate programmes are offered in English.
level, as a broad interscientific area of research and development.

Financial Support
The University supports many graduate students through teaching assistantships. There are also additional funding opportunities, information can be found at the Graduate School’s website. A number of students can also be financially supported through research programmes.

MASTER OF SCIENCE DEGREE (M.Sc.)

Admission
Applicants to the Programme must possess the equivalent of a B.Sc. Degree in Mechanical and/or Manufacturing Engineering, or in a related field of Science or Engineering, from the University of Cyprus or other accredited institution or programme. Applications must be submitted to the Department within the deadline. All applications are evaluated by the Graduate Studies Committee of the Department, which makes suggestions to the Council of the Department for the final approval of the selected candidates. The applicants to the M.Sc. programme are selected according to the following criteria, while the Department reserves its right to fill only as many announced graduate student positions as the Department deems appropriate:

- Quality of the applicant’s background in breadth and depth, and past performance in his/her undergraduate or graduate studies.
- Student’s ability in producing original and innovative research in the proposed area of study.
- Relevance of the proposed field of research to the interests of the Department, the University and the society.
- Availability of graduate positions in the programme and the necessary infrastructure and resources to support the proposed M.Sc. work.

Students must select, in consultation with their advisors, the courses that will assist them in completing their M.Sc. thesis. Most coursework eligible for the M.Sc. programme must be graduate-level courses. M.Sc. students are considered full-time if they are enrolled in 18 or more ECTS each semester.

Transfer of Credit and Student Exchanges
Students admitted to the M.Sc. Programme from an accredited graduate programme may, upon the Department’s Graduate Studies Committee approval, transfer ECTS of the graduate coursework they have successfully completed towards the requirements for the M.Sc. degree, according to the General Graduate Studies Regulations. In the framework of inter-university student exchange programmes, M.Sc. students may, in agreement with their advisor and upon the Department Graduate Studies Committee’s approval, attend courses and conduct research at an accredited university abroad.

Master’s Thesis
An original research study and a thesis are required for the M.Sc. degree. The subject of the student’s research is chosen in consultation with his/her advisor. The student must submit a thesis proposal at least two semesters before the intended date of graduation. Furthermore, one semester before the intended date of graduation, the student must present a progress report to the members of the committee.

For more information on the writing and presentation of the thesis, please refer to the Admission and Attendance Regulations – Application Requirements or please consult the Graduate School, or the Department’s Secretariat.

Duration of Studies
The minimum duration of the M.Sc. programme for full-time students is three semesters, including the summer between the two academic years. The maximum duration for the completion of the M.Sc. degree is defined by the University’s regulations (eight semesters).

M.Sc. IN MECHANICAL AND MANUFACTURING ENGINEERING
Graduate students are awarded the M.Sc. Degree in Mechanical and Manufacturing Engineering, after successfully completing the required programme of study and successfully defending and writing their M.Sc. thesis.

Programme Structure
The Programme requires the completion of at least 120 ECTS in graduate level and research work distributed as follows:

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Title</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
<td>MME 531</td>
<td>Continuum Mechanics</td>
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<tr>
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<td>MME 541</td>
<td>Manufacturing Process Automation</td>
<td>8</td>
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<tr>
<td></td>
<td>MME 518</td>
<td>Theory + Applications of Incompressible Newtonian and Non-Newtonian Fluids</td>
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<td>MME705</td>
<td>Thesis Research I</td>
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<td>Second Semester</td>
<td>MME 512</td>
<td>Advanced Engineering Thermodynamics</td>
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<td>MME 524</td>
<td>Modelling and Analysis of Dynamic Systems</td>
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<td></td>
<td>Technical Elective Course 1</td>
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<td>MME 706</td>
<td>Thesis Research II</td>
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<tr>
<td>Third Semester</td>
<td>MME 707</td>
<td>Thesis Research III</td>
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<td>Technical Elective Course 2</td>
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<td>Technical Elective Course 3</td>
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<tr>
<td>Fourth Semester</td>
<td>MME 708</td>
<td>Thesis Research IV</td>
<td>20</td>
</tr>
</tbody>
</table>

Department of Mechanical and Manufacturing Engineering
M. Eng. in Mechanical and Manufacturing Engineering

The structure of the M.Eng. is equivalent to that of the M.Sc., except that the duration of the M.Eng. programme is three semesters and requires 96 credits. Dissertation research is not a part of the programme’s requirements. In addition to the 40 ECTS of compulsory courses mentioned in the M.Sc. programme, students must cover the remaining 56 ECTS with seven technical elective courses. Out of these seven courses, two can be taken from other departments.

M.Sc. in ADVANCED MATERIALS AND NANOTECHNOLOGY

Graduate students are awarded the M.Sc. Degree in Advanced Materials and Nanotechnology, after successfully completing the required programme of study and successfully defending and writing their M.Sc. Thesis. The Programme is offered only in English.

Programme Structure

The Programme requires the completion of at least of 120 ECTS in graduate level and research work distributed as follows:

<table>
<thead>
<tr>
<th>Semester</th>
<th>Courses</th>
<th>ECTS</th>
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<tr>
<td>First Semester</td>
<td>MME 557 Polymer Nanocomposites</td>
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<td>MME 563 Materials Physics</td>
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<tr>
<td></td>
<td>MME 566 Advanced Semiconductor Materials and Nanodevices</td>
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<td>MM 709 Thesis Research I</td>
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<td>Second Semester</td>
<td>MME 553 Surface Engineering</td>
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<td>MME 554 Characterization Techniques of Bulk and Nano-Materials</td>
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<td>MME 710 Thesis Research II</td>
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<td>Third Semester</td>
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<td>Fourth Semester</td>
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Technical Electives

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<tr>
<td>MME 505</td>
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<tr>
<td>MME 506</td>
<td>Independent Study II</td>
<td>8</td>
</tr>
<tr>
<td>MME 516</td>
<td>Renewable Energy Technology</td>
<td>8</td>
</tr>
<tr>
<td>MME 523</td>
<td>Signal Processing</td>
<td>8</td>
</tr>
<tr>
<td>MME 525</td>
<td>Analysis and Control of Robotic and Autonomous Systems</td>
<td>8</td>
</tr>
<tr>
<td>MME 532</td>
<td>Biomaterials in Tissue Engineering and Regenerative Medicine</td>
<td>8</td>
</tr>
<tr>
<td>MME 551</td>
<td>Nonlinear Mechanics of Solids and Structures</td>
<td>8</td>
</tr>
<tr>
<td>MME 559</td>
<td>Fundamentals of Ceramics I</td>
<td>8</td>
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<tr>
<td>MME 562</td>
<td>Semiconductor Processing Technology</td>
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<td>MME 563</td>
<td>Materials Physics</td>
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<td>MME 564</td>
<td>Nanomechanics</td>
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<td>MME 565</td>
<td>Physical Principles, Design and Fabrication of MEMS</td>
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<td>MME 566</td>
<td>Advanced Semiconductor Materials and Nanodevices</td>
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<td>MME 567</td>
<td>Materials for Energy Production, Storage and Conversion</td>
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ELECTIVE COURSES

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<tr>
<th>Course Code</th>
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<tr>
<td>MME 505</td>
<td>Independent Study I</td>
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<tr>
<td>MME 506</td>
<td>Independent Study II</td>
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<tr>
<td>MME 539</td>
<td>Nonlinear Mechanics &amp; Modelling of Solids</td>
<td>8</td>
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<td>MME 555</td>
<td>Polymers in Medical Applications</td>
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<tr>
<td>MME 558</td>
<td>Fundamentals of Ceramics I</td>
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<tr>
<td>MME 559</td>
<td>Fundamentals of Ceramics II</td>
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<td>Semiconductor Processing Technology</td>
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<td>MME 512</td>
<td>Advanced Engineering Thermodynamics</td>
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<td>MME 516</td>
<td>Renewable Energy Technology</td>
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<td>MME 518</td>
<td>Theory and Applications of Incompressible Newtonian and Non-Newtonian Fluids</td>
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<td>MME 523</td>
<td>Signal Processing</td>
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<td>MME 524</td>
<td>Modelling and Analysis of Dynamic Systems</td>
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<td>MME 525</td>
<td>Analysis and Control of Robotic and Autonomous Systems</td>
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<td>MME 532</td>
<td>Biomaterials in Tissue Engineering and Regenerative Medicine</td>
<td>8</td>
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<td>MME 541</td>
<td>Manufacturing Process Automations</td>
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<tr>
<td>MME 551</td>
<td>Nonlinear Mechanics of Solids and Structure</td>
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DOCTOR OF PHILOSOPHY DEGREE (Ph.D.)

Graduate students are awarded a Doctoral degree by completing the required programme of study and successfully writing and defending their Ph.D. thesis.

Admission to the Ph.D. Programme

Applicants to the Ph.D. programme must hold the equivalent of a B.Sc. or M.Sc. degree in Mechanical and/or Manufacturing Engineering, or in a related field of science or engineering, from the University of Cyprus or other accredited university. Applications must be submitted to the Department within the deadline. The evaluation criteria for candidates to the Ph.D. programme are the same as the ones for applicants to the M.Sc. programme. Good knowledge of the English language is required for admission to the doctoral programme. Students must select, in consultation with their advisors, the courses that will fulfill the requirements for their Ph.D. thesis. Most coursework eligible for the Ph.D. programme must be graduate-level courses. Ph.D. students are considered full-time, if they are enrolled in 18 or more ECTS each semester.

Transfer of Credit and Student Exchanges

Students who have joined the doctoral programme after successfully completing a relevant M.Sc. programme, can be credited with up to 60 ECTS. ECTS for previously completed graduate work are credited only after approval by the Graduate Studies Committee of the Department, following a justified petition by the student. In the framework of inter-university student exchange programmes, Ph.D. students may, upon agreement with their advisor and approval of their petition to the Graduate Studies Committee, attend courses and conduct research at an accredited university abroad.

Comprehensive Examination

Admission to candidacy for the Ph.D. programme is granted when the student has successfully passed a written comprehensive examination. The comprehensive examination must be taken no later than the sixth academic semester from the time of enrolment in the Ph.D. programme.

Ph.D. Thesis

An original research study and a thesis are required for the Ph.D. degree. The subject of the students’ research is chosen in consultation with his/her advisor.

Dissertation Proposal

Doctoral students must prepare a brief written proposal (no more than 20 pages) of their intended doctoral research and make a comprehensive oral presentation to the Dissertation Committee and a representative from the Department’s Graduate Studies Committee. Students must demonstrate a sound understanding of the dissertation topic, the relevant literature, the techniques to be employed, the issues to be addressed and the work completed to-date. The proposal must be made two to four semesters after the successful completion of the comprehensive examination.

Doctoral Dissertation

The doctoral dissertation must address current and valid scientific and/or technical issue(s) primarily by fundamental research, leading to new scientific and/or engineering knowledge. Applied research and development aspects, leading to a prototype or an application of this basic research, may also be included as a secondary component of the dissertation. The research must be novel and original, and of the highest scholarly standards, qualifying it as acceptable for publication in international academic journals.

The dissertation must be based on significant research findings by the doctoral candidate, distinguished clearly from the work of others, testifying to the candidate’s personal contribution and scholarship, and acknowledging support by others in or outside the University. In addition, the broader impacts of the research must be highlighted in the dissertation, in terms of opening new scientific or engineering areas or issues, and generating new technical applications and innovations. Broader impacts must also be indicated in promoting innovation, education at all student levels and training of the workforce; involving under represented groups in science and engineering; establishing physical infrastructure (laboratory resources, software programmes, etc.) and virtual resources (centres, networks, etc.); setting dissemination plans through scholarly publications and presentations, and outreach through the media to the public, etc.; and indicating societal implications of the work, including public health and safety, security, environmental impacts, etc.

Dissertation Defence

Doctoral candidates are required to defend the originality, independence, and quality of their research. For more information on the procedures related to the comprehensive exam, the dissertation proposal, the doctoral dissertation and the dissertation defence, please refer to the Admission and Attendance Regulations – Application Requirements or consult the Graduate School, or the Departmental Secretariat.

Duration of Studies

The minimum duration of the Ph.D. programme for full-time students is defined by the University’s regulations. The maximum duration for the completion of the Ph.D. degree is also defined by the University’s regulations (16 semesters).
Ph.D. IN MECHANICAL AND MANUFACTURING ENGINEERING

Graduate students are awarded the Ph. D. Degree in Mechanical and Manufacturing Engineering after completing the required programme of study, passing the comprehensive examination and successfully defending and writing their Ph.D. thesis.

Programme Structure

The programme of study leading to the Ph.D. Degree in Mechanical and Manufacturing Engineering requires the completion of at least 240 ECTS in graduate level courses (beyond any taken for the Bachelor degree) and research work, distributed as follows:

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<tr>
<th>ECTS</th>
<th>First Semester</th>
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<tr>
<td></td>
<td>MME 518 Theory + Applications of Incompressible Newtonian and non-Newtonian fluids</td>
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<td>MME 523 Signal Processing</td>
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<td>MME 531 Continuum Mechanics</td>
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<td>MME 805 Thesis Research I</td>
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<td>MME 512 Advanced Engineering Thermodynamics</td>
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<td>MME 524 Modelling and Analysis of Dynamic Systems</td>
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<td>MME 551 Nonlinear Mechanics of Solids and Structures</td>
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<td>MME 806 Thesis Research II</td>
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<td>MME 541 Manufacturing Process Automation</td>
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<td>Technical Elective 1</td>
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<td>Technical Elective 2</td>
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<td>MME 807 Thesis Research III</td>
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<td>Thesis Research IV (3X10)</td>
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<td>(MME 830 + MME 831 + MME 832)</td>
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<td>Thesis Research V (3X10)</td>
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<td>(MME 820 + MME 821 + MME 822)</td>
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<td>Thesis Research VI (3X10)</td>
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<td>(MME 823 + MME 824 + MME 825)</td>
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<td>Thesis Research VII (2X10)</td>
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<td>(MME 828 + MME 829)</td>
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<td>MME 810 Thesis Writing II</td>
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Technical Electives

| ECTS | MME 605 Independent Study I | 8 |
|      | MME 606 Independent Study II | 8 |
|      | MME 516 Renewable Energy Technology | 8 |
|      | MME 525 Analysis and Control of Robotic and Autonomous Systems | 8 |
|      | MME 532 Biomaterials in Tissue Engineering and Regenerative Medicine | 8 |
|      | MME 539 Nonlinear Mechanics & Modelling of Solids | 8 |
|      | MME 553 Surface Engineering | 8 |
|      | MME 554 Characterisation Techniques of Bulk and Nano-Materials | 8 |
|      | MME 555 Polymers in Medical Applications | 8 |
|      | MME 557 Polymer Nanocomposites | 8 |
|      | MME 558 Fundamentals of Ceramics I | 8 |
|      | MME 559 Fundamentals of Ceramics II | 8 |
|      | MME 562 Semiconductor Processing Technology | 8 |
|      | MME 563 Materials Physics | 8 |
|      | MME 564 Nanomechanics | 8 |
|      | MME 565 Physical Principles, Design and Fabrication of MEMS | 8 |
|      | MME 566 Advanced Semiconductor Materials and Nanodevices | 8 |
|      | MME 567 Materials for Energy Production, Storage and Conversion | 8 |

DOCTOR OF PHILOSOPHY (Ph.D.) IN ADVANCED MATERIALS AND NANOTECHNOLOGY

Graduate students are awarded the Ph.D. Degree in Advanced Materials and Nanotechnology after completing the required programme of study, passing the comprehensive examination and successfully defending and writing their Ph.D. thesis.

Programme Structure

Students must complete at least 240 ECTS in graduate level courses and research work, distributed as follows:

<table>
<thead>
<tr>
<th>ECTS</th>
<th>First Semester</th>
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<tr>
<td></td>
<td>MME 557 Polymer Nanocomposites</td>
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<td>MME 563 Materials Physics</td>
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<td>MME 566 Advanced Semiconductor Materials and Nanodevices</td>
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<td>MME 840 Thesis Research I</td>
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<td>Second Semester</td>
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<td>MME 553 Surface Engineering</td>
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<td>MME 554 Characterization Techniques of Bulk and Nano-Materials</td>
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<td></td>
<td>Elective Course 1</td>
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<td></td>
<td>MME 841 Thesis Research II</td>
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</table>
### Course Descriptions

In order to improve the curriculum, it is anticipated that some minor amendments to the courses and the description provided here may occur. Unless otherwise stated, all courses are credited with 8 ECTS.

**MME 505 Independent Study I (8 ECTS)**
**MME 506 Independent Study II (8 ECTS)**

Independent academic project of the student’s choice with the advisor’s consent. It may include theoretical, computational, experimental or combined work, relevant to a fundamental issue with applied and/or educational impacts. It includes preparation of comprehensive documentation and work presentation to the Department. It is open to M.Sc. students only as an elective.

**MME 605 Independent Study I (8 ECTS)**
**MME 606 Independent Study II (8 ECTS)**

Independent academic project of the student’s choice with the advisor’s consent. It may include theoretical, computational, experimental or combined work, relevant to a fundamental issue with applied and/or educational impacts. It includes preparation of comprehensive documentation and work presentation to the Department. It is open to Ph.D. students only as an elective.

**MME 705-708 Thesis Research I-IV (M.Sc.) (ECTS vary)**

Defence and writing of M.Sc. thesis. Open to M.Sc. students of Mechanical and Manufacturing Engineering Programme.

**MME 709-712 Thesis Research I-IV (M.Sc.) (ECTS vary)**

Defence and writing of M.Sc. thesis. Open to M.Sc. students of Advanced Materials and Nanotechnology Programme.

**MME 800 Comprehensive Examination (0 ECTS)**

See related information on Comprehensive Examination.

**MME 805-807 + 820-832 Thesis Research I-VIII (Ph.D.) (ECTS vary)**


**MME 840-854 Thesis Research I-VIII (Ph.D. Advanced Materials and Nanotechnology Programme only) (ECTS vary)**

Defence and writing of Ph.D. thesis. Open to Ph.D. students of Advanced Materials and Nanotechnology Programme.

**MME 809-816 Thesis Writing I-VIII (Ph.D.) (ECTS vary)**

Writing of Ph.D. Thesis.

**MME 512 Advanced Engineering Thermodynamics (8 ECTS)**


**MME 516 Renewable Energy Technology (8 ECTS)**


**MME 518 Theory and Applications of Incompressible Newtonian and Non-Newtonian Fluids (8 ECTS)**

The course covers the basic principles of flow for Newtonian and non-Newtonian fluids as well as methods for solution of standard flow problems. The objective of the course is to cover in-depth both the theory of incompressible fluids and the applications in several aspects of the human activity and technology including biological flows (blood), industrial processes (plastic and food technology), flows involved in hydrocarbons mining (with the use of fluids with special properties).

**MME 523 Signal Processing (8 ECTS)**

The aim of this course is to introduce students to modern signal processing techniques currently used to a) decipher complicated processes in engineering and biological systems; (b) detect damage and monitor the health of engineering components and bio-engineering systems and; (c) characterise the intricacies of time-varying and non-linear systems.

Techniques of signal analysis and synthesis based on Fourier transform, Hilbert transform, time – frequency distributions, wavelet transform, and multi-resolution analysis are introduced through examples taken from the disciplines mentioned above.

**MME 524 Modelling and Analysis of Dynamic Systems (8 ECTS)**

The course aims at a unified approach for abstracting real mechanical, fluid, and electrical systems into proper models in graphical and state equation form to meet engineering design and control system objectives. The emphasis is not on deriving equations but rather on understanding how the engineering task defines the modelling objectives, which in turn determine the appropriate modelling assumptions. The bond graph language, which is a graphical power topology of dynamic systems, is taught to help students develop models of multi-energy domain systems. A project on a topic of the student’s research area reinforces the concepts taught in the course.

**MME 525 Analysis and Control of Robotic and Autonomous Systems (8 ECTS)**

The course introduces the students to advanced topics in robotic and autonomous systems: a) Medical robotic systems, b) Robotics and assistive technologies for independent living, c) Multi-body kinematics and dynamics formulation, d) Mobile/autonomous robotic systems analysis, e) Stability and the method of Lyapunov, f) Feedback control for manipulators, g) Nonlinear model-based control, h) Force control for robotic manipulators, i) Passivity-based control, j) Adaptive control and its application to robotic manipulation, k) Control of mobile robotic systems, l) Dynamic simulation of robotic and autonomous systems, m) Robot and autonomous systems design.

**MME 531 Continuum Mechanics (8 ECTS)**

The course includes a brief review of the symbols and calculations among tensors and vectors and focuses on the study of the kinematics of a continuum, and specifically the calculation of stress and strain tensors and rates of deformation tensors; the balance laws: Conservation of mass, momentum and energy; the constitutive equations for the mechanical behaviour of solids, fluids and viscoelastic materials; constitutive theories and problems for ideal fluids, Newtonian fluids and linear elastic solids.

**MME 532 Biomaterials in Tissue Engineering and Regenerative Medicine (8 ECTS)**


**MME 533 Biomedical and Industrial Applications of Engineering Acoustics (8 ECTS)**

**MME 541 Manufacturing Process Automation (8 ECTS)**

In-depth study of the physical dynamics in the wider spectrum of manufacturing processes, assessing their potential for automation. Emphasis on new technologies such as rapid prototyping, microelectronics fabrication and nanomanufacturing, as well as on advanced, nonlinear, adaptive and multivariable control algorithms. Use of simulation to assess and optimise the performance of processing systems. Research directions are explored through a taxonomy of manufacturing processes, suggesting redesign for automation. Students integrate and demonstrate control of a process experiment in the laboratory, such as automated bottle labelling robotic cell, thermal control of welding with infrared feedback or automated assembly with machine vision.

**MME 551 Nonlinear Mechanics of Solids and Structures (8 ECTS)**

This course aims to cover a particular area in applied mechanics and biomechanics: Nonlinear mechanics of solid matter using a continuum-based approach. The course opens with a brief introduction to the fundamentals in solid mechanics, equations of motion and equilibrium, and variational principles for deformable solids. The course places emphasis on the theoretical basis of nonlinear elastic solids – spanning from linear elastic (including isotropic and anisotropic) materials to hypo- and hyperelastic, viscoelastic, elastoplastic and viscoelastoplastic materials. In summary, the course covers essential material in advanced solid mechanics for final year undergraduates and postgraduates in Mechanical Engineering, Bioengineering and Civil Engineering.

**MME 507 Technical Writing and Speaking (4 ECTS)**

The course covers the principles and processes of speaking and writing effectively. It also targets specific audiences through intense instructions in oral and written communication. In the first part of the course, the focus will be on developing students’ language skills in effective and clear communication and giving instructions to the students in relation to the design and preparation of scientific talks and posters. The second part focuses on the preparation of scientific publications, including the structure and elements of publications, the art of scientific
writing, the preparation of figures and tables, correct citations, the selection of suitable journals, the submission of manuscripts and the reviewing and publication process.

**MME 559 Nonlinear Mechanics & Modelling of Solids (8 ECTS)**
The first part of the course focuses on the fundamental theory in continuum solid mechanics – applicable to nonlinear solids – that spans from the various stress and strain measures to a short outline of constitutive laws of solid materials. The second part of the course focuses on the derivation of equilibrium and equations of motion for deformable solids. The third part of the course focuses on the constitutive equations that describe elastic solids mechanical behaviour (from macro to micro); the course material will span from linear elastic (isotropic and anisotropic) solids, hyperelastic, viscoelastic, poroelastic and elastoplastic solids.

**MME 553 Surface Engineering (8 ECTS)**
The course covers surface treatments and deposition of thin films and functional coatings for multiple applications such as mechanical, biomedical, catalytic, etc. using a large variety of methods. The choice of a surface material with the appropriate properties and sufficient resistance to wear, corrosion and degradation is crucial to its functionality. Processes involved range from traditional well-established techniques (e.g. painting) to more technologically demanding coating techniques and surface treatments (e.g. vapour deposition) which have benefited from recent innovations. Integrating both theory with lab practice in the course ensures a greater understanding and appreciation of the concepts for application.

**MME 554 Characterisation Techniques of Bulk and Nano-Materials (8 ECTS)**

**MME 555 Polymers in Medical Applications (8 ECTS)**

**MME 557 Polymer Nanocomposites (8 ECTS)**

**MME 558 Fundamentals of Ceramics I (8 ECTS)**
The course focuses on bonding, structure, and the physical and chemical properties that are influenced mostly by the type of bonding rather than the microstructure, such as defect structure and the atomic and electronic transport in ceramics. Bonding in ceramics – Structure of ceramics – Effect of chemical forces and structure on physical properties – Thermodynamics and kinetics - Defects in ceramics – Diffusion and electrical conductivity – Phase equilibria – Formation, Structure, Properties of Glasses.

**MME 559 Fundamentals of Ceramics II (8 ECTS)**
The course focuses on the science of sintering and microstructural development and with properties that are more microstructure dependent, such as fracture toughness, optical, magnetic, and dielectric properties. Sintering and grain growth – Mechanical Properties: Fast Fracture – Creep, Subcritical Crack Growth, and Fatigue – Thermal Properties – Dielectric Properties – Magnetic and Nonlinear Dielectric Properties – Optical Properties.

**MMK 562 Semiconductor Processing Technology (8 ECTS)**
Semiconductor crystals, crystals and crystallographic planes, crystal of silicon, wafer preparation, compound semiconductors, thermal oxidation and nitridation, silicon dioxide and interface SiO2-Si, growth of thin films, chemical vapor deposition, physicochemical processes of growth, physical vapor deposition, lithography, optical lithography, techniques for improving resolution, electron beam lithography, X-ray lithography, ion beam lithography, control of purity and etching, purity processes, etching, ion implantation, fundamentals, energy losses, destruction of crystal and activity of dopants, diffusion, point defects, fick's laws, non-constant diffusion coefficient, diffusion in polycrystalline Si, diffusion in insulators, diffusion sources, gettering in Si, contact and interconnect technology, contact metallisation, multilayer dielectrics, metallic interconnects, interlevel dielectrics, multilevel metals, reliability.

**MMK 563 Materials Physics (8 ECTS)**
The course includes the following topics: Introduction to materials physics, symmetry, crystal structure (metals and ceramics) chemical bonds, reciprocal lattice–X-ray diffraction, lattice vibrations - phonons - thermal properties (heat capacity, thermal expansion, phonon thermal conductivity); free electron Gas–Metals (Jellium model, nearly free electron approximation, Fermi statistics, electronic band structure, density of states, specific heat, thermal conductivity, electrical conductivity, Wiedemann-Franz law); electrical properties (metals, semiconductors, dielectrics, superconductors); magnetic properties (paramagnetism, diamagnetism, ferromagnetism, Antiferromagnetism).

**MMK 564 Nanomechanics (8 ECTS)**
The operating environment of nanostructures is completely different of that of their macroscale counterparts. For example, responses to thermal fluctuations, and for certain scales to quantum potentials, contribute to their positional uncertainty. The basic classical, statistical and quantum mechanics and thermodynamics required to characterise nano-mechanical devices will be introduced. In addition, the principle of operation of various devices used to probe the properties of a nanosystem will be explained. An overview of continuum mechanics notions such as stress and strains, elastic contacts and waves in solids will be given.
MME 565 Physical Principles, Design and Fabrication of MEMS (8 ECTS)
A historical overview; relevant length scales, market analysis and motivation; simple MEMs e.g. cantilever, switches, comb drives, pressure sensors, transduction principles i.e. mechanical, electrostatic, thermal, piezoelectric. Fabrication of MEMs using standard integrated circuit processing technology, types of lithography, i.e. photolithography, electron beam lithography, soft lithography, thin film deposition, wet and dry etching methods. Surface and bulk micromachining, hot embossing, micro-molding. Assembly, packaging and reliability. Advanced radio frequency MEMs, Piezo MEMs, Magnetic MEMs, Biological MEMs.

MME 566 Advanced Semiconductor Materials and Nanodevices (8 ECTS)
Introduction to semiconductors, intrinsic, n-type and p-type; carrier transport, Hall effect, resistivity, photoconductivity, The infinite quantum well, 3D DOS, Fermi Dirac Statistics, carrier concentration, law of mass action. Temperature dependence of carrier density, mobility, scattering mechanisms. Energy band diagrams, Fermi level and temperature dependence. The p-n junction in equilibrium, forward and reverse bias in the dark and light, the p-n junction photovoltaic device, open circuit voltage, short circuit current, efficiency, fill factor, I-V characteristic, fabrication of p-n junctions. Derivation of 2D and 1D DOS, quantum wells, wires and dots. Nanowires, VLS growth, axial and core-shell, nanowire device fabrication, nanowire solar cells.

MME 567 Materials for Energy Production, Storage and Conversion (8 ECTS)
This course focuses on materials and technologies for energy production, storage and conversion, as well as for sensors used for monitoring of pollutant emissions. Devices that will be considered include solar cells, fuel cells, batteries and electromechanical sensors. The main part of the course refers to thermodynamic, kinetic and electrochemical concepts, as well as material properties critical for designing such devices.
Rafaela Agathokleous, Lecturer
Thermal analysis of energy systems through modelling and experimentation. Transient analysis of thermal behaviour and performance of solar energy systems, energy storage systems, waste heat recovery systems. Optimisation of solar energy technologies, photovoltaic thermal collectors (PVT), solar water heating systems and building integrated solar thermal systems (BISTS) and photovoltaics (BIPV).

Efthychios Christoforou, Assistant Professor
Robotics and autonomous systems, Robot dynamics and control, Reconfigurable/adaptive structures, Medical robotics, telerobotics and telemedicine.

Ioannis Giapintzakis, Professor
Thin-film solar cells based on chalcopyrites for applications in photovoltaics, Resistive switching phenomena in thin films of lithiated transition metal oxides for applications in non-volatile memories and neuromorphic systems, Thermaoelectricity in complex transition metal oxides, chalcogenides and (nano)composites for applications in solid-state cooling and power generation devices, Thermal transport in epitaxial thin films of quasi-1D quantum magnets for applications in thermal management, Growth of epitaxial thin films and nanostructures using ns- and ps-pulsed lasers.

Dimokratis Grigoriadis, Associate Professor
Heat & mass transfer, Renewable energy sources, Computational Fluid dynamics (CFD), Direct and large Eddy simulations of Turbulent flows (DNS/LES), High performance & GPU computing, Algorithmic acceleration of scientific computations.

Stavros Kassinos, Professor
Modelling and simulation of turbulent flows, Modelling and simulation of magnetohydrodynamic flows, Biological and biomedical flows, Simulation of multiscale phenomena, Thermodynamics and renewable energy sources, Drug delivery to the lungs.

Theodora Krasia-Christoforou, Professor
Synthesis, characterization and applications of polymers, Organic-inorganic polymer-based nanocomposites, Electro-spinning.

Andreas Kyprianou, Associate Professor
Non-linear systems, Dynamic modifications and robustness, Modern signal processing techniques applied to vibrating systems, Solar cells, Urban characterisation.

Theodora Kyratsi, Professor
Materials synthesis and processing based on powder technology techniques – ball milling and consolidation techniques, Nanomaterials and nanocomposites, Energy- and environment-related materials, Thermoelctic materials for cooling applications and power generation, Materials for CO2 storage.

Loucas S. Louca, Associate Professor
Physical system modelling and model reduction of large-scale systems, Bond graph theory, Modelling of automotive systems, Computer aided modelling and simulation, Haptic interfaces, Robotic rehabilitation.

Denis Politis, Lecturer

Claus G. Rebholz, Associate Professor
Thin films and coatings, Surface engineering technologies, Nanostructured materials, Nanoscale manufacturing technologies, Carbon materials and energy, Engineering design.

Triantafyllos Stylianopoulos, Associate Professor
Biomechanics, Biotransport, Bioengineering, Tumor micro-environment, Cancer research.

Alexandros Syrakos, Lecturer
Non-Newtonian fluid mechanics and rheology, Constitutive modelling of complex fluids, Computational Fluid Dynamics (CFD) with finite volume and finite element methods.

Dimitrios Tzeranis, Lecturer
Design and development of biomedical devices and systems, Biomaterials, stem cells & grafts for regenerative medicine, 3D tissue models and their application in pre-clinical drug discovery, Fluorescence imaging, microscopy & spectroscopy.

Vasileios Vavourakis, Associate Professor

Matthew Zervos, Associate Professor
Synthesis, structural, optical, electrical characterization of semiconductor nanowires and device fabrication for energy related applications.

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Dimokratis Grigoriadis, Associate Professor
Claus Rebholz, Associate Professor
Vasileios Vavourakis, Associate Professor

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www.ucy.ac.cy/mme/en

Department of Mechanical and Manufacturing Engineering

ΕΡΕΥΝΗΤΙΚΑ ΕΝΔΙΑΦΕΡΟΝΤΑ ΑΚΑΔΗΜΑΪΚΟΥ ΠΡΟΣΩΠΙΚΟΥ
The IPP-ETSD has been offered by the Faculty of Engineering of the University of Cyprus since September 2010. In this postgraduate programme, all the Departments of the Faculty of Engineering of the University of Cyprus are involved:

- Department of Architecture
- Department of Civil and Environmental Engineering
- Department of Electrical and Computer Engineering
- Department of Mechanical and Manufacturing Engineering

The Programme offers the possibility to students to join one of the following Master programmes of studies:

- Master of Engineering (M.Eng.), a Master of professional type, where emphasis is given to courses, seminars and a project targeted mostly on practical applications.
- Master of Science (M.Sc.), with emphasis in courses, seminars and projects that mainly aim in research directions and innovative design.

Introduction

The Programme offers specialisation in the discipline of Energy Technologies within the frame of Sustainable Design. The interdisciplinary nature of the Master’s programme gives the opportunity to students to encounter subjects from a wide range of scientific backgrounds and work with fellow students of different disciplines to develop synergies and complementarities for achieving common objectives. Graduates of the programme can thus gain a more comprehensive and multidisciplinary training in such a diverse subject area such as Energy.

Feasibility and Goals

The key objectives of the IPP-ETSD programme are:

- The proper preparation of the engineering-scientists graduates so that they can successfully address current energy challenges and demands, both nationally and internationally.
- The acquisition of a unified interdisciplinary scientific training and understanding in a wide range of energy topics, through the framework of sustainable design.

Through the versatile education offered to students, the concept of Energy itself as well as its storage, distribution and utilisation is studied in a way that is consistent with modern concepts of sustainability and energy saving.

Moreover, students are given the opportunity to work as members of a multidisciplinary team for the development of a complex large-scale project that requires multidisciplinary collaboration, reflecting the background of the four departments of the Faculty of Engineering. This activity will help students to obtain a common background necessary for the implementation of the projects in real conditions, in which, knowledge of basic principles relating to all disciplines is necessary. Furthermore, the perception of teamwork and holistic view of a project is cultivated to achieve the greatest possible synergies in sustainable design and energy efficiency.

Procedure and Criteria of Admission

The candidates for admission to the programme (M.Sc. & M.Eng.) must hold at least a recognised equivalent university degree (B.Sc.) in a relevant field of Science or Engineering. The candidates must submit a formal request to one or more Departments, through the Graduate School and within specified deadlines (twice a year). The applications are evaluated and approved by the Departmental Council to which the application was submitted. The selection of students is based on the following criteria:

- Quality of the candidate’s academic career, both in depth and in breadth, and past achievements in his/her undergraduate or graduate studies.
- Indications of capability in implementing existing technologies, as well as developing innovative technologies in the proposed area of study.

Moreover, for the admission to the M.Sc. Programme, the candidate students must provide indications of their ability for original and innovative research in the proposed field of study.
Academic and Research Supervisors

The main objective of the Programme is to ensure that all the students will receive adequate and appropriate advising support throughout their studies.

**Academic Supervisor:** Upon admission to the Programme and before the first day of registration, every student is assigned an academic supervisor, the representative of his/her Department in the Interdepartmental Committee of the Programme. The student can find the relevant information after the registration to the Banner System. The academic supervisor meets with the student before the first registration, to plan the first semester of studies, helps the student to appropriately select courses and oversees his/her academic progress with regular meetings, beginning, end and/or during the semester. The first meeting takes place at the "New Student Introductory Day", which takes place the week of registration. At the meeting, all students' academic advisors are present.

**Research Advisor:** (this concerns only students who are admitted to M.Sc. Programme). The student must determine a research advisor to carry out his/her thesis research. The research advisor may be a person other than his/her academic advisor. The selection of a research advisor is done by consulting students and a faculty member, that his/her research interests focus on energy. The research advisor may be from any of the University faculties, regardless of the Department of enrolment of the student. In collaboration with the research advisor, a suitable and specific thesis topic will be agreed. After submission and approval of the thesis proposal, the student, in collaboration with the research advisor, must inform the Thesis Committee.

**MASTER OF ENGINEERING PROGRAMME (M.Eng.)**

Students are required to successfully complete the Programme of studies, as described in detail below. The minimum duration of the Programme for full-time students is three academic semesters. The maximum duration allowed for completion of the Programme is four years, as determined by the University Regulations. The Advanced Project «Capstone Design & Research Project» starts only every September and ends in July.

**Programme of Studies**

The Programme requires the completion of at least 91 ECTS from a combination of graduate courses, seminars and labs, as follows:

<table>
<thead>
<tr>
<th>ECTS</th>
<th>5 Specialisation Courses</th>
<th>POL 500 Basic Principles of Interdisciplinary Engineering</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prerequisite</td>
<td>ARH 538 Environmental Building Design</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ECE 687 Building Integration of Photovoltaic (PV):</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Towards nearly zero energy buildings (NZEB)</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MME 516 Renewable Energy Sources Technology</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CEE 536 Energy Efficiency of Buildings</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td><strong>General Elective Courses</strong></td>
<td></td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>4 Elective Courses</td>
<td>Advanced Project: Capstone Design &amp; Research Project</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Graduate Seminar</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Engagement with Practice and Industry</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td><strong>Grand Total</strong></td>
<td></td>
<td>91</td>
</tr>
</tbody>
</table>

**Indicative Programme of Studies for M.Eng.**

The determination of the appropriate combination of courses, research and seminars for each semester will be performed by the students, in coordination with their academic advisor. The following table shows an indicative example of a M.Eng. degree program.

**Example A: Admission in September**

<table>
<thead>
<tr>
<th>ECTS</th>
<th>First Semester (Fall)</th>
<th>MME 516 (mandatory)</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>CEE 536 (mandatory)</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Advanced Project I</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Prerequisite¹</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Graduate Seminar</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>Second Semester (Spring)</td>
<td>ARH 538 (mandatory)</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ECE 687 (mandatory)</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Advanced Project II</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 Elective Course</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Engagement with practice and industry</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>Summer</td>
<td>Advanced Project III</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total</strong></td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Third Semester (Fall)</td>
<td>3 Elective Courses</td>
<td>3 X 8 = 24</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total</strong></td>
<td>24</td>
</tr>
</tbody>
</table>

¹ For POL 500, students will be notified before the beginning of each academic year, for the dates and hours.
Example B: Admission in January

<table>
<thead>
<tr>
<th>First Semester (Spring)</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARH 538 (mandatory)</td>
<td>8</td>
</tr>
<tr>
<td>ECE 687 (mandatory)</td>
<td>8</td>
</tr>
<tr>
<td>1 elective course</td>
<td>8</td>
</tr>
<tr>
<td>Graduate seminar</td>
<td>1</td>
</tr>
<tr>
<td>Engagement with practice and industry</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Semester (Fall)</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MME 516 (mandatory)</td>
<td>8</td>
</tr>
<tr>
<td>CEE 536 (mandatory)</td>
<td>8</td>
</tr>
<tr>
<td>1 elective course</td>
<td>8</td>
</tr>
<tr>
<td>Advanced Project I</td>
<td>8</td>
</tr>
<tr>
<td>Prerequisite $^1$</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester (Spring)</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 elective course</td>
<td>2 X 8 = 16</td>
</tr>
<tr>
<td>Advanced Project II</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Summer</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Project III</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
</tr>
</tbody>
</table>

$^1$ For POL 500, students will be notified before the beginning of each academic year for the dates and hours.

MASTER OF SCIENCE PROGRAMME (M.Sc.)

Students are required to successfully complete the programme of studies that also includes the Thesis Research and the Advanced Project, as described in detail below. The minimum duration of the Programme for full-time students is four academic semesters. The maximum duration allowed for completion of the Programme is four years, as determined by the University Regulations. The Advanced Project «Capstone Design & Research Project » starts only every September and ends in July.

Programme of Studies

The Programme requires the completion of at least 115 ECTS from a combination of graduate courses, seminars, advanced project and thesis research as follows:

<table>
<thead>
<tr>
<th>6 Specialisation Courses</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>POL 500 Basic Principles of Interdisciplinary Engineering Prerequisite</td>
<td>1</td>
</tr>
<tr>
<td>POL 800 Research Methodology</td>
<td>8</td>
</tr>
<tr>
<td>ARH 538 Environmental Building Design</td>
<td>8</td>
</tr>
<tr>
<td>ECE 687 Building Integration of Photovoltaic (PV): Towards nearly zero energy buildings (NZEB)</td>
<td>8</td>
</tr>
<tr>
<td>MME 516 Renewable Energy Sources Technology</td>
<td>8</td>
</tr>
<tr>
<td>CEE 536 Energy Efficiency of Buildings</td>
<td>8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>General Elective Courses</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Project: Capstone Design and Research Project</td>
<td>24</td>
</tr>
<tr>
<td>Graduate Seminar</td>
<td>1</td>
</tr>
<tr>
<td>Engagement with Practice and Industry</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Master Thesis</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grand Total</td>
<td>115</td>
</tr>
</tbody>
</table>

Master’s Thesis

Students are required to carry out an individual research thesis. The topic of the student’s research is chosen in coordination with his/her research supervisor, preferably before the end of the first semester. Students must submit in writing to the Interdepartmental Committee, a one-page summary of the thesis, explaining the relevance to the discipline of the Programme, not later than six months prior to its defence. When the thesis is completed, the student must present it to an open audience, before the Examination Committee. The Examination Committee is composed of three members. If the defence of the research is satisfactory, the Examination Committee approves its successful completion. The thesis is accredited as “Excellent”, “Very Well” and “Well”. Students, who complete a dissertation, are obliged to submit an electronic version of their work with graphic abstract to the Secretariat of the Programme and to the library.

Indicative Programme of Studies

The appropriate combination of courses, research and seminars attendance for each semester will be determined by the student in coordination with his/her academic advisor. Indicative examples of an M.Sc. programme of studies, which can be completed in three academic semesters, are presented below, one with admission in September and one with admission in January, provided that a student is a full-time student.
### Example A: Admission in September

<table>
<thead>
<tr>
<th>First Semester (Fall)</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMK 516 (mandatory)</td>
<td>8</td>
</tr>
<tr>
<td>CEE 536 (mandatory)</td>
<td>8</td>
</tr>
<tr>
<td>POL 800 (mandatory)</td>
<td>8</td>
</tr>
<tr>
<td>Advanced Project I</td>
<td>8</td>
</tr>
<tr>
<td>Prerequisite¹</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Semester (Spring)</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC 538 (mandatory)</td>
<td>8</td>
</tr>
<tr>
<td>ECE 687 (mandatory)</td>
<td>8</td>
</tr>
<tr>
<td>Graduate Seminar</td>
<td>1</td>
</tr>
<tr>
<td>Advanced Project II</td>
<td>8</td>
</tr>
<tr>
<td>Engagement with practice and industry</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Summer</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Project III</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester (Fall)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Elective Course</td>
<td>8</td>
</tr>
<tr>
<td>Master Thesis Research I</td>
<td>8</td>
</tr>
<tr>
<td>Master Thesis Research II</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fourth Semester (Spring)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Master Thesis Research III</td>
<td>8</td>
</tr>
<tr>
<td>Master Thesis Research IV</td>
<td>8</td>
</tr>
<tr>
<td>Master Thesis Research V</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
</tr>
</tbody>
</table>

¹ For POL 500, students will be informed before the beginning of each academic year for the dates and hours.

### SPECIALISATION COURSES

Students must successfully attend a number of postgraduate specialisation courses selected from the Interdepartmental Programme, that will ensure the minimum number of ECTS credits according to the requirements of each programme. Cited below, there is a list of specialisation courses that is typically offered over time (not all courses are available in the same semester or in the same year). An indicative timetable of the present semester is posted on the ETSD Programme’s website. Due to the wide and varied offering of courses within the Interdepartmental Programme, part-time students must have in mind that a limited number of courses are offered during the morning and midday hours. Courses are offered in Greek and English language.

### List of Specialisation Courses (Mandatory)

<table>
<thead>
<tr>
<th>DEPARTMENT</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture</td>
<td></td>
</tr>
<tr>
<td>ARH 538 Environmental Building Design</td>
<td>8</td>
</tr>
<tr>
<td>Electrical and Computer Engineering</td>
<td></td>
</tr>
<tr>
<td>ECE 687 Building Integration of Photovoltaic (PV): Towards nearly zero energy buildings (NZEB)</td>
<td>8</td>
</tr>
<tr>
<td>Mechanical and Manufacturing Engineering</td>
<td></td>
</tr>
<tr>
<td>MME 516 Renewable Energy Sources Technology</td>
<td>8</td>
</tr>
<tr>
<td>Civil and Environmental Engineering</td>
<td></td>
</tr>
<tr>
<td>CEE 536 Energy Efficiency of Buildings</td>
<td>8</td>
</tr>
</tbody>
</table>

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### Example B: Admission in January

<table>
<thead>
<tr>
<th>First Semester (Spring)</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC 538 (mandatory)</td>
<td>8</td>
</tr>
<tr>
<td>ECE 687 (mandatory)</td>
<td>8</td>
</tr>
<tr>
<td>1 Elective Course</td>
<td>8</td>
</tr>
<tr>
<td>Graduate Seminar</td>
<td>1</td>
</tr>
<tr>
<td>Engagement with practice and industry</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Summer (N/A)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Semester (Fall)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MMK 516 (mandatory)</td>
<td>8</td>
</tr>
<tr>
<td>CEE 536 (mandatory)</td>
<td>8</td>
</tr>
<tr>
<td>POL 800 (mandatory)</td>
<td>8</td>
</tr>
</tbody>
</table>

---

1 For POL 500, students will be informed before the beginning of each academic year for the dates and hours.
### List of Elective Courses

<table>
<thead>
<tr>
<th>DEPARTMENT</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Architecture</strong></td>
<td></td>
</tr>
<tr>
<td>ARH 539  Advanced Topics in Architectural Technology</td>
<td>8</td>
</tr>
<tr>
<td>ARH 549  Advanced Topics in Urban Planning</td>
<td>8</td>
</tr>
<tr>
<td>ARH 550  Special Topics of Recording and Documenting Buildings and Sites</td>
<td>8</td>
</tr>
<tr>
<td><strong>Electrical and Computer Engineering</strong></td>
<td></td>
</tr>
<tr>
<td>ECE 680  Power System Analysis</td>
<td>8</td>
</tr>
<tr>
<td>ECE 681  Power System Operation and Control</td>
<td>8</td>
</tr>
<tr>
<td>ECE 685  Power System Plant and Operation</td>
<td>8</td>
</tr>
<tr>
<td>ECE 686  Power System Modelling</td>
<td>8</td>
</tr>
<tr>
<td><strong>Mechanical and Manufacturing Engineering</strong></td>
<td></td>
</tr>
<tr>
<td>MME 512  Advanced Engineering Thermodynamics</td>
<td>8</td>
</tr>
<tr>
<td>MME 566  Advanced Semiconductor Materials and Nanodevices</td>
<td>8</td>
</tr>
<tr>
<td><strong>Civil and Environmental Engineering</strong></td>
<td></td>
</tr>
<tr>
<td>CEE 580  Dynamics of Atmosphere and Air Pollution Dispersion</td>
<td>8</td>
</tr>
<tr>
<td>CEE 586  Sustainable Built Environment</td>
<td>8</td>
</tr>
<tr>
<td>CEE 596  Marine and Wind Energy</td>
<td>8</td>
</tr>
<tr>
<td>CEE 598  Biotechnological production of biofuels and bioenergy</td>
<td>8</td>
</tr>
<tr>
<td><strong>Interdepartmental Postgraduate Programme (ETSD)</strong></td>
<td></td>
</tr>
<tr>
<td>POL 800  Research Methodology - Only for M. Eng. Students</td>
<td>8</td>
</tr>
</tbody>
</table>

### Course Descriptions

**ARH 538 Environmental Building Design (8 ECTS)**

This course aims to develop the theoretical and applied knowledge of students on the Environmental Design of Buildings and highlights the role of the architectural design, construction and appropriate technical support in ensuring proper living conditions, in minimizing energy consumption and reducing adverse environmental impacts. The course covers issues concerning the bioclimatic architecture, which aims to improve the comfort conditions of users – thermal, visual, acoustic comfort, air quality – in the indoor built environment; issues that have to do with energy design aiming to the minimisation of energy consumption of the building envelope as well as issues of ecological construction regarding the minimisation of the ecological footprint.

**ARH 539 Advanced Topics in Architectural Technology (8 ECTS)**

Subjects in this course will vary according to emerging student needs or requests and the educational and research interests of the faculty. Emphasis is given on the mechanisms of heat transfer, the basic environmental design principles (lighting, ventilation, climatic adaptability), and the integration of hybrid systems and RES technologies in the design of double-skin facades or ceilings. The aim of the course is for students to develop an energy orientated design methodology in the case of high-performance building envelopes.

**ARH 549 Advanced Topics in Urban Planning (8 ECTS)**

Subjects in this course will vary according to emerging students’ needs or requests and the faculty’s educational and research interests. The coursework consists of a workshop and a survey course based on best practices in sustainable urban design and development, with a particular focus on the challenges facing the Eastern Mediterranean region. The coursework is organized in the form of a workshop and includes thematic presentations, the analysis of cases studies, role playing and visioning exercises and a final master-planning exercise in a location to be specified by the instructor.

**ARH 550 Special Topics on Recording and Documenting Buildings and Sites (8 ECTS)**

The course provides basic and advanced knowledge on recording and documenting buildings and sites using conventional and contemporary digital techniques. It aims at introducing research tools and methodological approaches of in-situ recording of buildings, sites and individual building elements, while it includes methodologies for the evaluation and processing of monitoring data. Moreover, the course refers to the recording and analysis of the indoor comfort and energy efficiency of buildings. Among others, it refers to the documenting of functional particularities and to specific comfort requirements of buildings, while it includes quantitative recordings and analysis of the parameters defining comfort conditions.

**ECE 680 Power System Analysis (8 ECTS)**

The course provides basic and advanced concepts of power system analysis. Development of analytical skills to perform analysis of power systems. Analyse balanced and unbalanced systems using symmetrical components. Study transformers and per unit sequence models, transmission line modelling, power flow solution techniques, bus impedance and admittance matrices, power system stability. Projects and term
papers to develop a deep understanding of the operation of power systems so that the students are well prepared to enter the workforce as network engineers or to perform research in this area.

**ECE 681 Power System Operation and Control (8 ECTS)**

Basic principles of generation and control in power systems. Economic dispatch, unit commitment, automatic generation control. Linear and dynamic programming and solution of problems. Steam and hydro units, fuel scheduling, production costing, observability, state estimation, power flow, deregulation.

**ECE 685 Power System Plant and Operation (8 ECTS)**

Prerequisite: ECE 680

A power system plant embraces all the equipment, including structural members that constitute a unit power source. The course introduces students to the overall design of power plant systems, focusing both on the system and on the component design. It provides an overview of the manufacturing, operating and thermal aspects of systems and the decisions necessary to deduce an optimal power plant design. Therefore, it aims to put into context the fundamentals of the plant parameters, by specifically introducing the following concepts:

- Overhead transmission lines: Design and operation;
- underground power cables: Design and operation;
- power transformers: Design and operation; technical and economical assessment of power systems.

**ECE 686 Power System Modelling (8 ECTS)**

Prerequisite: ECE 685

A number of events and challenges exacerbated at the onset of the 21st century, as well as future challenges require thorough understanding of the operating principles and main features of a Power System Plant, which is fundamentally important to power engineers. The module embraces the following simulation-based exercises:

- Overhead line design and parameter evaluation; thermal rating of HV underground power cables; electric field stress on the Insulation Material on power cables through Finite element modelling;
- modelling of non-linear properties of transformers’ core characteristics and design;
- losses evaluation on transformer structural components under saturation conditions. Final comprehensive exercise (real case scenario).

**ECE 687 Building Integration of Photovoltaics (PV): Towards Nearly Zero Energy Buildings (NZEB) (8 ECTS)**

Introductory graduate-level course on building integration of photovoltaics (BIPV) in a Nearly Zero Energy Building (NZEB) context. Review of current policy, directives, regulation, and goals on building energy efficiency and NZEBs. Available advanced components, technologies, tools, systems, techniques, and theories in modelling a building for achieving NZEB design and incorporating BIPV. Calculation of the size and cost of a system to offset building energy use. Study of smart systems for energy management and grid integration: monitoring consumption, RES generation, and environmental conditions are included, as well as case studies of smart meter projects.

**MME 512 Advanced Engineering Thermodynamics (8 ECTS)**


**MME 516 Renewable Energy Sources Technology (8 ECTS)**


**MME 566 Advanced Semiconductor Photovoltaic Devices (8 ECTS)**

Introduction to semiconductors, Intrinsic, n-type and p-type; Carrier transport, Hall effect, resistivity, photoconductivity, The infinite quantum well, 3D DOS, Fermi Dirac Statistics, carrier concentration, law of mass action. Temperature dependence of carrier density, mobility, scattering mechanisms. Energy band diagrams, Fermi level and temperature dependence. The p-n junction in equilibrium, forward and reverse bias in the dark and light, The p-n junction photovoltaic device, open circuit voltage, short circuit current, efficiency, fill factor, I-V characteristic, fabrication of p-n junctions. Derivation of 2D and 1D DOS, quantum wells, wires and dots. Nanowires, VLS growth, axial and core-shell, nanowire device fabrication, nanowire solar cells.

**CCEE 536 Energy Efficiency of Buildings (8 ECTS)**


**CCEE 580 Dynamics of the Atmosphere and Air Pollution Dispersion (8 ECTS)**


**CCEE 586 Sustainable Built Environment (8 ECTS)**

Environmental and Operational Management & Strategies. The course also demonstrates examples of both sustainable and unsustainable aspects of current design practice of the built environment, and how international policy frameworks can act as both drivers and barriers to sustainable solutions.

**CEE 596 Marine and Wind Energy (8 ECTS)**
The course is addressed to students coming from various backgrounds, with an interest in the marine environment and an aspiration to specialise in renewable energy. The aim is to introduce the technical, environmental and financial challenges of marine (mostly wind and wave) renewables. This aim is achieved through:

- Examining the natural variation of marine renewable energy sources.
- Learning the principles of such energy conversion.
- Analysing the process fundamentals of marine and wind energy systems.
- Exploring the range of environmental and financial constraints.

**CEE 598 Biotechnological Production of Biofuels and Bioenergy (8 ECTS)**
Biotechnological production of biofuels and bioenergy focuses on the use of waste to produce energy and fuels aiming at the reduction of environmental pollution. The course aims at understanding the basic processing of biofuels production (bio-gas, hydrogen, bioethanol, biodiesel) and the biotechnological processing of waste towards that direction. The students will be trained on analysis, design, control and optimisation of bioprocesses for biofuels and bioenergy production, as well as (bio) processing of waste.

**POL 500 Basic Principles of Interdisciplinary Engineering (1 ECTS)**
Introduction to basic engineering principles and notion and creating a basic common starting interdisciplinary background in Engineering, so that students from the different Engineering School Departments can take/select classes are across different departments and get introduced to the interdisciplinarity of the Programme. The course will be offered before the academic year starts. The duration of the course is 12 hours. The dates will be announced 2 weeks before.

**POL 800 Research Methodology (8 ECTS)**
The course introduces students to the qualitative and quantitative methodology of research, its simulation of principles and the application of basic methods of data collection, statistical analysis, and organising. Introduction to experimental laboratory and field methodology. Introduction to computational methodology. Basic analysis of error and uncertainty. Acquisition of tools for efficient execution and presentation of completed Master’s thesis, academic journal publication, poster presentation at conference etc.

**GRADUATE SEMINARS**

**POL 601 Graduate Seminar (1 ECTS)**
Seminar series (comprising at least 6 lectures-seminars) during the 1st Semester. The seminars can be either from the student’s Department of enrolment or from other departments of the faculty of Engineering, that are recognized as «relevant to the interdepartmental programme». Students can also attend any seminar within their Department of enrolment to complete the required number of seminars for the semester, in case that the required number of seminars «relevant to the interdepartmental programme» is not adequate.

**POL 700 Engagement with Practice and Industry (1 ECTS)**
Educational visits (4) during one academic year, to sites / organisations related to the subject of energy. During the visit thorough information will be provided on current practices, challenges, prospects and problems in the energy industry (indicative visits include wind & photovoltaic parks, bioclimatic buildings, air quality monitoring stations of the department of labour inspection etc).

**ADVANCED PROJECT: CAPSTONE DESIGN AND RESEARCH PROJECT (24 ECTS)**
Students are required to carry out an Advanced Project, and more specifically a Capstone Design & Research Project, that will be prepared and presented by the student in collaboration with other students of various specialties. The Capstone Design & Research Project includes topics that are related to the interdepartmental character of the Programme, as well as topics concerning the collaboration of students in as much as possible real conditions. Students are divided into groups and undertake the design of a project according to predetermined requirements. The work is shared while the knowledge gained by students through the courses offered throughout the Programme, is implemented in conditions of a project design. In this way, students are better prepared to transfer their knowledge into practical applications and gain experience from participating in a larger group, where everyone is performing part of the work but at the same time, all students work together towards the common objective of the Design & Research Project integration.

**POL 604 Capstone Design Project I (8 ECTS)**
The Project in collaboration with students of other disciplines under the supervision of academic staff.

**POL 704 Capstone Design Project II (8 ECTS)**
The Project in collaboration with students of other disciplines under the supervision of academic staff.

**POL 804 Capstone Design & Research Project III (8 ECTS)**
The Project in collaboration with students of other disciplines under the supervision of academic staff.
**Course Descriptions of General Elective Undergraduate Courses**

**ARH 412 Architecture and the Critical History of Ecology (5 ECTS)**

How have concepts of “Nature” and “Environment” influenced architectural thought and practice throughout history? Emphasis on the 20th and 21st century debates on environment and sustainability, and the theoretical dimensions of them.

**ECE 340 Power Engineering (6 ECTS)**

Power system components. Magnetic circuits, inductors, transformers and their equivalent circuits. Generation, transmission and utilisation of electric power. 3-phase AC and DC systems. Fundamentals of electromechanical energy conversion. Power semiconductors: basic devices and circuit applications. DC/DC converters; buck, boost, buck-boost and their derivatives, basic operation and design criteria. AC circuits: SCR phase control, inverters, uninterruptable power supplies (UPS).

**List of Undergraduate General Elective Courses**

<table>
<thead>
<tr>
<th>DEPARTMENT</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Architecture</strong></td>
<td></td>
</tr>
<tr>
<td>ARH 412 Architecture and the Critical History of Ecology</td>
<td>5</td>
</tr>
<tr>
<td><strong>Electrical and Computer Engineering</strong></td>
<td></td>
</tr>
<tr>
<td>ECE 340 Power Engineering</td>
<td>6</td>
</tr>
<tr>
<td>ECE 447 Renewable Energy Sources: Photovoltaics</td>
<td>6</td>
</tr>
<tr>
<td><strong>Mechanical and Manufacturing Engineering</strong></td>
<td></td>
</tr>
<tr>
<td>MME 217 Heat Transfer</td>
<td>5</td>
</tr>
<tr>
<td><strong>Civil and Environmental Engineering</strong></td>
<td></td>
</tr>
<tr>
<td>CEE 483 Transport Processes in Environmental Engineering</td>
<td>5</td>
</tr>
</tbody>
</table>
ECE 447 Renewable Energy: Photovoltaics (6 ECTS)


MME 217 Heat Transfer (5 ECTS)


CEE 483 Transport Processes in Environmental Engineering (5 ECTS)


Contact Details

For information regarding the Interdepartmental Postgraduate Programme ETSD, students may contact the Coordinating Secretariat.

Tel.: +357 22895400 & e-mail: energytech@ucy.ac.cy
Office Hours: Monday – Friday: 15.00 - 19.30

For information and introduction of the students to the IPP-ETSD a meeting of new entrant students is organized at the beginning of each semester, where students are provided with information, resolve any queries, assist and coordinate the registration. For updated information on the Programme, students may visit the Programme web site: http://etsd.ucy.ac.cy/en.

Departmental Contact Info

For general information regarding topics such as studies, registration, organisation and support, students are encouraged to contact the Department Secretariat.

Office Hours: Monday- Friday: 07.30 a.m. – 15.00 p.m.

Department of Engineering

Tel.: +357 22892980
E-mail: arch@ucy.ac.cy
Introduction

The Programme admits architects, civil engineers, archaeologists, chemical engineers, geologists, conservators and other relative disciplines. It aims at a comprehensive, interdisciplinary approach to conservation, so that students will be able to acquire all necessary knowledge and become qualified to manage heritage projects of all periods (archaeological sites, historical and traditional buildings and complexes, as well as buildings of the modern movement). One important element of the Programme is its interdisciplinary character, as it provides students with the opportunity to engage with different subjects from a wide range of scientific fields, as well as to collaborate with each other within the framework of joint, interdisciplinary synergies. In this way, a comprehensive, theoretical, as well as practical, training on issues of conservation and restoration of architectural heritage is achieved, emphasizing the necessary communication and cooperation between scientists from different fields of study.

Feasibility and Goals

The Programme is targeted at qualified graduates, who are ready to be actively involved in the actual restoration and conservation of historic buildings and sites. The academic objectives of the Programme involve high-level graduate teaching and practical application of the knowledge gained by students through the exploration of case studies; this approach guarantees the comprehensive and interdisciplinary approach of restoration and conservation works on historic buildings and sites by the Programme graduates. At the same time, the Programme aims at advancing and enhancing current research results and methods in the respective fields of restoration and conservation.

Graduates of the Programme are expected to be employed in relevant specialised positions in the public and private sector, both in Cyprus and abroad.

Furthermore, they will be able to provide consulting services in conservation and restoration projects.

The Programme aims at providing the students with novel knowledge in the field of restoration and conservation of historic buildings and sites and aspires to educate them to:

- Develop critical thinking during restoration and conservation works.
- Seek continuous professional development.
- Introduce and adopt innovative concepts/ideas, technologies and methods in their practice.
- Embrace interdisciplinary collaborations for the comprehensive approach and efficient solving of preservation problems of historic buildings and sites.

Procedure and Criteria of Admission

Candidates must hold a university degree in a relevant field awarded by the University of Cyprus or other accredited university in Cyprus or abroad. They must also submit an official application for admission to one of the participating departments (host department), within the announced deadlines for applications.

Applications are evaluated by the Committee of the Postgraduate Programme, which makes recommendations to the Councils of the respective departments. The Departments are then responsible for the final admission of students. Each department maintains the right not to fill all available positions.

The selection of students is made according to the following criteria:

- Quality of academic career in depth and breadth of knowledge.
- Past achievements in undergraduate/graduate studies.
- Ability to develop independent critical thinking and research activity.
Programme Requirements

Students are required to successfully complete the programme of studies, as described in detail below, including the successful attendance of seven courses, the completion of an independent research study, and the participation in an advanced group project (Capstone). The minimum duration of the Programme for full-time students is three academic terms (in addition to a summer semester) and the maximum duration for completing the Programme is four years, as determined by the University regulations. It is clarified that the three compulsory courses are offered every September, whereas the advanced group project (Capstone) starts every January and ends in December.

Programme of Studies

The Programme requires the completion of at least 94 ECTS from a combination of graduate courses, an independent study and the advanced group project (Capstone), as follows:

<table>
<thead>
<tr>
<th>Course Description</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Compulsory Core Courses</td>
<td>26</td>
</tr>
<tr>
<td>ARH 517 History and Critical Analysis of Conservation</td>
<td>8</td>
</tr>
<tr>
<td>CCE 533 Local and Traditional Building Materials</td>
<td>8</td>
</tr>
<tr>
<td>ARCH 652 Introduction to Building Archaeology</td>
<td>10</td>
</tr>
<tr>
<td>Specialisation Courses (elective)</td>
<td>32</td>
</tr>
<tr>
<td>4 Elective Courses from the list of the Programme courses</td>
<td></td>
</tr>
<tr>
<td>2 Graduate courses from the host department</td>
<td>16</td>
</tr>
<tr>
<td>2 Graduate courses from the other two departments</td>
<td>16</td>
</tr>
<tr>
<td>Capstone Design Project</td>
<td>20</td>
</tr>
<tr>
<td>Research Independent Study</td>
<td>16</td>
</tr>
<tr>
<td>Grand Total</td>
<td>94</td>
</tr>
</tbody>
</table>

Graduate Master students are considered as full-time students if they are registered in more than 18 ECTS each semester (according to the general rules of the University of Cyprus).

CON 500 A-C Capstone Design Project (20 ECTS)

For the successful completion of the Master’s degree, students are required to participate in the interdisciplinary Capstone Design Project (CON 500), that is an advanced group project, which forms an important element of the Programme. The Capstone Design Project (CON 500A-C) consists of three individual courses of a total duration of three semesters. Through these courses, the three Departments that participate in the Programme, achieve a close collaboration between their individual fields of specialisation, as well as between the students who come from different academic disciplines and backgrounds. The goal is the comprehensive, interdisciplinary training of students and the development of their ability to cooperate in real-life management issues, that cultural heritage is currently facing. It is noted that the course has been awarded and funded by the Teaching and Learning Centre of the University of Cyprus, within the framework of the First Call of the action “Teaching Innovations”.

The Capstone Design Project is essentially a case study, that combines analytical and design work and includes theoretical and archival research, field work (survey), laboratory experiments and design proposals. The work is performed by groups of students from all three Departments that participate in the Programme. These groups are formed according to the research background of each member and include architects, civil engineers, archaeologists, and conservators. In this way, students are better prepared to apply their knowledge to practical approaches, both academically and professionally. They also gain valuable experience from participating in an interdisciplinary project team, where each member performs part of the work based on their scientific background, but at the same time collaborates with others to reach the common goal of the project. Part-time students must have in mind that part of this project is carried out during the Summer Semester.

CON 510 Independent Study (16 ECTS)

For the successful completion of the Master’s degree, students must carry out an individual research project. The topic of each student’s research is chosen in collaboration with his/her research supervisor, and deals with a subject relevant to the area of conservation. The subject could be related to the Capstone Design Project.

Indicative Programme

The appropriate combination of courses for each semester is determined by the student in coordination with his/her academic advisor. One indicative example of a programme of studies, which can be completed in three academic semesters (in addition to the Summer Semester) by a full-time student, is presented in the table below.

<table>
<thead>
<tr>
<th>Semester</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Semester (Fall)</td>
<td></td>
</tr>
<tr>
<td>3 core courses</td>
<td>26</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
</tr>
<tr>
<td>2nd Semester (Spring)</td>
<td></td>
</tr>
<tr>
<td>3 Elective Specialisation Courses</td>
<td>24</td>
</tr>
<tr>
<td>Capstone Design Project CON 500A</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
</tr>
<tr>
<td>Summer Semester</td>
<td></td>
</tr>
<tr>
<td>1 Elective Specialisation Course</td>
<td>8</td>
</tr>
<tr>
<td>Capstone Design Project CON 500B</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
</tr>
<tr>
<td>3rd Semester (Fall)</td>
<td></td>
</tr>
<tr>
<td>Capstone Design Project CON 500C</td>
<td>10</td>
</tr>
<tr>
<td>Independent Study CON 510</td>
<td>16</td>
</tr>
<tr>
<td>Grand Total</td>
<td>26</td>
</tr>
</tbody>
</table>

List of Courses

Students must successfully attend three postgraduate core courses (one from each Department that participates in the Programme), as well as a number of
elective postgraduate courses (from within and outside the host Department), that will ensure the minimum number of ECTS, according to the requirements of the programme.

A list of core and elective specialisation courses, that are normally offered in the Programme, is shown below (note that not all courses are available in the same semester or in the same year). Some courses may be offered as crash-courses. The context of the core and elective courses is enriched continually, taking into consideration the current trends and new scientific results in the field of conservation.

List of Core Courses offered by each Department

<table>
<thead>
<tr>
<th>DEPARTMENT</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture</td>
<td></td>
</tr>
<tr>
<td>ARH 517 History and Critical Analysis of Conservation</td>
<td>8</td>
</tr>
<tr>
<td>History and Archaeology</td>
<td></td>
</tr>
<tr>
<td>ARCH 652 Introduction to Building Archaeology</td>
<td>10</td>
</tr>
<tr>
<td>Civil and Environmental Engineering</td>
<td></td>
</tr>
<tr>
<td>CCE 533 Local and Traditional Building Materials</td>
<td>8</td>
</tr>
</tbody>
</table>

List of Core Courses offered by all three Departments

<table>
<thead>
<tr>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CON 500 A-C Capstone Design Project</td>
</tr>
<tr>
<td>CON 510 Independent Study</td>
</tr>
</tbody>
</table>

List of Elective Specialisation Courses

<table>
<thead>
<tr>
<th>DEPARTMENT</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture</td>
<td></td>
</tr>
<tr>
<td>ARH 511 Architecture and the Critical History of Ecology</td>
<td>8</td>
</tr>
<tr>
<td>ARH 538 Environmental Building Design</td>
<td>8</td>
</tr>
<tr>
<td>ARH 540 Mediterranean Cities and Social Phenomena</td>
<td>8</td>
</tr>
<tr>
<td>ARH 546 Urban Design and Planning</td>
<td>8</td>
</tr>
<tr>
<td>ARH 549 Advanced Topics in Urban Planning</td>
<td>8</td>
</tr>
<tr>
<td>ARH 550 Special Topics on Recording and Documenting Buildings and Sites</td>
<td>8</td>
</tr>
<tr>
<td>History and Archaeology</td>
<td></td>
</tr>
<tr>
<td>ARCH 650 Settlement and Landscape Archaeology</td>
<td>10</td>
</tr>
<tr>
<td>ARCH 653 Introduction to GIS Technologies in Archaeology</td>
<td>10</td>
</tr>
</tbody>
</table>

Course Descriptions (Core and Elective Specialisation Courses)

**ARH 517 History and Critical Analysis of Conservation (8 ECTS: 3-0-12)**

The course includes a diachronic overview of the history of conservation and an in-depth critical analysis of the most recent trends on the conservation of historic buildings. The course employs a critical analysis of international charters and declarations regarding conservation, and a systematic analysis of remarkable conservation works of historic buildings and works of the modern movement. The course aims to develop a critical analysis of contemporary trends and theories on conservation through the investigation of various criteria, bringing forth the general principles of and an interdisciplinary methodology for the comprehensive protection of outstanding buildings of various periods.

**ARH 511 Architecture and the Critical History of Ecology (8 ECTS: 3-0-12)**

How have concepts of “Nature” and “Environment” influenced architectural thought and practice? This history-theory of architecture course situates the development of ecological awareness, debate and practice in architecture within the larger historical and theoretical context of modern architecture. It covers topics from 19th Century back-to-nature movements to early 20th century community experiments, to mid-twentieth century debates on science, technology, urbanisation, postcolonial modernisation, and international development, all of which resonate with today’s debates on environmental
responsibility, and shaped current notions of eco-development, green architecture, sustainability, etc. The course requires basic knowledge of modern architectural history.

**ARH 538 Environmental Building Design (8 ECTS: 3-0-12)**

The course aims to deepen the theoretical and applied knowledge of students on the Environmental Design of Buildings and to highlight the role of the architectural design, construction and appropriate technical support in order to ensure proper living conditions for the users of a building; minimising energy consumption and reducing adverse environmental impacts. The course covers issues concerning bioclimatic architecture, which aims to improve the comfort conditions of users – thermal, visual, acoustic comfort, air quality – in the indoor built environment; issues that have to do with energy design aiming to the minimisation of energy consumption of the building envelope, as well as issues of ecological construction regarding the minimisation of the ecological footprint.

**ARH 540 Mediterranean Cities and Social Phenomena (8 ECTS: 3-0-12)**

The course focuses on the understanding of the ways in which urban social phenomena both influence and are influenced by the morphology and planning of the city. Students are encouraged to critically address specific themes each year exploring the relation between architectural research, architectural practice and society. Emphasis is given on the formulation of novel readings, methodologies and interpretations of the multiple and complex cultural practices in Mediterranean urban space in an attempt to enrich and broaden knowledge and urban design processes.

**ARH 546 Urban Design and Planning (8 ECTS: 3-0-12)**

Investigation of planning principles necessary for the communication between architects, urban designers and urban planners when dealing with contemporary urban complexity. Discussion of the complementary nature of Architecture, Urban Design and Urban Planning. Reports and projects of theoretical and applicable proposed models of cooperation in specific cities in Cyprus and surrounding countries and regions.

**ARH 549 Advanced Topics in Urban Planning: Territorial Transformations: Urban Planning and Sustainable Development (8 ECTS: 3-0-12)**

The monitoring of the development and spread of the urban fabric and the concurrent attention to be paid to the conservation of arable land and the plant and animal environment are some of the most urgent problems affecting sustainable development. Moreover, better urban planning is one of the primary challenges of sustainable development. This includes not only the design of public space, roads, neighbourhoods and houses, but also the development of parks and other green corridors, mass transit networks, water and water supply networks, industrial plant processes, as well as best practices in spatial development. The fundamental principles and tools of urban planning that fall under the adoption of sustainability principles for the development of cities – and especially at the scale of the neighbourhood – will be explored in the context of the course.

**ARH 550 Special Topics on Recording and Documenting Buildings and Sites (8 ECTS: 3-0-12)**

The course provides basic and advanced knowledge on recording and documenting buildings and sites using conventional and contemporary digital techniques. It aims at introducing research tools and methodological approaches for the in-situ monitoring of buildings, sites and individual building elements, while it includes methodologies for the evaluation and processing of monitoring data. Moreover, the course refers to the recording and analysis of the indoor comfort and energy efficiency of buildings. Among others, it refers to the documentation of functional particularities and to specific comfort requirements of buildings, while it includes quantitative recordings and analysis of the parameters defining comfort conditions.

**ARCH 650 Settlement and Landscape Archaeology (10 ECTS: 3-0-16)**

The aim of the seminar course is to offer students a cohesive and complete theoretical, methodological and practical background of settlement- and landscape archaeology, as a means of studying built space and the natural environment at a higher resolution, in order to identify, quantify and comprehend past human activity. With the use of case studies, in situ visits and drills, students will become familiar with (a) state-of-the-art methods and approaches for examining archaeological landscapes and (b) the technical equipment (e.g. robotic total station, Differential GPS, handheld computers) for recording and documenting archaeological features in the field.

**ARCH 652 Introduction to Building Archaeology (10 ECTS: 3-0-16)**

Building Archaeology (‘Archéologie du bâti’, ‘Bauforschung’) constitutes a branch of the discipline dealing with the scholarly and scientific analysis of standing historical structures by non-destructive means. Its methodology entails the close ‘reading’ of extant masonry surfaces, the production, and study of accurate illustrative documentation, the scientific investigation of mortars, pigments, metal, wood and other materials. Written historical records will be studied with a view to reconstructing the history of edifices within their immediate architectural and cultural surroundings. The course aims to familiarise students with the basic methods employed in this kind of ‘above-ground’ archaeology, through the survey of current theoretical approaches and introduction to photographic and graphic documentation.

**ARCH 653 Introduction to GIS Technologies in Archaeology**

The aim of the course is to provide theoretical knowledge and the fundamental principles in the application of Geographical Information Systems (GIS) in Archaeology. The course will provide theoretical information regarding the different types of digital data (raster and vector format), the analysis and editing of them, the digitisation of Historical, Topographical or Geological maps and their georeferencing, the analysis of Digital Terrain Models (e.g. derivatives of it, viewshed analysis, least cost surface, etc.) and the creation of digital thematic maps. Examples will be drawn from previous investigations that address various archaeological and historical questions. The course also aims to give a theoretical background to students wishing to pursue research in the fields of Landscape Archaeology and applications related to analyses of the environment and space in History and Archaeology (e.g. Predictive Modelling, Risk assessment, linking information from historical sources with spatial data, communication networks, etc.). With the completion of the laboratory section of the course, students will get a firsthand experience of the ArcGIS environment, the digitisation of maps, the import of their own historical/archaeological datasets and the creation of thematic archaeological maps.
ARCH 659 The Interdisciplinary Study of Ancient Materials

It is widely accepted that nowadays, the most comprehensive archaeological studies are those which combine traditional methods of typological and stylistic classification with analytical techniques deriving from the natural and digital sciences. The focus will be on the physical, chemical and microscopic analysis of the main groups of inorganic materials, namely stone, ceramics, glass, plasters and metals. The students will also be instructed on how the analytical data procured can then be used to answer questions regarding ancient technology, economy, organisation of production and trade. The course is divided to smaller modules (each of which is dedicated to a different raw material namely stone, ceramics, glass and metals) and the beginning of each module an introduction on the interdisciplinary study of each of raw materials will be offered by the teacher. Furthermore, for each module the students will have basic practical training using the equipment of the Archeology Research Unit (digital and petrographic microscope, pXRF, etc.). The students must also prepare presentations of papers that have been assigned to them.

ARCH 663 Introduction to Cultural Heritage Management (CHM) (10 ECTS: 3-0-16)

The course aims to familiarise students with the concept of cultural heritage, its importance and the dangers that threaten it, as well as the reasons why it is imperative to manage it and what this entails. Students are introduced to the national and international legal instruments that govern Cultural Heritage Management (CHM), as well as to the most important local and international organisations engaged in it. The theoretical framework, ethics, methods and techniques involved in ensuring the protection, conservation and highlighting of cultural resources are examined, and good and bad practices in the field are discussed. By the end of the course, students will be able to recognise the potential contribution of CHM to the promotion of scientific knowledge, sustainable development, the improvement of the quality of life of human societies, the cultivation of respect for all human beings and their achievements, and peacebuilding.

ARCH 664 Global Issues and Special Cases in Cultural Heritage Management (CHM) (10 ECTS: 3-0-16)

The seminar will address various current issues in the field of CHM, such as cultural and environmental heritage conservation issues; intangible heritage; archaeological ethics; the ethics of museum collections and the antiquities’ market; illicit trafficking in antiquities and the Internet; conservation and its role in the protection and the valorisation of cultural heritage; the role of museums in CHM; CHM and sustainable development; CHM and cultural tourism; CHM and education. The focus of the course is on issues related to the preservation and protection of cultural and environmental heritage, the intangible cultural heritage, the archaeological code of conduct, the professional code of conduct of museums regarding the purchase of antiquities, the illegal trade in antiquities in relation to the Internet, conservation and its function in the protection and valorisation of cultural resources, the role of museums in cultural heritage management (CHM). Special topics, such as CHM and sustainable development, CHM and cultural tourism, CHM and education, are also discussed.

ARCH 665 Cultural Heritage Management (CHM) in Conflict Areas

Acquaintance with the special problems pertaining to CHM in conflict and post-conflict areas, ranging from intentional obliteration of sites, neglect, looting and illicit trafficking of cultural objects. The challenges faced by cultural policy makers and cultural heritage organisations in ensuring the protection and preservation of both material cultural remains and the intangible heritage of affected communities are examined. Special emphasis is placed on methods to highlight the important contribution of cultural heritage in achieving reconciliation and in building a new social cohesion in the affected regions, one that acknowledges and respects plurality and diversity. Acquaintance with the relevant international legislation relevant to the protection of cultural heritage in time of war and with the various international and national organisations and institutions involved in the effort to prevent public heritage in wartime and reconstruct it after the end of the conflict.

CCE 532 Advanced Technology of Materials (8 ECTS: 3-0-12)


CCE 533 Local and Traditional Building Materials (8 ECTS: 3-0-12)


CCE 534 Physical Properties and Related Durability Problems of Construction Materials (8 ECTS: 3-0-12)

Porosity and porous media, saturated and unsaturated flow, one dimensional flow, sorptivity, sharp front theory, applications of sharp front theory, evaporation and drying, salt crystallisation, rising damp.

CCE 537 Rehabilitation and Strengthening of Structures (8 ECTS: 3-0-12)

with advanced composites. Historical constructions, assessment and strengthening.

**CEE 538 Experimental Methods in Structural Engineering (8 ECTS: 3-0-12)**


**CEE 547 Masonry Structures (8 ECTS: 3-0-12)**

Masonry materials (stone, adobe/earth-based brick, mortar, timber) and their mechanical behaviour. Masonry types and construction techniques (unreinforced, reinforced, tier-laced, confined-masonry). Mechanical behaviour of masonry in compression, tension, bending, shear due to in/out-of-plane actions (mainly as a result of gravitational and seismic loads). Behaviour of interfaces within the masonry and force transfer mechanisms. Construction details of masonry buildings (lintels, arches, etc.). Evaluation of mechanical characteristics of masonry and its constituent materials (in situ or at lab). Assessment, damage/pathology and retrofit/ strengthening of masonry buildings. Eurocodes and other codes for designing/assessing masonry walls and buildings. Simulation of masonry structures and static/dynamic analysis using finite element software.

**CON 520 Conservation Practice (8 ECTS)**

The course introduces students to the essentials of conservation required to underpin their practical work. It is a hands-on course with significant time spent in fieldwork and laboratories. Lectures, seminars, site-visits and practical exercises deliver ethical, scientific and practical elements of conservation, which include the use of materials and equipment in conservation practice. Case studies from different historic periods are used to highlight practical conservation problems. The course also covers current legislation and norms relevant to conservation practice in Cyprus and abroad. It aims to provide an underpinning framework for understanding the role of a conservator and the skills required to carry out conservation practice. Through the course students will develop the necessary skills of critical thinking in approaching current conservation practices and problems. The course is designed to develop student’s ability to translate conservation theory into practice. The students will devise treatment strategies, with the support of staff and visiting lecturers, using a problem-based learning approach. In essence, the course delivers the necessary knowledge and expertise for graduates to operate as professionals in the heritage sector in Cyprus and abroad. It also provides skills in project and resource management, problem solving and communication, while also offering a solid platform for pursuing research.

**General Information**

For updated information, students are advised to have a look at the website of the programme at: [https://ucy.ac.cy/conservation](https://ucy.ac.cy/conservation).

For general information regarding the programme of study, registration, organisation and support, students are encouraged to contact the secretariat of their host Department.

**Department of Architecture (ARH)**

Tel.: +357 22892980
E-mail: arch@ucy.ac.cy

**Department of Civil and Environmental Engineering (CEE)**

Tel.: 357 22892249
E-mail: cee@ucy.ac.cy

**Department of History and Archaeology**

Tel.: 357 22892180
E-mail: isa@ucy.ac.cy

For specific information regarding the Programme, students may contact the Coordinating Committee of the Programme.

**ACADEMIC COORDINATING COMMITTEE**

Ioannis Ioannou, Professor  
Department of Civil and Environmental Engineering  
Tel.: 357 22892257  
E-mail: ioannou.ioannis.1@ucy.ac.cy

George Papasavvas, Associate Professor  
Department of History and Archaeology  
Tel.: 357 22893566  
E-mail: papasavvas.george@ucy.ac.cy

Maria Philokyprou, Associate Professor  
Department of Architecture  
Tel.: 357 22892974  
E-mail: mphiloky@ucy.ac.cy
GRADUATE SCHOOL
Objectives of the School

• To adopt quality assurance indicators to ensure the quality of the postgraduate programmes and of the degrees awarded.

• To encourage interdepartmental and interuniversity doctoral programmes of study, including research programmes. In addition, it aims at encouraging more collaboration between departments in programmes development, in order to create synergies.

• To assist the academic departments in obtaining external financial support for postgraduate studies and research and to further explore the cooperation with local, state and other international bodies, in order to leverage external funding and enhance research culture.

• To develop programmes of study in international languages other than the ones taught in Greek and Turkish language.

• To provide financial support to postgraduate students through scholarships and grants in exchange for a research or teaching work assistance.

Contact Details

Graduate School
Tel.: +357 22894044
E-mail: fgs@ucy.ac.cy

University Campus
University House "Anastasios G. Leventis" Ground Floor
1 University Avenue
2109 Aglantzia

www.ucy.ac.cy/graduateschool/en
DEPARTMENTS

English Studies
French and European Studies
Turkish and Middle Eastern Studies
Research in the Department
The Department is involved in research in Anglophone and Comparative Literature, Translation, Linguistics and Cultural Studies. More specifically, research activities of faculty members in the area of literature include theatre studies, critical and cultural theory, early modern literature, Romanticism, 18th and 19th century prose, postcolonial and postmodern literature, continental philosophy, psychoanalysis, feminist and American studies and literary translation in a comparative literature context. Faculty members in the area of Linguistics undertake various research projects in theoretical and applied linguistics, including theoretical syntax, comparative syntax, the syntax-semantics and syntax-morphology interfaces, language contact between English and Greek in the sociolinguistic context of Cyprus (diglossia, lexical borrowing, etc.), as well as the teaching of English in primary schools and the development of language tests and their educational and social impact. Faculty members in the area of Translation Studies undertake research in literary translation (including theatre), intercultural studies, cultural translation, translation theory, translation methodology, translation didactics, text linguistics, and interpreting studies.

Research Collaborations
The Department, in collaboration with other universities in Cyprus and/or abroad, is involved in the following research programmes:

a) Internal research project entitled “Cypriot Heritage and Recording Maintenance (ChARM): Forays into Cypriot Greek as a Heritage Language in the English-Speaking Diaspora” (UCY, 2023-25).


d) COST Action CA21114 entitled “CLIL Network for Languages in Education: Towards bi- and multilingual disciplinary literacies (CLILNetLE)” (ESF 2022-2026).

e) COST Action CA21143 entitled “Transnational Family Dynamics in Europe (TraFaDy)” (ESF, 2022-2026).

Postgraduate Studies
The Department of English Studies offers postgraduate programmes at M.A. and Ph.D. levels. The duration of the M.A. Programme in TAAL and the M.A. in English Studies is four semesters (three semesters of coursework, followed by one semester for writing the M.A. dissertation), while the Programme of the M.A. in TESOL comprises two semesters of coursework and the writing of an M.A. dissertation during the summer.

Students are allowed up to eight semesters to complete an M.A. degree, if necessary. Doctoral candidates must complete at least six and no more than sixteen semesters of study.

In the Spring Semester of each academic year, the University announces which postgraduate programmes will be offered in the following year.

Admission Requirements
1. Postgraduate programmes at Master’s level:
   Admission to the M.A. programmes offered by the Department requires a first class or upper second class degree (or equivalent) in a subject related to their proposed field of study. All candidates must be competent and fluent in English and, depending on the nature of the programme, in other relevant languages.
   Although it’s not compulsory for candidates to have completed their degree at the time of application, they must have received it by the time they commence the postgraduate programmes.

2. Postgraduate programmes at Ph.D. level: as a rule, applicants must hold a Master’s degree (or equivalent), awarded by a recognised university, in a subject related to their proposed field of study; alternatively, they must show evidence of their ability to conduct research in the humanities.
Application and Selection Procedures
For more information on application requirements and selection procedures, refer to Admission and Attendance Regulations – Application Procedures or please consult the Graduate School (tel.: 22894021/44, www.ucy.ac.cy/graduateschool/en).

M.A. IN ENGLISH STUDIES
Philosophy
This Master’s programme is designed for students who wish to pursue advanced study and research in English Studies. Drawing from the fields of Literary and Cultural Studies, Translation Studies, and the study of the English Language, this interdisciplinary, inter-generic programme balances theoretical, cultural and practical concerns. It has the following main objectives:

• To provide graduate students with a holistic understanding of hermeneutic and pedagogical issues of interpretation and transmission.

• To offer an in-depth focus on theoretically and historically informed perspectives on Literature.

• To develop a particular focus on the role of the interlingual and intercultural transfer of literary texts through translation and adaptation.

• To provide a solid background in the philosophy and practice of language.

The Programme is divided into two components: The taught component covers the main areas of English Studies and familiarizes students with research methodology; the thesis component gives students the opportunity to undertake research in a specialised area of interest. Offered courses will be drawn from a list of broader rubrics (listed below) that represent the philosophy and objectives of the Programme. The courses offered may vary from one cycle of the M.A. to another, but by the end of the third semester, students will have taken a minimum of one course from each of the four rubrics.

The M.A. in English Studies is currently under review by the CYQAA and will not be offered in the academic year 2023-2024.

COURSE DISTRIBUTION PER SEMESTER

**LIST OF RUBRICS**

<table>
<thead>
<tr>
<th>I. Topics in Literary and Cultural History</th>
<th>ECTS</th>
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</thead>
<tbody>
<tr>
<td>ENG 700 Aesthetics &amp; Literature: From Romanticism to Postmodernism</td>
<td>10</td>
</tr>
<tr>
<td>ENG 713 Gender, Sexuality &amp; Subjectivity in Early Modern Literature &amp; Culture</td>
<td>10</td>
</tr>
<tr>
<td>ENG 721 Nation and Narrative</td>
<td>10</td>
</tr>
<tr>
<td>ENG 723 Early Modern Literature and Political Theory</td>
<td>10</td>
</tr>
<tr>
<td>ENG 724 The Struggle for Shelter: Refugees, the Five Generations, 1935-2020</td>
<td>10</td>
</tr>
<tr>
<td>ENG 725 Writing the Anthropocene</td>
<td>10</td>
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<table>
<thead>
<tr>
<th>II. Questions in Comparative Cultural Studies</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 705 The Animal in Literature and Philosophy</td>
<td>10</td>
</tr>
<tr>
<td>ENG 716 The Sublime</td>
<td>10</td>
</tr>
<tr>
<td>ENG 719 Space and Cultural Production</td>
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</tr>
<tr>
<td>ENG 720 Seminar in Contemporary Feminist Theory: Debates on Aesthetics, Ethics and Politics</td>
<td>10</td>
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<tr>
<td>ENG 726 Advanced Seminar in Literary and Cultural Theory</td>
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<tr>
<th>III. Reception, Translation, Adaptation</th>
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<tbody>
<tr>
<td>ENG 709 Imagined Worlds: The Long Nineteenth Century</td>
<td>10</td>
</tr>
<tr>
<td>ENG 727 Reading, Re-reading, Failing to Read: Methodo-logical Questions in Literary and Cultural Criticism</td>
<td>10</td>
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<tr>
<td>ENG 771 Shakespeare’s Afterlives</td>
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<tr>
<td>ENG 772 Translation Criticism</td>
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<tr>
<th>IV. Language, Literature, Pedagogy</th>
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<tbody>
<tr>
<td>ENG 704 Critical Pedagogy and Shakespeare</td>
<td>10</td>
</tr>
<tr>
<td>ENG 740 Language Teaching and Learning</td>
<td>10</td>
</tr>
<tr>
<td>ENG 743 Principles of Linguistic Analysis I</td>
<td>10</td>
</tr>
<tr>
<td>ENG 748 Principles of Linguistic Analysis II</td>
<td>10</td>
</tr>
<tr>
<td>ENG 749 First and Second Language Acquisition</td>
<td>10</td>
</tr>
<tr>
<td>ENG 760 Philosophy of Language</td>
<td>10</td>
</tr>
<tr>
<td>ENG 761 Pragmatics: Utterance, Context, Communication</td>
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</table>

| First Semester | | |
|----------------|----------------|
| Compulsory course drawn from rubrics 1-4 | 10 |
| Compulsory course drawn from rubrics 1-4 | 10 |
| Advanced Research Skills I (Compulsory) | 10 |

| Second Semester | | |
|-----------------|----------------|
| Compulsory course drawn from rubrics 1-4 | 10 |
| Compulsory course drawn from rubrics 1-4 | 10 |
| Advanced Research Skills II (Compulsory) | 10 |

| Third Semester | | |
|----------------|----------------|
| Compulsory course drawn from rubrics 1-4 | 10 |
| Compulsory course drawn from rubrics 1-4 | 10 |
| Research Portfolio (Compulsory) | 10 |

| Fourth Semester | | |
|-----------------|----------------|
| Master Thesis in English Studies | 30 |

| Grand Total | 120 |
M.A. IN TEACHING ENGLISH TO SPEAKERS OF OTHER LANGUAGES (TESOL)

The Programme is primarily designed for those interested in the scientific investigation of language and has the following main objectives:

- To offer students a solid foundation and deepen their knowledge in the main areas of English grammar and the structure of language.
- To acquaint students with different areas in the field (such as syntax, semantics, phonology, applied linguistics, etc.).
- To provide guidelines for students conducting research in the field of Linguistics and consequently encourage them to further their studies.

The Programme is divided into two components: The taught component covers the main areas of Linguistics and familiarizes students with research methodology; the thesis component gives students the opportunity to undertake research in a specialised area of interest.

COURSE DISTRIBUTION PER SEMESTER

<table>
<thead>
<tr>
<th>First Semester</th>
<th>ECTS</th>
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<tbody>
<tr>
<td>ENG 740 Language Teaching and Learning</td>
<td>10</td>
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<tr>
<td>ENG 741 Trends in Applied Linguistics</td>
<td>10</td>
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<tr>
<td>ENG 742 Research Methodology</td>
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<table>
<thead>
<tr>
<th>Second Semester</th>
<th>ECTS</th>
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<tbody>
<tr>
<td>ENG 753 Language Testing and Assessment</td>
<td>10</td>
</tr>
<tr>
<td>ENG 754 Materials Development and Course Design</td>
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<tr>
<td>ENG 75X Elective Course</td>
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<table>
<thead>
<tr>
<th>Third Semester</th>
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<tbody>
<tr>
<td>ENG 765 Master Thesis in TESOL</td>
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</tr>
<tr>
<td>ENG 762 Teaching Portfolio Development</td>
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<tr>
<td>Grand Total</td>
<td>90</td>
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</tbody>
</table>

M.A. IN THEORETICAL AND APPLIED LINGUISTICS (TAAL)

The Programme is primarily designed for those interested in the scientific investigation of language and has the following main objectives:

- To offer students a solid foundation and deepen their knowledge in the main areas of English grammar and the structure of language.
- To acquaint students with different areas in the field (such as syntax, semantics, phonology, applied linguistics, etc.).
- To provide guidelines for students conducting research in the field of Linguistics and consequently encourage them to further their studies.

The Programme is divided into two components: The taught component covers the main areas of Linguistics and familiarizes students with research methodology; the thesis component gives students the opportunity to undertake research in a specialised area of interest.

COURSE DISTRIBUTION PER SEMESTER

<table>
<thead>
<tr>
<th>First Semester</th>
<th>ECTS</th>
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</thead>
<tbody>
<tr>
<td>ENG 741 Trends in Applied Linguistics</td>
<td>10</td>
</tr>
<tr>
<td>ENG 743 Principles of Linguistic Analysis I</td>
<td>10</td>
</tr>
<tr>
<td>ENG 766 Portfolio Development I</td>
<td>10</td>
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<table>
<thead>
<tr>
<th>Second Semester</th>
<th>ECTS</th>
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<tbody>
<tr>
<td>ENG 748 Principles of Linguistic Analysis II</td>
<td>10</td>
</tr>
<tr>
<td>ENG 742 Research Methodology</td>
<td>10</td>
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<tr>
<td>ENG 767 Portfolio Development II</td>
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<table>
<thead>
<tr>
<th>Third Semester</th>
<th>ECTS</th>
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<tbody>
<tr>
<td>ENG 749 First and Second Language Acquisition</td>
<td>10</td>
</tr>
<tr>
<td>ENG 750 Topics in Linguistics</td>
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</tr>
<tr>
<td>ENG 768 Portfolio Development III</td>
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<tr>
<th>Fourth Semester</th>
<th>ECTS</th>
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<tbody>
<tr>
<td>ENG 769 Master Thesis in TAAL</td>
<td>30</td>
</tr>
<tr>
<td>Grand Total</td>
<td>120</td>
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</tbody>
</table>
Stella Achilleos, Associate Professor
Her research interests concentrate on the literature and the social and cultural history of the early modern period. Her research focuses particularly on the discourses and practices of friendship in early modern literature and culture, literature, community and sociability (with emphasis mainly on the seventeenth-century poetry and sociability), literature and utopia, early modern political theory (emphasizing especially on theories of sovereignty), and the literature of the English Revolution.

Spyros Armostis, Lecturer
His research interests lie in the fields of Phonetics, Phonology, Sociolinguistics, and Clinical Linguistics. In particular, his research focuses on the following: Articulatory, acoustic, and perceptual phonetics as well as laboratory phonology for the investigation of first or second/foreign language, variational sociolinguistics, and the investigation of typical and atypical language development.

Antonis Balasopoulos, Associate Professor
The literary construction of racial, national and imperial identities (with emphasis on the American novel of the 18th and 19th centuries), the cultural production of space (with a special emphasis on the production of utopian spaces in literary, political and architectural discourse), the politics of representation in the visual arts, and critical theory (especially materialist theories of cultural production, genre theory and post-colonial theory).

Georgios Floros, Associate Professor
His research interests focus on theoretical and methodological aspects of translation and interpreting, text linguistics and discourse analysis. More specifically, his main research areas include culture and translation, translation methodology, didactic aspects of translation & interpreting, translation ethics and politics, secondary term formation and terminology in bilectal contexts, and the use of translation in other professional contexts. Regarding the text linguistic and discourse-analytical perspective, he is interested in textual structure, genre theory and textual pragmatics.

Vasso Giannakopoulou, Assistant Professor
Her research interests lie in literary translation, translation sociology, with a particular interest in the application of Bourdieusian sociology in translation studies, the reception of canonical texts through translation, and especially the reception of Shakespeare’s works in Greek, translation history, both as theory and as a practice, the relation between translation and adaptation, and intersemiotic translation with a special focus on theatre translation and comics.

Kleanthes K. Grohmann, Professor
His research interests lie in the field of Biolinguistics, in particular theoretical linguistics, cognitive aspects of the human language faculty, and language acquisition. He is concerned with syntactic theory, synchronic and diachronic study of grammar, and theoretical concerns in psycho- and neurolinguistics. The language families, he is currently most interested in, are Germanic, Greek, Romance, and Slavic.

Sviatlana Karpava, Lecturer
Her areas of research are: Applied Linguistics, Syntax, Semantics and Pragmatics, First and Second Language Acquisition, Bilingualism, Multilingualism, Sociolinguistics, Teaching and Education. She is interested in heritage language use, maintenance and transmission, language loss, shift and attrition, family language policy and intercultural communication.

Konstantinos Kritsis, Lecturer
His research interests focus on the interfaces between translation/interpreting and theatre/information technology. More specifically, his research areas comprise Theatre and Drama Translation (history, theory, practice, and didactics), the application of actor training techniques and approaches to the training of translators and (community) interpreters, as well as the use of digital tools in (community) interpreter training.

Maria Margaroni, Associate Professor
History and Theory of Literary Criticism, Continental Philosophy, Feminist and Gender Studies, Psychoanalysis and Neuropsychoanalysis, Trauma Theory, Contemporary Anglophone Literature (especially, fiction and drama).

Phoevos Panagiotidis, Professor
His research interests comprise general linguistics, language typology and change, morphology, syntax and their acquisition. More precisely, his research concentrates on the syntax and acquisition of nominal phrases and syntactic edges and on issues of grammatical category from a syntactic, morphological and semantic point of view.

Evy Varsamopoulou, Associate Professor
English and European Romanticism, aesthetics, the artist novel (künstlerroman), the sublime (18th to 20th century), comparative literature, the ancient Greek novel, history and theory of the novel, autobiography, literary theory, ecocriticism and ecopoetics, anti-colonial theory, cultural theory, philosophical approaches to literature and film-particularly, ethics, phenomenology, existentialism, political philosophy, Kantian and post-Kantian aesthetics, psychoanalysis, time and narrative, subjectivity and gender, community and identity.

Contact Details
DEPARTMENT SECRETARIAT

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Georgia Lasetta
Tel.: +357 22892101
E-mail: lasetta.georgia@ucy.ac.cy
www.ucy.ac.cy/eng/en
The Master's Degree is designed to build students’ academic knowledge (for example: a theoretical framework, awareness of modern methodologies), professional skills (for example: practice teaching, gaining experience in teaching in schools), and familiarity with educational administration. More specifically, the Programme provides students with the theoretical background required to analyse teaching situations, as well as the practical tools they will need in their professional careers.

It is suitable for teachers who are currently working in the public or private sector in Cyprus and who are seeking for further specialisation on their subject, as well as for future teachers or those who wish to specialize in the French language for other professional reasons. It is also addressed to holders of an undergraduate degree (usually, but not necessarily, in the French language or Linguistics), awarded by the University of Cyprus or by any other accredited university, seeking for specialisation in teaching French as a Foreign Language in combination with educational leadership and administration skills. In terms of academics, the Programme will educate its students, in accordance with the latest requirements of teaching French as a Foreign Language and according to the current needs of the labour market of Cyprus and abroad. In terms of research, the Programme aims to prepare graduates to undertake high-level academic research in this field.

In addition to preparing its graduates for employment as teachers of French as a Foreign Language, the Programme also qualifies its graduates for many other professional opportunities, such as becoming foreign language Inspectors, directors of francophone and foreign private schools, directors of language centres and private institutes, instructors of pedagogical institutes, inspectors of French as a foreign language, future francophone cultural attaché, writers of francophone manuals, consultants or specialists in the francophone world, consultants and officers of francophone programmes, consultants and officers in linguistic programming and policy, consultants and practitioners in the field of language services, francophone curricula designers, translators/interpreters.

Terms of Admission
Criteria for admission to the programme include:
1. A first degree in any of the areas of Social Sciences or the Humanities, with an overall average of 7/10, an equivalent grade and/or proven research abilities, and/or teaching experience.
2. Good knowledge of the French language (indicative level B2).
3. Basic knowledge of another international language, sufficient for passive comprehension of literature relevant to the programme. The Departmental Postgraduate Committee reserves the right to require any selected candidates it deems necessary to take courses outside the programme of studies, that might be missing from their academic background but are considered vital (e.g. a French Language Course, Research Methodology, etc.). The credit for these courses will not affect the total number of ECTS of the Programme, since the grade will be in the form Pass/Fail and, therefore, will not contribute to the assessment level of the students.

Submission of Application
The application should be submitted electronically and must include:
1. A letter of interest with a statement of research and/or professional goals and interests of the candidate (500 words), in French.
2. A Curriculum Vitae, in French.
3. A copy of the undergraduate degree accompanied by the Diploma Supplement (DS) or the official transcript.
4. A writing sample, such as teaching material, a brief article, an excerpt of academic work, etc. (optional).

5. Two letters of recommendation to be directly submitted by the referees via the electronic application system of the University.

Applications will be examined by the Departmental Postgraduate Committee. If the Committee deems it necessary, the selected candidates will/might be invited to a personal interview or an interview via video-conference. The Committee’s list of selected candidates will be submitted for a final approval to the the Departmental Council of French and European Studies.

Postgraduate Scholarships
There is a limited number of scholarships available, and these are not available every year. Upon acceptance into the Programme, all students have the opportunity to apply. The deadline for submission of applications and the selection criteria will be announced on the Department’s website.

Programme Duration
The Programme extends over three semesters, during which the physical presence of the students at the University is required. However, through the ERASMUS+ Programme students can spend the maximum permitted time by the regulation of the University of Cyprus in institutions abroad. The possibility of a joint Master dissertation supervision, as a part of the exchange and cooperation programmes between the University of Cyprus and departments, laboratories or research institutes abroad, is viewed positively.

Programme Structure
The Programme extends over three semesters and requires successful completion of a minimum of 90 ECTS. It concludes in the awarding of the title of Magister Artium in Didactics of French as a Foreign Language. The programme of study per semester is distributed as follows:

<table>
<thead>
<tr>
<th>Semester</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
<td></td>
</tr>
<tr>
<td>FES 730</td>
<td>Methodologies in Teaching French as a Foreign Language</td>
</tr>
<tr>
<td>FES 731-738</td>
<td>Course from the Indicative List of the Department of French and European Studies</td>
</tr>
<tr>
<td>EDU or PSY</td>
<td>Course from the Indicative List of the Department of Education or the Department of Psychology</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>30</strong></td>
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<table>
<thead>
<tr>
<th>Semester</th>
<th>Courses</th>
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</thead>
<tbody>
<tr>
<td><strong>Second Semester</strong></td>
<td></td>
</tr>
<tr>
<td>FES 731-738</td>
<td>Course from the Indicative List of the Department of French and European Studies</td>
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<tr>
<td>EDU or PSY</td>
<td>Course from the Indicative List of the Department of Education or the Department of Psychology</td>
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<td>FES 749</td>
<td>Graduation Project DID</td>
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<td><strong>Grand Total</strong></td>
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Note: The Department of French and European Studies will select the courses offered each semester apart from the compulsory FES 730 Methodologies in Didactics of French as a Foreign Language, which must be taken by the students each semester (See below the indicative list of courses offered by the Department of French and European Studies).

The courses in the Department of Education are credited with 12 ECTS. The courses in the Department of Psychology are credited with 7.5 ECTS. Students who select courses from the Department of Psychology may fulfill the remaining credit requirements with the Research Methodology course offered by the Department of French and European Studies and/or by seminars offered by the collaborating departments.

Conferences, workshops and lectures, organised by the collaborating departments on topics related to the curriculum, are an important complement to the Programme. Students may be required to submit written reports associated with these activities.

Graduation Project (30 ECTS)
The graduation project is undertaken under the supervision of a member of the academic staff of the Department, or under the supervision of a member of the academic staff of the Department with a second evaluator from a collaborating department, after consulting with the academic advisor. Student must select their subject and Supervisor(s) by the end of the second semester of their studies. The graduation project is assessed by a Committee assembled at the end of the programme’s third semester and consists of the supervisor and another member of the academic staff. According to relevant regulations, the project should be submitted before the viva voce examination, which occurs during the examination period of the third semester.
Working Languages
The courses are taught mainly in French, except for those offered by the Department of Education and the Department of Psychology, which courses are taught in Greek. The bibliography for the seminars will be the same as the language in which they are offered. The subject of the thesis must be relevant to the didactics of French as a Foreign Language and it can be written in French or Greek.

Course Descriptions (Indicative List)

FES 730 Methodologies in Didactics of French as a Foreign Language (10 ECTS)
Through an interdisciplinary approach that requires students' critical thinking, the course outlines the principles governing the design of the teaching and learning process. It defines the current theoretical framework of the discipline of Didactics of French as a Foreign Language and Culture and outlines the fundamentals of designing and planning a course curriculum. The course discusses the principles of pedagogy which aims to create incentives and thus to improve the teaching and learning practice. More specifically, the course suggests ways of developing methodological skills, including identification and selection of teaching and learning objectives, selection and adaptation of learning material, development of teaching material through lesson plans, the use of interactive whiteboards, lesson planning and classroom management.

FES 731 Information and Communication Technology in Didactics of French as a Foreign Language (10 ECTS)
The course will familiarize students with methods of teaching French as a Foreign Language, using information technologies and communication technologies. The use of new technologies as teaching tools will enrich the teacher's educational approaches and practices and enhance the student's learning horizons. The first part of the course examines the use of computer technology in teaching languages and in digital learning environments (for instance, computing applications with multimedia, hypermedia and Internet). The second part studies Computer-mediated Communication (English: CMC, French: CMO), Distance Learning (synchronous and asynchronous education), Hybrid Education and Tele-teaching.

FES 732 Acquisition of Language Skills in Oral and Written Communication of French as a Foreign Language (10 ECTS)
The course will present the theories of learning and particularly the theoretical principles underlying speaking and writing competency in the acquisition of French as a Foreign Language. In this context, we consider the use of various methodologies in teaching a language in its spoken and written form; important among these are the communicative approach, the application of text linguistics to teaching/learning foreign languages, the use of comprehension activities as well as written activities. The course also looks at ways of coping with learning difficulties in the production of spoken and written language (blocking, emotion, anxiety, self-esteem, motivation, formative self-assessment).

FES 733 Sociolinguistics and Didactics of French as a Foreign Language (10 ECTS)
The course analyses the relationship between teaching and learning the French language within a wide range of contexts including social, political, cultural, psychological and interpersonal frameworks. More specifically, the course aims to familiarize and sensitize students with issues which are part of the broad interplay of language and society, namely in the field of Sociolinguistics. The focus will be on becoming aware of issues that deal with language diversity, language change, language contact and language policies, as well as the influence of the principles and conclusions of Modern Sociolinguistics regarding the educational practice.

FES 734 Teaching the Grammar of French as a Foreign Language (10 ECTS)
The course examines modern ways of teaching grammar. The way to teach grammatical structures and the rules of the French language is, especially at novice levels, inductive and starts with examples taken from texts (i.e. it is contextualised, as required by modern, communication-oriented language teaching). Grammar is not an independent discipline, but it is a part of the language course, as one of the components that make communication possible (for example, vocabulary, production and understanding of spoken language, etc.). Grammar is presented as a structure that functions as a means of effecting communication, as well as a means of stylistic differentiation, of textual cohesion and a mechanism of textual modulation.

FES 735 Teaching with Francophone Literary Texts (10 ECTS)
In this course, literature is viewed as a means of acquiring cognitive tools that can enhance the learning of the French language. The aim of this course is to enable students to use a francophone literary text in the context of communication and action. More specifically, through contemporary and classic French-language literary texts we approach the French language and grammar, idiomatic expressions and specific structures and their function in linguistic and textual environments. Finally, through a literary perspective, data offers answers to the following questions: How can one include the literary discourse in the process of building the communicative competence? How can one articulate literature and linguistic, socio-cultural as well as pragmatic skills with discourse skills? How can reading skills be developed through literary texts?

FES 736 Strategies for Learning the French Language: Analysis and Evaluation of Errors (10 ECTS)
The course will help students analyse strategies, evaluation and learning mistakes that learners make, when studying French as a Foreign Language. More specifically, it focuses on identifying, recording and interpreting frequent errors, that appear in the writing of Greek-speakers who are learning French. The teacher, who knows the language elements with a high frequency of error, knows what to focus on. The study and analysis of errors can also help teachers understand the cognitive and linguistic processes involved in learning the language. Finally, students will consider the importance of analysing errors from a communication perspective: What is evaluation? What is to be evaluated? When? How and why?

FES 737 The Action-oriented Approach in Teaching French as a Foreign Language (10 ECTS)
The course presents a new technique of learning French as a Foreign Language, which mainly focuses on the role of experience in the process of learning. Through the action-oriented approach, the teacher stimulates the student, coordinates and monitors the learning process while he emphasizes on the importance of active involvement in language learning. This method also reinforces the relevance between the classroom, the daily lives of the students and the
The course aims to prepare students to give a lesson using a chosen text or extract from French or Francophone theatre or using an extract from a film in French as a foreign language classes (all levels). Students will be introduced to the analysis and critical approach to the choice of French and Francophone theatre or film extracts in FLE classes. They will then be introduced to the creation and preparation of teaching aids based on theatrical or film documents for all levels of FLE learning (up to C2 level).

The Graduation Project (30 ECTS) is an introduction to autonomous theoretical and applied research, that seeks to exploit the acquired expertise of the graduate programme and put it into practice. Specifically, the student seeks to gain expertise in a particular subject and, after working on an independent research, to be able to draw conclusions that will have research and scientific interests.

We are only familiar with our current education system, which we consider to be adequate at all levels: individual, political, societal and scientific. But other European cultural eras would not agree with us on how to prepare our young people for the challenges of tomorrow. The reason for this is that every education system implies a certain vision of society and works towards achieving it. How did the Greco-Roman and medieval eras, and the societies of the Renaissance and modernity conceive of education? What were their objectives, ambitions, vision of men and women in political, societal and scientific terms? After examining the perspectives of these past eras, we will be able to grasp the criticisms of the contemporary education system, based on a positivist understanding of knowledge and scientism.

The course covers the fundamental research focused on the discursive and multimodal construction of identities, borders and migration within the European 'space'. We first examine the historical discourse on migration (within Europe), including the presentation of the official discourse of the EU regarding the issue. We also address how identities of migrants, their reasons for migrating, etc. within and towards Europe are constructed during the most important migrant waves, giving a special attention to the discursive definitions of refugees, migrants, etc. within the European mass media. We, finally, focus on comparative cases studies found in mass media using Critical Discourse Analysis.

In antiquity, the term 'Europe' referred to Zeus' beautiful lover as far as mythology was concerned, but geographically speaking it also denoted an entire continent. Later on, the word Europe was associated with a closed space hosting a common culture shared by many people. For example, after the Fall of Constantinople (1453), the term appears in the confrontation of the West with the Ottomans, noted in the speeches of Enea Silvio Piccolomini. From the 15th century and onwards, the meaning of the term develops rapidly. Humanists and people of the Enlightenment such as Erasmus, Bodin, Comenius, Grotius, Leibniz, Shaftesbury, Bolingbroke, Montesquieu, Locke, Hume, Voltaire, Rousseau, Kant and Novalis develop the idea of Europe in their political and cultural theories, while at the same time they perceive Islam as a challenge as far as the re-examination of the relationship between Judaism, Islam and Christianity is
concerned. It is due to their work that the secular meaning of the term prevailed: the various models of tolerance arise, the fear of the stranger, as well as the image of the ‘other’ begins to be discussed. In the same framework, human rights, minority rights and gender rights become ideas worth struggling for. In the 19th century the term ‘Europe’ is used in order to combat various nationalisms. Finally, after the two World Wars of the last century, political theory perceived Europe as a great leap towards establishing an Ecumenical Community (Habermas). These changes in Europe’s character demand a constant revision of it.

FES 762 The Discourse of Culture in Europe, from Plato to Popper (10 ECTS)

Plato’s Politeia (‘Republic’) is a challenging text concerning the rearing and education (‘paideia’) of people, which had a great effect on the European mentality throughout the ages. In his quest for justice, Plato proposed the tripartite distinction of the human soul (the ‘logikon’-logical, the ‘thymoeides’-the high spirited and the ‘epithymitikon’-the appetitive), as well as the theory of the four virtues (wisdom, courage, reason and justice). Furthermore, he combined the Theory of ‘Paideia’ with the Philosophy of the State, the Theory of Science and the sharp viewing of Fine Arts. Europe’s later pedagogues developed their own theories based on these Platonic preconditions. For example, the pedagogical texts of Castiglione, More, Rousseau, Schiller, Karl Popper and others, all discuss Plato’s positions either directly or indirectly. This theoretical lesson allows a wider accessibility to pedagogy, which contains elements taken from anthropology, psychology, theory of the state and the philosophy of History.

FES 763 Tragedy in Europe and Europe in Tragedy (10 ECTS)

Although tragedy is a Greek invention, it, however, came to be a common cultural asset of the European culture, since it was developed in England (Marlowe, Shakespeare), Spain (Calderón, Lope de Vega), France (Racine, Voltaire), Germany (Goethe, Schiller, Kleist) and Scandinavia (Ibsen, Strindberg). Tragedy allows for social problems and tensions to be enacted and analysed. From directing to the theatrical adaptation of a tragedy a close relation with the public is developed. Its initial ritual dimension (the interchange between dialogue and chorus and reference to myth) is presented in increasingly more modern forms. From the wide range of tragedy material, cultural conflict and wartime experiences are investigated (e.g. Aeschylus, ‘The Persians’), as well as the problems of political power (e.g. Shakespeare, King Lear), social conflicts (e.g. Büchner, Woyzeck), the battle between the two genders (e.g. Ibsen, Hedda Gabler) and more recently, criticism of the Bourgeois Society (e.g. Brecht, The Threepenny Opera) come to light. Towards the end of the module, themes such as the special meaning and the possible interpretations of tragedy in Europe’s modern societies are investigated, based on the Short Organum (Brecht) and the Théâtre de la cruauté (Artaud).

FES 764 The Cinematic Europe of Divisions (10 ECTS)

The subject of the course is Europe of divisions, as it has been dealt with in the cinema of recent decades. It focuses on visible or invisible, symbolic or real walls and dividing lines in order to examine how European territory has hosted or suffered some of the most emblematic divisions in history, and thus how the very idea of division has been projected onto the European landscape. The course begins with the division between West and East Germany in the post-war period, as captured in Das Leben der Anderen (Florian Henckel von Donnersmarck, 2006), between Western and Eastern Europe, as seen through the Greek-centred world-view of The Vision of Odysses (Theodore Angelopoulos, 1995) and through the bleak version of the curtain in Est Ouest (Régis Wargnier, 1999), as well as between Catholic and Protestant Northern Ireland in The Wind that Shakes the Barley (Ken Loach, 2006), between Anglo-Saxon and Protestant and European societies in The Wind that Shakes the Barley (Ken Loach, 2006), between Anglo-Saxon and European societies in The Wind that Shakes the Barley (Ken Loach, 2006), between Anglo-Saxon and Protestant societies in The Wind that Shakes the Barley (Ken Loach, 2006), between Anglo-Saxon and Protestant societies in The Wind that Shakes the Europe in the coloured halls of The Cook, the Thief, his Wife and her Lover (Peter Greenaway, 1989) and so on. Particular emphasis is placed on selected films and documentaries that refer to the Cypriot case through films, such as Kalabush (Antonis Florides and Theodoros Nicolaides, 2002), Guilt (Vassilis Mazomenos, 2009) or The Immortalizer (Marios Piperides, 2013). The overall aim of the seminar is to explore Europe as a privileged field of difficult territorialisations and to unravel some of its complex ideological mappings.

FES 765 Europe outside the Museum (10 ECTS)

The course focuses on the osmosis of cultural theory and art in the European area. It begins with the observation that in recent decades a network has been created for the presentation and dissemination of contemporary art, exemplified by the Biennale-type events. This network links the art scene of many European countries due to the dispersal of events and to the fact that open invitations of interest are published and proposals are accepted from the ‘outside’. At the same time, the following elements are described: a) the ethnographic turn in contemporary art, i.e. its engagement with issues of obvious socio-political interest, b) the educational turn in contemporary art, i.e. its intermingling with the aim of creating channels of communication with the public c) the systematic use of theoretical and philosophical concepts (e.g. in the accompanying texts of works of art). Finally, a significant part of this contemporary art studies issues related to Europe and, more specifically, the Europe of crisis, migration and post-democracy with its complexities and contradictions. The course studies the above elements, insisting on the fact that this particular version of contemporary art seems to study Europe rather than musealise it. In this way, it familiarises students with a new and emerging field of European cultural studies.

FES 766 From Europe’s Abduction to Huntington’s Clash: Models of Cultural Interpenetration (10 ECTS)

This course examines various models of cultural co-existence: a) Models of Isolation: religious or nationalist discourses of distinction or superiority, marking-off of bounded spaces both in and beyond Europe, natural boundaries like those mapping the Utopias, homogeneous and tautological concepts of (supra) national identity such as the Aristotelian hellenocentrism, medieval allegories of superiority, modern nation-states. b) ‘Polemos’: Titanomachy, Abductions and their Variations. c) Models of Peaceful Interaction: mythological narratives of marriage and various discourses of cosmopolitan idealism (Zeus, Xenos, Diogenes, 18th to 21st-century philosophers: Kant, Derrida, Levinas, Appiah, Sen, Thich Nhat Han), contemporary narratives of peaceful interaction (European Neighbourhood Policy).

FES 767 Cultural Hegemonies in European Space (10 ECTS)

Although art is generally subversive, it has also been used to serve absolute conformism. In its supposedly civilising manifestations, art served to disseminate the image of a specific
European culture/nation. However, European history offers many examples of the association of cultural hegemony, in the Gramscian sense, with the promotion of a dominant power or ideology. Cultural hegemony has thus been deployed in order to glorify certain leaders, to push propaganda or even to impose a particular belief system. Thus, European art has often been on the side of the powerful. This course examines several examples of the mobilisation of art in the service of hegemony.

FES 768 The Critique of Justice in European Culture (10 ECTS)

Europe could be described as a Space of Law. However, from very early on, the founding texts were accompanied by the intellectual scepticism of writers questioning both the theory and practice of the Law as well as its aspirations towards an ideal Justice. This critique appears in many forms in the European culture and speaks in many different idioms, from Aeschylus to Brecht, from 'úbrις' to Utopia, from philosophy to satire, from sculpture to cinema. Its numerous indictments in European culture both of the legal profession and of the Law itself is an important part of Europe’s permanent re-evaluation of the very idea of Justice.

FES 769 Europe under Siege (10 ECTS)

Since 2008, Europe has faced a series of problems (debt crisis, jihadist terrorism, refugee's crisis, coronavirus sanitary and economic crisis), that endanger European integration. Many contemporary thinkers and analysts point to similarities and differences between the current European crisis and the historical experience of the Weimar Republic (1918-1933) and the rise of the Nazis (1933-1940). What this period shares mainly with the actual European political experience is the antiliberal rhetoric that discredited parliamentary democracy and opened the road to totalitarianism. The seminar will discuss the importance of these antiliberal ideas in today's situation.

FES 770 Which Political Form for which Europe? (10 ECTS)

What could a unified Europe be? This seminar will examine three political forms that suit the importance and the size of the European experiment: The empire, the church and the federation. The first two permit the coexistence under one rule of individuals of different nations and cultures, and of ethnic groups or national groups. The third one leads to a union of nations under a common legal and political framework. As the transition from the national States to a European State proves to be more difficult than imagined, can Europe be understood as a democratic empire or a Christian club?

FES 771 European Spirit in the Globalised Era (10 ECTS)

The seminar will examine a series of philosophers that have contributed to the making and understanding of the European way of life. We will mainly, but not exclusively, discuss important works of Kant, Hegel, Husserl, Patocka, and Foucault. Each one of these philosophers emphasised in a certain aspect of the European unity and spiritual identity, the European "living environment", as Edmund Husserl described it. Through the thought of these philosophers, the seminar will examine a series of ideas like peace, freedom, science, philosophy, free speech, all pertaining to a European way of life.

FES 772 Gender Roles within the European Space (10 ECTS)

Equal treatment for women and men is one of the European Union’s fundamental values, and one that can be traced back to 1957 when the Treaty of Rome laid down the principle of equal pay. Ever since then, the European Union (EU) has worked to eliminate discrimination and achieve gender equality, in part through legislation. However, equal treatment has also been the motivation behind a number of important grass-roots movements, such as the suffragettes’ movement in the UK or the more recent FEMEN activism- originally from Ukraine and now based in Paris. After a historical review of these grass-root movements (Duby & Perrot, Offen, Scott), and the EU stance on the issue (Reding’s proposals for instance), we investigate how key concepts such as ‘gender roles’ (Goffman), ‘stereotype’ (Lippman, Amossy) and ‘prejudice’ (Allport, Dovidio) structure these gender equality movements. We also consider how the same concepts are constructed, reproduced or challenged in popular cultural artefacts such as advertisements, comic strips, songs, etc. Students are informed about official EU legislation and the grass-root movements advocating gender equality through a historical and multi-modal approach. The course encourages students’ independent thought and constructive criticism.

FES 773 The Europe of Nations (10 ECTS)

The devotees of a federal Europe recognize today that the Nation-State is a very stable political form that enjoys the confidence of Europeans. The “resistance of the nations” proved to be stronger than expected, to the extent that the folding to protectionism seems today plausible. The “Europe of Nations” storyline is instead proposed, out of the heart of the 19th century and the reflection of Giuseppe Mazzini (1805-1872), who saw in the newly established National-State (république) a hope for the emancipation of nations. The seminar will follow the emergence of the National-State model from Vico (1668-1744), and the “common nature of the nations”, to Kant (1724-1804) and Mazzini.

FES 774 Hate Speech in the European Space (10 ECTS)

Research shows that in Europe, hate speech is often not seen as a serious offence. Yet these types of incidents are increasing in most countries, and the use of hate speech against certain groups of people is no longer limited to extremist groups. First, the course investigates the importance and differences within definitions of this phenomenon amongst European countries, distinguishing overt and covert hate speech. Secondly, it introduces theoretical interpretations of hate speech through the focus on discursive strategies of Othering. Thirdly, it presents methodological tools in order to investigate hate speech and students are given the opportunity to work on their research skills.

FES 775 European Spiritualities (10 ECTS)

“And spirituality, my dear Claude? What is politics without spirituality?” Through the work of the Foucault, it appears that the problem of the European identity and politics is the problem of the loss of European spirituality. His seminars and interventions from 1975 to 1984 are essentially a survey on the European liberal spirituality. Through a dynamic discontinuous transformation process, the Greco-Roman and Christian legacies infuse the tradition of the critical thinking and the Enlightenment. The seminar will examine how Western individualism becomes conscious of its own spirituality as an essential orchestration of human autonomy of the European man.

FES 776 The Spirit of Nations (10 ECTS)

Under what conditions did the national-state model that accompanied Europe from triumph to its tragedy operates in today’s European and global reality? At a time, when even the most romantic and ardent Europeans, devotees of a federal Europe, recognize that the “resistance of the nations” proved to be much stronger than expected, it is necessary to study the democratic-republican and spiritual-religious roots of the
modern nation-state. In an effort to understand the metaphysical roots of the nation-state phenomenon, texts of Vico (1668-1744), Maistre (1753-1821), Fichte (1762-1814), Hegel (1770-1831), Gentile (1875-1944) and Heidegger (1889-1976) will be studied.

PH.D. PROGRAMME IN FRENCH STUDIES OR EUROPEAN STUDIES

The Programme provides students with a contemporary and specialised education and gives them the opportunity to acquire scientific expertise. It trains students for research and research methodology in compliance with the current requirements of academic knowledge, as it is very important to be aware of the new European reality.

Graduated students of this Programme may work in various sectors and institutions of the Republic of Cyprus as well as in the European Union, and practise academic teaching, public and private teaching, provide cultural and linguistic services, public services at international institutions, diplomatic bodies, translation centres, in the tourism and hotel industry, media, multinational companies, NGOs, etc.

Admission Requirements

The date for submission of applications for the Doctoral Programme will be announced by the department; the date will apply to all Ph.D. programmes of the Department. Students, who have not yet obtained their Master’s degree but will have completed their studies by the 31st of July of the year that they wish to enter the Ph.D. programme, will be eligible. Applicants with a relevant degree in Science must demonstrate proficiency in the French language (writing, reading and speaking skills); knowledge of additional foreign languages will be considered as an additional qualification.

Applications and Number of Admissions

The applications must be submitted to the Graduate Programme Coordinator by the date specified by the University. The number of admissions is specified each year.

Applications must include the following:
1. A sample of scholarly writing: short article, a chapter from the Master’s thesis, etc.
2. Evidence of proficiency in the Greek, English, French or German language.

All applications will be reviewed by the Graduate Programme Committee of the Department. If the Committee deems it necessary, selected candidates may be invited to a personal interview or teleconference interview. The Committee submits its final selection of candidates to the Department Council for final approval.

Duration Programme

The doctoral degree must be completed within eight years from the day of admission to the Programme. Doctoral students are encouraged to spend up to one calendar year of study at universities abroad through an exchange programme.

Study Regulations

The doctoral studies are regulated by the Postgraduate Studies Regulations of the University of Cyprus.

Programme Structure

The Ph.D. Programme in French Studies and European Studies comprises a minimum of 240 ECTS. The distribution of the ECTS in the different stages of the programme is as follows:

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Each semester is equivalent to 30 ECTS, either at the Research stage or at the Thesis writing stage. However, students may divide each research stage in two semesters and complete 15 ECTS per semester. Students must register for each stage of the programme and must pay the fees for each semester unless they formally wish to take a leave.

Research Supervisor: The doctoral thesis must be conducted by a supervisor, assigned by the Departmental Council, following a proposal from the Departmental Postgraduate Committee, and in consultation with the doctoral student and the proposed supervisor. The supervisor monitors the research work of the student and provides all necessary support and guidance.

Tripartite Committee: At the end of the second semester of the Programme (at the latest), a Tripartite Committee is selected, which will monitor the Ph.D. thesis writing. This Committee is chosen during a Department Council meeting on the recommendation of the coordinator and the Ph.D. supervisor. The Ph.D. Committee consists of the research supervisor who is the main coordinator of the Ph.D. thesis, another member of the Department of French and European Studies and another member from
either the Department of French and European Studies or from another department of the University of Cyprus, or from another university or research centre, to the extent that this member works in a related discipline. The Committee evaluates the student’s progress in his/her Ph.D. studies and defines the examination type of the Comprehensive Exam.

**Courses Attendance:** Attendance of courses and/or seminars offered by the University of Cyprus is compulsory.

**Doctoral Day:** Each year in December, the Department organises a compulsory Doctoral Day for all Ph.D. Students, who are required to present their work to their fellow students, as well as the Department’s (and other) professors. This annual presentation, based on My Thesis in 180 Seconds Model, aims to enhance the research work carried out within the Department, and to encourage scientific exchanges. The date of the Doctoral Day is announced at the beginning of the academic year.

**Comprehensive Exam:** The doctoral student must take a comprehensive examination, preferably by the end of the fourth semester. In case of a failure, the doctoral student must repeat the comprehensive examination by the end of the sixth semester, at the latest. In the event of a second failure, the studies are terminated. The Department is responsible for planning the comprehensive exam.

**Thesis Proposal:** The proposal must be submitted no later than two semesters after success on the comprehensive examination and before the expiration date of each course. The presentation of the proposal must be made within the current examination period. In case of a rejection of the thesis proposal, or if modifications are suggested, the Ph.D. candidate must submit a new thesis proposal to the Committee, before the end of the following semester, at the latest. In the event of a second failure, the studies are terminated. Once the thesis proposal has been approved, the candidate begins to write his/her thesis.

**Ph.D. Thesis:** The thesis must be original and must make a significant contribution to the student’s chosen field. It must be between 80,000 and 100,000 words - the exact length can be discussed between the candidate and the research supervisor.

**Language of the Thesis:** For the Ph.D. in French Studies, the thesis must be written in French. For the Ph.D. in European Studies, the thesis may be written in Greek, English, French or German.

**Thesis Defence:** The thesis defence is open to the public. The Jury is composed of five members, selected by the Departmental Council on the recommendations of the Postgraduate Committee and the Research Supervisor. The Jury must be composed of: a) the Tripartite Committee, b) a member of another university or a research centre at the university level; c) a member of another department of the University of Cyprus in a related discipline or another university or a research centre at the university level. The President of the Jury must be a member of the Department, but not the research supervisor.

**Non-Award:** If the Jury votes for non-award of the doctorate, the candidate is allowed to resubmit the thesis for a second and final time, after complying with the recommendations of the Jury. In this case, the whole process is repeated. The Jury must remain the same for the second submission, with the replacement of a member allowed only for particular/serious reasons.

**Participation in Exchange Programmes:** The Ph.D. candidate may and is encouraged to spend up to one academic year of his/her studies in universities abroad.
**RESEARCH INTERESTS OF THE ACADEMIC STAFF**

**Fabienne Baider, Professor**
Discourse analysis and ideology (political journalistic and advertising discourse, rhetoric of the extremes, social media and fake news), gender studies and European discourses on gender equality and sexual minorities, European discourses on Discrimination/Migration/ Ethnic and linguistic minorities, Language Learning and the Emotional Development, Sociolinguistics and FFL: Textbooks and representations, classroom interactions and humour, integration of plurality and diversity.

**May Chehab, Professor**
Comparative literature: Relations between French literature and a) Ancient Greek philosophy, b) Scientific discourse, c) Human rights, d) the Arts - European culture (myth, history, law, cartography, literature, arts, cinema) - Projects of European union, from the Fall of Constantinople to the contemporary 27 member-States construction – Cultural diplomacy.

**Panagiotis Christias, Associate Professor**

**Yiannis E. Ioannou, Emeritus Professor**
French and comparative literature, 19th and 20th centuries:  
- Surrealism movement  
- The phenomenon of poetic creation  
- Odysseas Elytis’ work and his relations with French literature and thought  
- French poetry from Baudelaire to surrealism  
- Political culture

**Fryni Kakoyianni-Doa, Associate Professor**
French and comparative linguistic: Morphology, Syntax (parts of speech and semantic classes, adverbs, utterance, enunciation, syntactic structures of phrases, syntactic grammar, proposition and transformation theories), Lexicology (lexical semantics, polysemy function, lexical classes, taxonomy and vocabulary classification), Phonetics and phonology, Parallel Corpora, Neurolinguistics Didactics: Didactics of French as Foreign Language (pedagogical approaches, grammar, image semiotics, sound and image, new technologies).

**Iulian Bogdan Toma, Assistant Professor**
- Modern and contemporary French literature  
- Surrealism  
- European francophone literature and cinema  
- Intellectual history  
- Migration studies  
- Literary theory

**Christakis Christof, Lecturer**
Arts – Literature – Civilisation: France – Europe - Theory and literary, artistic and theatre practices, European studies (arts, literature & civilisation), 20th-century French literature (poetry, theatre, novel), Literature, arts and civilisation (interdisciplinarity).

**Maria Constantinou-Papanicolaou, Lecturer**
Translation studies, cross-cultural, contrastive studies (Multimodal) Critical Discourse Analysis and Corpus linguistics

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**Contact Details**

**DEPARTMENT SECRETARIAT**

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Tel.: +357 22894389  
E-mail: soteriou.c.georgia@ucy.ac.cy

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Tel.: +357 22894390  
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[www.ucy.ac.cy/frml/en](http://www.ucy.ac.cy/frml/en)
The Department of Turkish and Middle Eastern Studies offers a Programme of Postgraduate Studies which leads to the degrees of M.A. (Master) and Ph.D.

**MASTER IN TURKISH STUDIES**

**Introduction/Aim of the Programme**
Turkish Studies comprise the study of the Turkish and other Turkic languages, as well as the history, the literatures and the civilisations of Turkic peoples from the 8th century AD to the present day. The various fields of Turkish Studies are: Turkology or Turkic Studies, which deal with the whole spectrum of Turkic languages and literatures; Ottoman Studies, which focus on the linguistic varieties, the history and the civilisation of the Ottoman Empire (14th-20th century); Modern Turkish Studies, which deal with the politics, the literature, the economy and the society of Turkey in the 20th century; Islamic Studies, which are an integral part of Ottoman and Modern Turkish Studies and are related to Middle Eastern Studies, which cover the study of the Middle Eastern peoples (particularly Arab and Iranian), their languages and civilisations. Moreover, Turkish Studies also include the study of the Balkan peoples, in relation to the Ottoman and Turkish world.

Turkish Studies at the University of Cyprus cover the majority of the above-mentioned fields of Turkish and Middle Eastern Studies. There is particular thematic emphasis on the context of the island and especially the Turkish Cypriot community, as well as the broader region, the interests and orientations of the staff and the academic and professional prospects of the graduates. Members of the academic staff from the Department of Turkish and Middle Eastern Studies participate in the Master’s Programme as instructors and academic advisors, while sometimes visiting professors also participate in the Programme.

The aim of the Programme is to equip students with the knowledge and skills necessary in order to be able to work independently in regard to the language, history, civilisation, literature and politics of the Ottoman Empire, Turkey and subjects related to the Turkish Cypriot community. The specialisation courses will help students improve their linguistic skills, while gaining in-depth knowledge of one particular field. This specialisation will determine the subject of their original Master’s thesis.

**Programme Organisation**
The Programme requires the completion of 120 ECTS and consists of four elements. The Master’s degree requires the successful completion of all four elements of the Programme:

- Courses.
- Attending the Departmental Lectures and Graduate Seminars.
- Participation in the Colloquium.
- Writing a Master’s thesis.

**Courses:** Three introductory courses, three Turkish Texts Courses – Reading and Dialogue and six courses covering all scholarly fields of Turkish Studies. The three introductory courses focus on the primary and secondary source materials and on the methodology appropriate to the analysis of various fields of Turkish Studies, the three Turkish Texts Courses – Reading and Dialogue concern the study of texts related with the courses taught during the semester. The other courses are specialisation courses in different fields of Turkish Studies. The specialisation courses offered each semester will be decided by the Departmental Council.

**Attendance at Lectures and Seminars:** Attendance at the lectures that comprise the Department’s lecture series is mandatory. Attendance at the graduate seminar series, held throughout the course of the semester, is also mandatory.

**Participation in the Colloquium:** All candidates for the Master’s degree must present a paper, which will be on a topic of their choice and based on their own research. The Colloquium will take place in the fourth semester of study and the student’s topic should be decided in collaboration with his/her research advisor.

**Master’s Thesis:** The thesis must be at least 15,000 words long. The completion and presentation of the thesis takes place after the completion of the first three semesters.

**Criteria for Acceptance**
Graduate students are admitted to the Programme in accordance with the criteria outlined in the General Rules of Postgraduate Studies. Admission to the Master’s programme requires a Bachelor’s degree in either Turkish Studies, Cultural Studies, or a subject in the Humanities or the Social Sciences. The degree must be from an accredited university. Success in personal interview or any other relevant testing might be required, at the discretion of the Department.

Classes will be taught in one of three languages, Greek, Turkish or English, while course materials will include
texts in Turkish and other languages. Candidates must know Turkish well enough to study texts in Turkish at an academic level. Borderline cases will be examined during the interview. The minimum requirement is a certificate of coursework in the Turkish language corresponding to 50 ECTS. If the department deems it necessary, there may be a special examination to test the applicant’s proficiency in the Turkish language. Knowledge of at least one foreign language (other than Turkish) is essential. In case that the foreign language is not English, the student must have the basic competence to respond to texts in English. Knowledge of additional languages will be considered an additional qualification.

Graduates of Greek universities and of the University of Cyprus must have a minimum grade of 6.5/10. The equivalent grade is also required from graduates of other universities.

The Department’s Graduate Studies Committee evaluates applications, interviews candidates when necessary and recommends to the Departmental Council a list of proposed candidates to the Programme. The final decision rests with the Departmental Council.

**Study Regulations**

Postgraduate studies are regulated by the General Rules of Postgraduate Studies of the University of Cyprus and the Internal Rules of Graduate Studies of the Department of Turkish and Middle Eastern Studies.

**Requirements for the Master’s Degree**

All students will be assigned an academic advisor. The academic advisor will be either the graduate programme coordinator or a member of the Department’s Graduate Studies Committee (in the absence of the coordinator). Students work closely with their academic advisor throughout the entire programme of studies.

Following initial enrolment, full-time attendance for at least four semesters and completion of the thesis by the eighth semester is required.

Successful completion of 120 ECTS is required. These are distributed as follows:

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<thead>
<tr>
<th>Course Description</th>
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<tr>
<td>Three Introductory Courses (3x8)</td>
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<td>Six Specialisation Courses (6x8)</td>
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For workload equivalents, the General Rules of Postgraduate Studies of the University of Cyprus apply; 1 ECTS represents 25 to 30 hours of student workload.

**Programme of Studies**

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<tr>
<th>Semester</th>
<th>Course Description</th>
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<td>TUM 602 Issues in Turkish Linguistics</td>
<td>8</td>
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<td>TUM 603 Turkish Literature and Social Issues after 1980</td>
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**Course Descriptions**

**INTRODUCTORY COURSES (TUM 601-604)**

**TUM 601 Modernity and Historical Evolution in Turkey (8 ECTS)**

The aim of this course is to analyse the complex and multifaceted process of Turkish modernity. Beginning with the Ottoman attempt to form a modern state and the ideologies that existed in the Ottoman Empire during the second half of the nineteenth century, this course analyses the transition of the Ottoman Empire into a modern state, its attempts for secularisation and the Tanzimat reforms. The course focuses on the Late Ottoman Period, the emergence of Turkish nationalism and the process of formation of the Turkish nation state.

**TUM 602 Issues in Turkish Linguistics (8 ECTS)**

The course is a survey of Turkish linguistics, starting with the concept of related languages (language families), the criteria for their classification, and the inclusion of Modern Turkish within the Turkic language family. From a typological point of view, the term “Turkic” represents the agglutinative type of
languages. The course examines how agglutinative language systems function, how they interact with typologically different languages like for example, the Indo-European (such as Iranian, Armenian, Greek etc.) and the Semitic (Arabic, Aramaic) language families. Turkish is stratified into various spoken varieties, such as sociolects (vertical stratification into social registers) and dialects (horizontal division into geographic varieties). The spoken varieties of both categories may display strong influences of genetically unrelated languages, such as the local and neighbouring (minority) languages of past and present. Many of these aspects of diversification and contact-influenced linguistic developments can also be observed in Cyprus. The course will introduce the current linguistic terminology, methodology, reference works, and sources of linguistic Turkology, sociolinguistics, and dialectology, which are required to deal with the description and analysis of various issues in Turkish linguistics.

**TUM 603  Turkish Literature and Social Issues after 1980 (8 ECTS)**

The course is a continuation of the undergraduate course TOM 342 "Literature and Society in Turkey". Turkish society has changed a lot since the mid-1980s. On the one hand, a liberal economic policy was pursued during this period, in order to connect the Turkish economy to the world market. On the other hand, the influence of conservative forces and political and cultural life has increased, while previously influential ideologies, such as Marxism and ultra-nationalism, have lost their influence. In the area of tension between these developments, movements, such as feminism and Islamism, have gained importance and new movements, such as environmentalism, human rights activism or LGBT have emerged. Non-Turkish and/or Non-Muslim communities in Turkey became more visible and have become more active culturally and politically. The aim of this course is to examine in-depth how these developments are treated in contemporary Turkish literature. In addition to reading original texts, the social, cultural, and political circumstances will be discussed under which these texts were produced, and students will become acquainted with new academic works on the subject.

**SPECIALISATION COURSES [TUM 610 – 700 and TUM 701 - 800]**

The courses focus on different areas of Turkish Studies, for example, Linguistics, Literature, History and Politics. Each course covers the analysis and presentation of specialised topics in one of the above-mentioned fields.

**OTTOMAN HISTORY COURSES [TUM 610-650]**

**TUM 610  Historians and Chronicles of Ottoman History (8 ECTS)**

The course focuses on the study of the texts of historians and chroniclers of Ottoman history. Students will study, in the original and/or in translation, extended extracts from the work of authors from various periods of Ottoman history from the 15th until the 19th century, like Aşıkpaşazade, Neşri, Kemalpaşazade, Mustafa Ali, Mustafa Selâniki, Kâtip Çelebi, İbrahim Peçevi, Mustafa Naima, Ahmed Resmi Efendi and Ahmed Cevdet Pasha. Based on the texts themselves, as well as on contemporary bibliography, the historical framework that produced these works, their conception of history and of the Ottoman dynasty, as well as their attitudes towards topics, such as the formation of the Ottoman state and the transformation of its institutions will be discussed.

**TUM 611  Ottoman Political Thought during the Tanzimat (8 ECTS)**

The aim of the course is to analyse the major ideologies and the policies applied in the Ottoman state during the period of the Tanzimat reforms. The attempts to transition to an Ottoman national monarchy, as well as the efforts to create a modern type of state, form the main axis of the study of the period. The political thought of the Ottomans, as manifested in specific decrees of the Sublime Porte, as well as in other documents from this period, combined with the efforts for reforms in the political administration of the empire, are examined in depth, in order to better understand the political thought and realities of the period of reforms.

**TUM 612  Ottoman Istanbul (8 ECTS)**

The course focuses on the study of Istanbul as an Ottoman city. Particular emphasis is placed on the city's significance in the Ottoman Empire, as an administrative as well as an economic and cultural centre. Through Ottoman sources of the period, as well as recent studies, study in-depth various aspects of the history of Istanbul, like the transformation of the Byzantine city into an Ottoman one in the 15th century, urban growth and expansion, the city's image at different times, e.g. during the Tulip Period, and the attempts at modernisation in the 19th century will be studied.

**TUM 613  Ottoman Empire: Reforms and Modernity (8 ECTS)**

The course focuses on the question of modernity and the attempts of the Sublime Porte to form a new type of state in the period of the Ottoman reforms of the 19th century. The main axes of analysis will be the efforts of the Ottoman state to create a new administrative model, the reorganisation of the basic structures, the inclusion of non-Muslims in this new model and the new conditions that made possible the emergence of new ideologies in the Ottoman lands. The course will be conducted in the form of seminars, using archival material and secondary literature.

**TUM 614  Communal Organisation in the Ottoman State (8 ECTS)**

The aim of the course is to analyse the community organisation in the Ottoman state, both during the classical period of its history (until the 16th century) and during the long period of modifications (until the 18th century) and the reforms of the 19th century. The aim is to understand the functions of the Community system in the Ottoman state, with emphasis on developments concerning the Orthodox community. As far as the Ottoman reforms and community organisation are concerned, the course analyses the modifications in the relationship between the communities and the central state, as well as the internal organisation of the communities.

**TUM 615  Continuities and Discontinuities in the Transition from Ottoman to Colonial Space (8 ECTS)**

The course will analyse the transition from Ottoman to Colonial Space, using the case of Cyprus as an example. The Ottoman administrative model, as it was manifested on the island, as well as the administrative structures that were subsequently changed after the reforms of the 19th century, are analysed and compared with the structures created when the administration of Cyprus was transferred to Britain and a new administrative model was imposed. The purpose is to study continuity and discontinuity with respect to the two administrative models. The course will be conducted in the form of seminars, using archival material and secondary literature.
TUM 616 Embassies and Consulates in the Ottoman State (8 ECTS)
The course will analyse the operation of embassies and consulates in the Ottoman Empire during the 18th and 19th centuries. The archival material of the consulates, in conjunction with archival material of the Ottoman administration, provide a wealth of information about the functions of consulates, their importance for the countries they represented, the Ottoman administration and the peoples living in the areas in which they operated. The course will be conducted in the form of seminars, using archival material and secondary literature.

COURSES ON THE HISTORY/POLITICS OF TURKEY [TUM 651–700]

TUM 651 The Kurdish Question in Turkey (8 ECTS)
The Kurdish question is a significant problem of the Turkish Republic. Some measures for secularisation, modernisation and Turkification met with resistance from the Kurds (and others) and led to uprisings, which were suppressed. From the 1960s onwards, we may observe, on the one hand, a process of assimilation, even inclusion of Kurds in the Turkish state and society. On the other hand, the Kurds are demanding more rights and greater participation in social developments in Turkey.

TUM 652 Ethnic and Religious Minorities in Turkey (8 ECTS)
According to the official view, the term “minorities” in Turkey applies to the non-Muslim minorities of Armenians, Greeks and Jews. This view, which is based on the Ottoman millet system, ignores Muslim groups, such as the Kurds, Laz and Circassians. Next to the Sunni majority, there is a significant minority of Alawites. This course aims to deepen the student’s knowledge of the religious and ethnic mosaic that composes modern Turkey.

TUM 653 Atatürk: Elements of a Biography (8 ECTS)
The founder of modern Turkey is one of the most fascinating figures of the 20th century. After the collapse of the Ottoman Empire, he imposed the westernization of the country almost single-handedly. His legacy continues to shape Turkey even today. Turkey’s relationship with Kemalism plays a decisive role in the process of its accession to the European Union. This course follows the itinerary of the “Father of the Turks”, from a military officer to his rise as an authoritarian reformer and politician.

TUM 654 Political Economy of Turkey (8 ECTS)
A middle-income country with a fragile democracy, Turkey, has been shaped by much the same dynamics and constraints as other countries in the semi-periphery of global capitalism. Major interacting forces have determined its evolutionary fortunes. Different socio-political coalitions have underpinned different economic policy regimes in different periods. External market, economic and policy forces have produced powerful dynamics upon Turkey’s economic choices and strategies. Frequent economic crises have let to revisions in policy regimes and socio-political coalitions and also inspired initiatives for institutional reform. Based on the above framework this course offers a detailed and analytical introduction to the dynamics and some enduring problems of the Turkish economy from a political economy perspective.

TUM 656 Turkish Modernity and its Dilemmas. Kemalism, Tradition and Religion (8 ECTS)
In this course, students will research and analyse modernity in relation to the modern Turkish state, its peculiarities and diversity. Kemalism will be analysed in relation to modernity, which it imposes, while tradition and religion will be analysed in terms of their relationship to and their impact on Turkish modernity.

TUM 657 Greece, Turkey, Cyprus. The History of a Complex Relationship (8 ECTS)
This course focuses on the complexity of the relationship between Greece, Turkey and Cyprus, as well as the changes in this relationship over time. Greek-Turkish relations from the time of the establishment of the Turkish state to the present, as well as how Cyprus features as an integral part of these relations will be considered. The complexity of the 20th century - in relation to international developments, developments between Greece and Turkey and developments in Cyprus - is the basic framework of analysis.

TUM 658 Collective Memory and National Identity in Turkey (8 ECTS)
The course discusses the national identity in Turkey over the years, since the establishment of the Turkish state, connected with developments in relation to the formation of a collective memory in Turkish society. In the same context, research focuses on minority groups in the Turkish state and the elements of diversity they express.

TUM 659 Political and Historical Themes and Issues of the Turkish Cypriot Community (8 ECTS)
The course examines themes and issues in the political life and history of the Turkish Cypriot community. It examines the history of the Turkish Cypriot community from the beginning of the British Colonial administration until the Independence of the Republic of Cyprus, as well as the developments in the sixties and after the Turkish Invasion in 1974. In parallel with the historical developments, it focuses on political developments such as the Rise of Turkish Nationalism, Political Movements and Organisations, and the Civil Society.

LITERATURE COURSES [TUM 701–750]

TUM 701 Literary and Historical Dimensions of First-Person Narratives in Turkish Literature (8 ECTS)
The course focuses on texts, in which Turkish writers of the 19th to 21st centuries write about their own or a fictitious life. The differences between the main genres of autobiographical texts, such as autobiography, letters, memoirs, and autobiographical novel will be examined in the Turkish context and will be discussed in a comparative perspective with Western literature.

TUM 702 Ottoman Travel Literature (8 ECTS)
Ottoman travel reports were until the 17th century mostly integrated into texts such as historical and geographical works, reports about military campaigns or pilgrimage narratives. In this course, students will be introduced to examples of Ottoman travel writing from the 17th century up to the early 20th century. They will read and analyse selected passages from well-known Ottoman travelogues, such as Evliya Celebi’s Seyahatname from the 17th century, Yirmisekiz Celebizade Mehmed Efendi’s Sefaretname from the 18th century and Ahmed Midhat’s report of his travel to Europe from the late 19th century.

TUM 703 “Writing about the Nation”. Turkish Authors as Creators of a New Ideology (8 ECTS)
In the course, students will read and analyse texts written during the period of transition from the Ottoman Empire to the modern Turkish Republic, such as those of Ziya Gökalp and
Analytical Programme for Master’s Holders

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<th>Stage (research, etc.)</th>
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<td>1st</td>
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Analytical Programme for Non Master’s Holders

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Research Stage

The Research Stage consists of the following:

a) Submission of a research proposal, which must include a description of the sources proposed and the methodology to be employed.

b) Appointment of a supervisor for each student and Dissertation Committee by the Department.

c) Comprehensive Examination (written and oral examination). Students, depending on their research proposal, will be examined on one of the basic fields of Turkish Studies: Ottoman History, History and Politics of the Turkish Republic, Ottoman Literature, Contemporary Turkish Literature, Turkish/Turkic Linguistics.

Presentation of the Final Research Proposal

According to the Regulations of the University of Cyprus, postgraduate students (Ph.D. level), before the end of the seventh semester, must present his/her research proposal in front of the three members of the Advisory Committee.

Writing Stage and Examination of Dissertation

The dissertation is examined by a five-member Committee, whose members are outlined in the Postgraduate Studies Regulations.

Admission Requirements to the Doctoral Programme

1. Candidates, who already have a Master’s degree, must submit brief dissertation proposal, which includes the sources to be used and the proposed methodology. Candidates must know a foreign language, preferably English. A second foreign language would be considered an advantage.

2. Candidates, who do not already possess a Master’s degree, must have a first degree either in Turkish Studies, a degree from the Faculty of Letters or in other fields of the Humanities, as described in the Regulations for admission to the Master’s programme. Candidates must be competent in Turkish language.

For more information, please refer to the Graduate School (tel.: 22894021/44), the Department’s Secretariat (tel.: 22893950) or the Department’s webpage.
Michalis N. Michael, Associate Professor
History of the Ottoman Empire and its Institutions; History of Cyprus in the Ottoman Period, with special emphasis on the status and role of the Church of Cyprus; The Transition from Ottoman to British Colonial Rule, especially in relation to the status and role of the Orthodox Church; Analysis of Post-Ottoman Cypriot Historiography on the Ottoman Period.

Börte Sagaster, Associate Professor
The Transition from Late Ottoman to Modern Turkish Literature; Modern Turkish Literature; Identity and Society in Turkish Literature; Memoirs in Turkish Literature.

Theocharis Stavrides, Associate Professor
Early Ottoman History; Ottoman Civilization; History of Cyprus in the Ottoman Period, with special emphasis on Society and Culture.

Gulshen Sakhatova, Assistant Professor
Mood and modality in general linguistics, Verb system of Turkic languages, Modality in Turkic languages, Spoken Turkish, Turkish as a Foreign Language: Learning and Teaching, Turkic in written monuments.

Nikos Moudouros, Lecturer
Contemporary history of political Islam in Turkey, political economy in Turkey, contemporary political thought as well as the transformation of the relations between Turkey and the Turkish Cypriot community. He is teaching courses on issues like Islam in Turkey, Turkish foreign policy, social changes in Turkey and the development of the Turkish Cypriot community.

Ahmet Yikik, Lecturer
Modern Turkish literature since the Westernization period (Tanzimat) in the 19th century, Non-Muslims writing in Turkish, Genre developments, Literary Theory and Sociology of Literature, Ottoman/Turkish literature in Cyprus from the 19th century to the present.

Zenonas Tziarras, Lecturer
Turkish foreign policy, Contemporary Turkish politics, International Politics and security of the Middle East and Eastern Mediterranean, Political Islam
Faculty of LETTERS
DEPARTMENTS

Byzantine and Modern Greek Studies
Classics and Philosophy
History and Archaeology
Introduction

Both postgraduate programmes of the Department are offered at two levels: a Master’s Degree and a Ph.D. Degree. The Programme in Modern Greek Studies mainly focuses on the in-depth examination of Modern Greek literary texts from the 11th century to the present. In this context, it offers seminars in a number of related areas (i.e. Comparative Literature, Theory of Literature, History of Art and Theatre Studies), in order to promote interdisciplinary research. The Interdepartmental Programme in Byzantine Studies aims at promoting an interdisciplinary approach in the broader field of Byzantine Studies.

Among the Department’s immediate priorities are: a) to develop postgraduate programmes in all the academic fields taught by the Department and b) to establish stronger links with postgraduate programmes of other departments of the University of Cyprus, as well as with other European universities. To this end and in order to promote interdisciplinary research in the framework of postgraduate programmes, the Department participates in the Erasmus exchange programme and has also signed exchange agreements with important departments in other universities abroad.

INTERDEPARTMENTAL POSTGRADUATE PROGRAMME IN BYZANTINE STUDIES AND THE LATIN EAST

(See relevant pages)

MODERN GREEK STUDIES

The Programme at both levels offers students the following specialisations:

- Historical - Grammatological (editions of Modern Greek literary texts, research of primary sources, history of literature, etc.).
- Theoretical (analyses and interpretive approaches of texts in the light of theoretical principles and categories such as literary genres, the rhetorical and narrative organisation of literary texts, prosodic analysis, reading reception, gender studies, etc.).
- Criticism (history and theoretical principles of Modern Greek criticism, aesthetic evaluation of literary texts, etc.).
- Comparative (approaches based on the comparison between national literatures, with reference concepts such as effect, intertextuality, chance, analogy, translation, etc.).
- Interdisciplinary-interartistic (engagement of literature with different academic subjects such as cultural history, philosophy, fine arts, cinema, etc.).

A) M.A. in Modern Greek Studies Programme

Applications can be submitted via the electronic application system of the Graduate School of the University of Cyprus.

The final date for submitting application is announced by the Graduate School during Spring for September admission and during Fall for January admission.

The following documents must be submitted with the application:

1. Degree in Modern Greek Philology or a related field (with a grade of at least “very good” or equivalent) and a detailed list of the courses of the relevant study programme. If the candidate has not yet received her/his Bachelor’s Degree, she/he may submit a certificate of expected graduation in the summer or fall, preceding the start of the graduate programme.
2. Brief curriculum vitae and statement of scientific and research interests.
3. Two letters of recommendation from experts, preferably university professors or established researchers.

At the discretion of the programme faculty, applicants may be invited for an interview.
Duration of Studies
Four semesters for a full-time enrolment. Upon the supervisor’s approval, the course duration may extend to another four semesters.

Academic Requirements
The Programme of studies has two directions.
Direction A: the completion of 120 ECTS is required, of which:
• 78 ECTS are obtained by attending the postgraduate seminars (13 ECTS correspond to each seminar).
• 30 ECTS with the completion of the dissertation.
• 12 ECTS by attending the Programme’s Colloquium (lecture series).

Direction B: the completion of 120 ECTS is required, of which
• 104 ECTS are obtained by attending the postgraduate seminars (13 ECTS correspond to each seminar).
• 16 ECTS by attending the Programme’s Colloquium (lecture series).

Analytical Programme of Studies
Direction A

<table>
<thead>
<tr>
<th>ECTS</th>
<th>First Semester</th>
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<tr>
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<tr>
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<tbody>
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<td>26</td>
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<tr>
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<tbody>
<tr>
<td>30</td>
<td>Writing of the M.A. dissertation under supervision and defending it before a three-member examination committee</td>
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<tr>
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<td>Colloquium IV</td>
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Direction B

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<tbody>
<tr>
<td>26</td>
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<tr>
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<td>Colloquium III</td>
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<tbody>
<tr>
<td>26</td>
<td>Completion of two postgraduate Seminars</td>
</tr>
<tr>
<td>4</td>
<td>Colloquium IV</td>
</tr>
</tbody>
</table>

Programme Structure
The postgraduate seminars are divided into five cycles, corresponding to four literary periods and a specialisation course in areas such as Literary Theory, Metrics, Text Editing and Publishing, Bibliology, Translation and Creative Writing:

A. 11th–14th centuries (codes: BMG 640-650)
B. 15th–17th centuries (codes: BMG 651-660)
C. 18th–19th centuries (codes: BMG 661-670)
D. 20th–21st centuries (codes: BMG 671-680)
E. Methodology (codes: BMG 681-690)

In consultation with the director of the postgraduate programme, students may attend seminars offered by other postgraduate programmes within the Department or within the Faculty of Letters.
Alongside the seminars, the Department organizes a cycle of scientific lectures (Colloquia) every semester, in the context of which guests of the Department, University teachers or Ph.D. candidates, writers, critics and even translators mainly from Greece (without missing the speakers from other European countries, and even - less often - from America) present their research and recent work. The participation of postgraduate students in the Colloquium is mandatory.

B) Ph.D. in Modern Greek

Duration of Studies
The course duration must not exceed eight academic years. The Ph.D. dissertation can be submitted only after six semesters have passed from the admission of the student to the Programme.
Application submission

Applications can be submitted via the electronic application system of the Graduate School of the University of Cyprus. Applications are submitted in Greek or English.

The final date for submitting application is announced by the Graduate School during Spring for September admission and during Fall for January admission.

The following documents must be submitted with the application:

1. Degree in Modern Greek Philology or a related field (with a grade of at least “Very good” or equivalent).
2. Master’s degree in Modern Greek Philology or a related field (with a grade of at least “Very good” or equivalent) and a detailed list of the courses of the relevant study programme. If the candidate has not yet received her/his Master’s degree, she/he may submit a certificate of expected graduation in the summer or fall preceding the start of the Master’s programme.
3. Two letters of recommendation from experts, preferably university professors or established researchers.
4. Certificate of very good knowledge of at least one foreign language.

Are positively considered (if any):
- any scientific publications by the candidates.
- participation of candidates in conferences or research programmes.
- relevant professional experience (e.g. collaboration with publishing houses for the editing of scientific texts).

At the discretion of the programme faculty, applicants may be invited for an interview.

Academic Requirements

1. A comprehensive oral examination before a three-member examination committee, prior to the seventh semester. Candidates are examined in three subjects from a range of topics representative of the academic fields of the Programme in agreement with the members of the scientific committee.

2. Presentation and approval of the dissertation proposal.

3. Attendance of the Colloquium organised by the Department.

4. Submission and approval of the Ph.D. dissertation.

For more information on the academic requirements, see the Admission and Attendance Regulations – Application Requirements, or consult the Graduate School or the Department’s Secretariat.

Additional Information on the Postgraduate Programmes

The students of the M.A. and the Ph.D. programmes are encouraged to spend part of their studies abroad, so that they have the opportunity to work in specialised research libraries. For this purpose, the Department of Byzantine and Modern Greek Studies has established a wide network of cooperation and exchange programmes (ERASMUS+) with related postgraduate programmes in Byzantine and Modern Greek Studies and Comparative Literature in Greece and other European universities.
Yoryia Agouraki, Associate Professor
Syntactic theory, Comparative syntax as well as the interfaces between syntax and the other branches of theoretical linguistics, namely phonology, morphology and semantics.

Aphrodite Athanasopoulou, Associate Professor
Modern Greek literature (from the literature of the Cretan heyday to the post-WWII generation) with a focus on 19th and 20th-century literary production and criticism. More specifically: Greek romanticism – Heptanesian and Athenian Schools – with a focus on the oeuvre of Dionysios Solomos, the Greek language question (from the Enlightenment onwards), realism in prose (Greek and European), Greek modernism with a focus on the 1930s generation. Also: Literary theory with a focus on topology and narratology, methods and approaches to teaching literature, relationship between history and literature (19th-century historical poetry – historical novel, the historical Cavafy, the post-WWII generation).

Julia Chatzipanagioti-Sangmeister, Professor
Modern Greek literature from the 18th until the early 20th century, Travel literature (Greek and European), edition of manuscripts, Comparative literature, Cultural history of the 18th and 19th centuries, and bibliography.

Stavroula Constantinou, Associate Professor
Hagiography, Byzantine literary genres, poetic, performance, narrative and feminist approaches, The body in Byzantine literature and culture and the literary image of the Other.

Antonia Giannouli, Associate Professor
Byzantine theological literature, in particular religious poetry, hymnography and their commentaries, The history of theological commentaries and homiletical texts, Byzantine lexicography, Prosopography and the critical edition and study of texts.

Martin Hinterberger, Professor
Late-byzantine literature, in particular hagiography as well as vernacular literature, The history of medieval Greek, Byzantine Autobiography, The cultural history of Byzantium, especially the topic of “Envy”, The edition and study of Byzantine documents, in particular the documents of the patriarchal archives of Constantinople.

Marilena Karayiomen, Professor
Sociolinguistics, Language policy and language planning with emphasis on language endangerment and revival, Language attitudes, Dialectology.

Marianne Katsoyannou, Associate Professor
Theoretical linguistics research with the description of the varieties of the Greek language as main application field, Language engineering with emphasis on issues of translation, lexicography and terminology.

Eleftherios Papaleontiou, Associate Professor
Satirical Poetry of 19th and 20th centuries, Poetry in Cyprus Dialect, Modern Greek Prose of 19th and 20th centuries, Modern Greek Poetry between the two Wars, Parodies in Modern Greek Poetry, Literary Magazines, Cyprus Literature.

Marinos Pourgouris, Associate Professor
Modern Greek and comparative literature (with an emphasis on Modernism), Literary theory, particularly the critique of poststructuralism; Psychoanalytic criticism, postcolonial theory and philosophy, Cultural history (concentrating on the Balkans and the Mediterranean).

Alexandra Samuel, Professor
European modernism and literary avant-garde, Modern Greek literature of the 19th and 20th centuries in relation to the European literature of the same period, History of Modern Greek criticism.

Contact Details
COORDINATORS OF THE INTERDEPARTMENTAL PROGRAMME IN BYZANTINE STUDIES AND THE LATIN EAST
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Tel.: +357 22893870
E-mail: niki.sophocleous@ucy.ac.cy

www.ucy.ac.cy/bmg/en
General Principles and Characteristics of the Programme

The Department offers postgraduate programmes at M.A. and Ph.D. levels. By taking into consideration significant developments in Classical Studies in the international academic community, the Department has put together a curriculum of carefully designed postgraduate seminars which reflect the particular research interests of the academic staff members, who are personally involved in the organisation and teaching of the Programme. Visiting scholars complement and enrich the Programme. This gives the opportunity to postgraduate students to choose from a wide range of courses and methodology options, as well as conduct their research with constructive criticism in a supportive environment, which plays an important role in the promotion of science and in the attainment of academic standards.

Admission Requirements for the M.A. Programme

A. B.A. Degree in Classics or a related field from a recognised University.
B. Good knowledge of one of the languages internationally used in Classics, preferably English.
C. Two reference letters from academic faculty in Classical Philology or a related field. Candidates holding a B.A. Degree from the Faculty of Letters of the University of Cyprus are exempted from this obligation.
D. Any other additional qualifications held by the candidate, such as other degrees, will be evaluated on an individual basis.

Admission Procedure for the M.A. Programme

Candidates fulfilling the above requirements are admitted to the Programme as follows:
A. Holders of a B.A. Degree from the Faculty of Letters of the University of Cyprus with “First Class Honours” are admitted on the basis of their personal file.
B. Holders of a B.A. Degree in Classics with a grade of 7/10 and above are admitted on the basis of their personal file.
C. Candidates who do not fall into categories A or B, may be invited by the Departmental Postgraduate Programmes Committee for an interview or might be asked to take a written examination in the subject area of the Programme. Students admitted to the Programme are subject to the General Postgraduate Studies Regulations.

All students are assigned an academic advisor who assists them with academic matters.

Admission Requirements for the Ph.D. Programme

A. A Master’s Degree in Classics or a related field from a recognised University.
B. Good knowledge of at least two of the languages internationally used in Classics.
C. Two reference letters from academics faculty in Classics or a related field.
D. Additional qualifications will be taken into consideration and evaluated.

The Departmental Postgraduate Programmes Committee, after evaluating the candidate’s file, might invite the candidate to an interview.

M.A. (MAGISTER ARTIUM) PROGRAMME

In order to obtain a Magister Artium Degree, the following qualifications are required: Full attendance at the Post-graduate Seminars for a minimum period of three semesters, successful completion of at least 120 ECTS and writing a thesis. The thesis must be 60-100 pages long (A4 paper size, 1.5 line spacing), demonstrating the students’ ability in methodical treatment of a given subject, judicious use of ancient sources as well as secondary literature, originality of ideas and scholarly presentation of results.

A. Postgraduate seminars offered within the Programme are structured around the following areas of Classical Studies:
1. Ancient Greek Literature
2. Latin Literature
3. Comparative Study of Greek and Latin Literature
4. Text Criticism and Editorial Technique as applied to Classical Texts
5. Auxiliary Disciplines of Classical Studies (Greek and Latin Palaeography, Papyrology, Epigraphy)
6. Ancient Greek Dialectology
7. History of the Latin Language
8. Political Thought of the Ancient Greeks and the Romans
9. Interpretative Approaches to Classical Texts
10. Issues in the Translation of Ancient Greek and Latin Texts
11. Classical Survivals in Modern Literatures
12. History of Classical Scholarship

B. Postgraduate students must choose and attend the seminars, according to their research interests, in order to get the necessary guidance in completing their thesis successfully.

C. In special cases, a number of ECTS can be obtained by participating successfully in undergraduate seminars offered by the Department or in postgraduate seminars at other recognised universities within the framework of student exchange programmes. It is recommended that one of the two courses in Historical Linguistics (AGL) covers the area of Greek or Latin Epigraphy.

Courses Offered

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<td>LAT I 6 ..</td>
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<td>(3 Courses x 10 ECTS = 30 ECTS)</td>
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<tr>
<td>AGP II 6 ..</td>
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<td>LAT II 6 ..</td>
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<td>HIS ... ARC ... BMG ..</td>
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<tr>
<th>Third Semester</th>
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<tbody>
<tr>
<td>(2 Courses x 10 ECTS = 20 ECTS and preparation for the M.A. Thesis 10 ECTS, Total: 30 ECTS)</td>
</tr>
<tr>
<td>AGP 601 Papyrology</td>
</tr>
<tr>
<td>AGL II 6 ..</td>
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<tr>
<td>AGP 690 Bibliographical Research and Study, Preparation of M.A. Thesis Proposal (10 ECTS)</td>
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<tr>
<td>AGP 690 M.A. Thesis (30 ECTS)</td>
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<td>Grand Total: 120 ECTS</td>
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<tr>
<td>(Credits from 8 three-hour long courses = 80 ECTS)</td>
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<tr>
<td>(Credits from M.A. Thesis = 40 ECTS)</td>
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**Ph.D. PROGRAMME**

**Requirements**

For the completion of the Doctoral programme the following are required: successful completion of at least 240 ECTS from the Doctoral programme, including the successful completion of the thesis.

The 240 ECTS workload that leads to the completion of the Ph.D. consists of graduate level courses, participation in seminars and conferences organised by the Department, and the completion of the thesis.

Candidates who already hold an M.A., M.Phil. or equivalent degree from another university, will be invited to an interview before a three-member Committee, consisting of members of the Programme’s teaching staff, in order to demonstrate their scholarly competence and their ability to fulfil the requirements for the Programme.

**Admission Procedure for the Doctoral Thesis**

The proposal for a doctoral (Ph.D.) thesis must be presented before a three-member Committee.

Successful applicants must subsequently write an original thesis, which must contribute substantially to their respective fields of research. The Degree is awarded following the successful defence of the thesis before a five-member Committee, consisting of internal as well as external members of the UCY.
### RESEARCH INTERESTS OF THE ACADEMIC STAFF

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Research Interests</th>
</tr>
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<tbody>
<tr>
<td>Demokritos Kaltsas, Associate Professor</td>
<td></td>
<td>Papyrology, The ancient book, Ancient tachygraphy, Koine and Atticism.</td>
</tr>
<tr>
<td>Margot Neger, Assistant Professor</td>
<td></td>
<td>Roman literature of the Imperial period, Roman epistolography, Ancient epigram, Late antique literature, Interaction of genres.</td>
</tr>
<tr>
<td>Anna Panayotou - Triantaphyllopoulou,</td>
<td>Professor Emerita</td>
<td>Syllabic scripts of the Greek-speaking world, Greek alphabets and dialects, Koine Greek, The Greek inscriptions of Macedonia and Cyprus, and the Cypriot dialect (ancient, medieval and modern).</td>
</tr>
<tr>
<td>Antonios Tsakmakis, Associate Professor</td>
<td></td>
<td>Archaic lyric poetry, Greek historiography and biography, Old comedy (Aristophanes), philosophy and political theory of the 5th and 4th cent. BC, Narratological and cognitive approaches to literary texts, Didactics of classical Greek.</td>
</tr>
<tr>
<td>Spyridon Tzounakas, Associate Professor</td>
<td></td>
<td>Roman epic, Roman satire, Roman epistolography, Latin elegy, Cicero’s orations, Latin historiography.</td>
</tr>
<tr>
<td>Maria Ypsilanti, Associate Professor</td>
<td></td>
<td>Epigram, Poetry of the Hellenistic period and late antiquity, Tragedy, Textual criticism.</td>
</tr>
</tbody>
</table>

### Contact Details

**PROGRAMME COORDINATOR**

Demokritos Kaltsas, Associate Professor  
Tel.: +357 22893855  
E-mail: dkaltsas@ucy.ac.cy

**DEPARTMENT SECRETARIAT**

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E-mail: classics@ucy.ac.cy

[www.ucy.ac.cy/cph/en](http://www.ucy.ac.cy/cph/en)
The Department of History and Archaeology encompasses the disciplines of History and Archaeology/Art History. Its chief aims are teaching and academic research in these fields. Since its establishment in 1992, the Archaeological Research Unit (A.R.U.) has been operating as a centre of archaeological studies. It has been functioning as part of the Department since 1996.

The Department offers the following postgraduate programmes:

- Mediterranean Archaeology: from Prehistory to Late Antiquity (Master and Ph.D.)
- Ancient History (Master’s and Ph.D.)
- Modern and Contemporary History (19th-20th centuries) (Master and Ph.D.)
- Field Archaeology on Land and Under the Sea (Master)
- Digital Heritage and Landscape Archaeology (Master)
- Interdepartmental Postgraduate Programme in Byzantine Studies and the Latin East in cooperation with the Department of Byzantine and Modern Greek Studies (Master and Ph.D.)
- Interdepartmental Postgraduate Programme in Conservation and Restoration of Historic Buildings and Sites in association with the Departments of Civil and Environmental Engineering and Architecture (Master)

Research Activity

The Department has inaugurated research programmes and projects in which postgraduate research assistants and postgraduate students participate. Their goal is original research, with special emphasis on Cyprus in relation to the rest of the Greek world and the Eastern Mediterranean.

For more information on the research programmes, please visit the websites of the Department of History and Archaeology and the Archaeological Research Unit (www.ucy.ac.cy/hisarch-en, www.ucy.ac.cy/hisarch/aru-en respectively).

Programme Leading to a Master’s Degree

Programme Structure

For the postgraduate programme leading to the acquisition of a Master of Arts Degree in Mediterranean Archaeology: From Prehistory to Late Antiquity, 120 ECTS must be completed, as follows: Course work, equal to 80 ECTS, and a Master’s thesis, equal to 40 ECTS (see requirements for a Master’s degree).

Postgraduate students must choose eight courses (each course equals 10 ECTS) from the following thematic units, which are offered on a two-year cycle:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ARC 700-ARC 709</td>
<td>The Mediterranean in Early Prehistory</td>
</tr>
<tr>
<td>ARC 710 - ARC 719</td>
<td>The Mediterranean in the 3rd Millennium B.C.</td>
</tr>
<tr>
<td>ARC 720-ARC 729</td>
<td>The Mediterranean in the 2nd Millennium B.C.</td>
</tr>
<tr>
<td>ARC 730-ARC 739</td>
<td>The Mediterranean in the Iron Age</td>
</tr>
<tr>
<td>ARC 740-ARC 749</td>
<td>Art: Production and Circulation (Architecture, Sculpture, Ceramics, Minor Arts, etc.) of the Geometric, Archaic and Classical Periods</td>
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<tr>
<td>ARC 750-ARC 759</td>
<td>Topography of the Main Centres of Classical Antiquity (urban centres, necropoleis and sanctuaries)</td>
</tr>
<tr>
<td>ARC 760-ARC 769</td>
<td>Art: Production and Circulation (Architecture, Sculpture, Ceramics, Minor Arts, etc.) of the Hellenistic and Roman Periods</td>
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</tbody>
</table>
Full-time postgraduate students must take three of the above courses in the first semester of their studies and three in the second. In the third semester they must take two of the offered courses and also the compulsory course ARC 810 preparation and writing of a Master’s thesis I (10 ECTS). In the fourth semester postgraduate students continue on to completing the Master’s thesis ARC 811 Preparation and writing of a Master’s thesis II (30 ECTS).

Programme of Studies

**First Semester**

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<tr>
<td>ARC 720</td>
<td>The Mediterranean in the 2nd Millennium B.C.</td>
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<tr>
<td>ARC 740</td>
<td>Art: Production and Circulation (Architecture, Sculpture, Ceramics, Minor Arts, etc.) of the Geometric, Archaic and Classical Periods</td>
</tr>
<tr>
<td>ARC 760</td>
<td>Art: Production and Circulation (Architecture, Sculpture, Ceramics, Minor Arts, etc.) of the Hellenistic and Roman Periods</td>
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**Second Semester**

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<tbody>
<tr>
<td>ARC 700</td>
<td>The Mediterranean in Early Prehistory</td>
</tr>
<tr>
<td>ARC 790</td>
<td>Theoretical Archaeology, Methodology, Archaeometry and Environmental Archaeology: The Directions of Modern Research</td>
</tr>
<tr>
<td>HIS 702</td>
<td>Documents of the Hellenistic and Roman Periods in the Eastern Mediterranean</td>
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**Third Semester**

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<tr>
<td>ARC 730</td>
<td>The Mediterranean in the Iron Age</td>
</tr>
<tr>
<td>ARC 750</td>
<td>Topography of the Main Centres of Classical Antiquity (Urban Centres, Necropoleis and Sanctuaries)</td>
</tr>
<tr>
<td>ARC 770</td>
<td>Topography of the Main Centres of Hellenistic and Roman Antiquity (Urban Centres, Necropoleis and Sanctuaries)</td>
</tr>
<tr>
<td>HIS 711</td>
<td>Inscriptions of Cyprus</td>
</tr>
<tr>
<td>ARC 810</td>
<td>Preparation and Writing of Stage I of the Master’s Thesis (offered only to 3rd semester students and is compulsory)</td>
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**Fourth Semester**

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<tr>
<td>ARC 710</td>
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</tr>
<tr>
<td>ARC 780</td>
<td>Protection, Preservation and Management of Cultural Heritage</td>
</tr>
<tr>
<td>ARC 800</td>
<td>Ancient Technology (Ceramics, Metals, Stone, Glass, etc.)</td>
</tr>
<tr>
<td>ARC 811</td>
<td>Preparation and Writing of Stage II of the Master’s Thesis (offered only to 4th-semester students and is compulsory)</td>
</tr>
</tbody>
</table>

**Prerequisites for Admission to the M.A. Programme**

1. Candidates must be:

    a) Graduates of the Department of History and Archaeology of the University of Cyprus or the Departments of History and Archaeology of Greek universities.

    b) Graduates of the Department of Classical Studies and Philosophy of the University of Cyprus or equivalent departments of Greek universities.

    c) Graduates of Departments of Archaeology and/or Classical Studies of recognised universities.

    d) Graduates with a degree in related fields of research (History, History of Art, Architecture, Anthropology, or other disciplines that have applications in archaeology, such as Geology, Physics and chemistry) from recognised universities.

    e) Graduates of the School of Letters with a Minor degree in History and Archaeology.

2. The Committee of the Programme will examine on their own merit applications from candidates who do not have a Degree in Archaeology or History.

3. Graduates of the University of Cyprus and Greek universities must have an undergraduate diploma with a cumulative grade of 7.5/10 or higher. The equivalent is required for candidates who have graduated from other universities.

4. Candidates who meet the above requirements will be invited to an interview and/or a written exam. They must also pass written exams in one of the main European languages (other than their mother tongue), namely English, French, German, Italian, Spanish.

5. Greek is the official language of instruction and for writing the Master’s thesis.

**Submission of Application**

Applications must be submitted to the Department’s postgraduate programme coordinator within the announced deadlines.

For information on application/admission procedures and requirements, please refer to the Admission and Attendance Regulations – Application Requirements or Department of History and Archaeology
please consult the Graduate School or the Department’s Secretariat.

In addition to the general requirements, candidates must also include the following in their application: a) two undergraduate essays on archaeological topics, or, in the case of applicants who fall under categories 1(a), 1(b) and 1(c), two undergraduate essays on related topics and b) certificates proving good knowledge of a foreign language.

DOCTOR OF PHILOSOPHY DEGREE

Prerequisites for Admission to the Ph.D. Programme

1. Candidates must have a postgraduate degree from a recognised university, in Archaeology or in a related field (History of Art, Architecture, Anthropology and other subjects that have applications in Archaeology, such as Geology, Physics and Chemistry).

2. Candidates who meet the above requirements will be invited to an interview. They must also pass written exams in two of the main European languages (other than their mother tongue), namely English, French, German, Italian, Spanish.

Submission of Application

Applications must be submitted to the Department’s Postgraduate Programme Coordinator within the announced deadlines (please refer to the Admission and Attendance Regulations – Application Requirements or please consult the Graduate School, or the Department Secretariat).

In addition, applications must include: a) a copy of the M.A. thesis and copies of published articles, if any, b) certificates proving good knowledge of two foreign languages, and c) a statement regarding the research topic for the Doctoral Dissertation.

Contact Details

PROGRAMME COORDINATOR FOR GSP

George Papasavvas, Associate Professor
Tel.: +357 22893566
E-mail: georgep@ucy.ac.cy

POSTGRADUATE PROGRAMME IN ANCIENT HISTORY (MASTER)

The Programme focuses on the in-depth study of Ancient Greek History, Roman History, and Ancient Cypriot History. The study of these subjects is confined within the geographical limits of the Mediterranean region and the Near East.

The postgraduate programme leading to the Master’s Degree in Ancient History requires 120 ECTS, as follows:

- 80 ECTS in eight courses (8 X 10)
- 40 ECTS for the Master’s thesis

The duration of the Programme is two years (four semesters); the fourth semester is devoted to writing the Master’s thesis.

Of the eight courses required for the Master’s degree, six courses must be taken from the following thematic units:

- Ancient Greek History-East
- Phoenicians-History and Culture
- Roman History-East
- Late Antiquity-East
- History of Ancient Cyprus
- Epigraphy

The remaining two courses are electives to be chosen from similar postgraduate programmes of the University of Cyprus. These may include, but are not limited to:

- Mediterranean Archaeology
- Classical Philology
- Byzantine Studies (see relevant pages)

Prerequisites for Admission to the Programme

Each year, the Department of History and Archaeology admits eight postgraduate students.

Candidates must be:

1. Graduates of the Department of History and Archaeology at the University of Cyprus or equivalent departments at other universities.

2. Graduates of the Department of Classical Studies at the University of Cyprus or equivalent departments at other universities.

Applications must be submitted to the Secretary of the Department of History and Archaeology within the announced deadline. Applications must include the following:

1. Curriculum Vitae.
2. A short essay on the scholarly and research interests of the candidate.
3. Two letters of recommendation from university professors or research institutions.

Candidates who meet these criteria will be invited to an interview.
POSTGRADUATE PROGRAMME IN ANCIENT HISTORY (DOCTORATE)
Each year, the Department admits four doctoral students.
Candidates must have a postgraduate degree (Master’s) from the University of Cyprus or from another recognised university in Ancient History, Classical Archaeology (or in Mediterranean Archaeology from the University of Cyprus).
Applications must be submitted to the Secretary of the Department of History and Archaeology within the announced deadline. Applications must include the following:
1. Curriculum Vitae.
2. A short essay (about three pages) on the proposed Ph.D. research topic.
3. Certificate(s) attesting to the good knowledge of a foreign language.
4. Publications (if applicable).
5. Two letters of recommendation from university professors or research institutions.
Candidates who meet these criteria will be invited to an interview.

Contact Details
PROGRAMME COORDINATOR
(MASTER AND DOCTORAL)
Theodoros Mavroyiannis, Professor

DEPARTMENT SECRETARIAT
Eleni Hadjistylianou
Tel.: +357 22892180
E-mail: isa@ucy.ac.cy

www.ucy.ac.cy/hisarch/en

POSTGRADUATE PROGRAMME IN MODERN AND CONTEMPORARY HISTORY (19th-20th CENTURY)

Master’s Degree
The aim of the Programme is to offer to the students specialised study of Modern Greek and European History (since the 19th c.), and highlight its connection with the history of the wider area of the Mediterranean and Southeastern Europe; and to map the course of Cyprus and its political and cultural relations with the broader European world.
The personnel teaching in the Programme comprises the academic staff appointed to the Department of History and Archaeology, in the following specialised areas:
• Modern Greek History
• Contemporary Greek History
• Modern European History
• Contemporary European History
The same members of staff will also act as academic advisors to the students.

Additional teaching can also be offered by visiting academic staff and short term visiting academic staff in the above specialisations. Academics of other departments of the University may also offer classes following the Department’s invitation.

Organisation of the Programme
The Programme consists of three elements:
I. Taught courses.
II. Independent study, attendance and participation in the Colloquium.
III. M.A. dissertation.
Students have to fulfil successfully all three elements of the Programme in order to obtain the M.A.

I. Courses
The taught element of the Programme is organised around groups of courses. Every candidate has to attend seven courses, four of which have to be from two different categories. The remaining three courses have to be selected, a) from courses which belong to the categories that have already been selected, b) from courses from other categories of courses, c) up to two courses may be selected from the postgraduate programmes of other Departments of the Faculty of Letters. At the suggestion of the coordinator of the postgraduate programme and with the approval of the Council of the Department, one of the two courses may be selected from a postgraduate programme outside the Faculty of Letters.
The categories of courses and the courses which will be offered are:
II. Independent Study/Colloquium

A Colloquium is offered as part of the Programme. Postgraduate students, Ph.D. candidates, teaching staff of the postgraduate programme and visitors of the Department who present their research, participate in the meetings of the colloquium.

During the first semester, students have to complete the Independent Study (graded with Pass/Fail) and to participate in the colloquium. The presentation of the Independent Study may take place during the first semester or the second semester (together with the presentation of the research proposal).

In the second semester of study, all postgraduate students present the research proposal for their M.A. dissertation at the Colloquium.

III. M.A. Dissertation

In the third semester of studies, postgraduate students attend one course and begin work on their M.A. dissertation. The M.A. dissertation is expected to be in the region of 15,000 words.

During the fourth semester of studies, postgraduate students continue and complete their M.A. dissertation.

Entry Criteria

1. Candidates in the Postgraduate Programme may be graduates of departments from recognised universities. Priority will be given to: Graduates of departments of History, graduates of faculty of Letters, graduates of departments of Political Studies, European Studies or Turkish Studies.

2. Graduates of Greek universities and of the University of Cyprus must have a GPA of at least 7.0/10 and above. Equivalent grades are required from graduates of other universities.

3. A good knowledge of the English language is required. Knowledge of a second European language is considered an advantage.

4. The final decision for the admission to the Postgraduate Programme is taken by a committee that is appointed by the academic staff of the Department (academic staff appointed to the Department and teaching in the programme), which evaluates the candidates’ applications. The Committee reserves the right to invite for an interview and/or a written examination the candidates, even if they fulfil all the criteria for acceptance.

5. The language of teaching and assessment is Greek.

6. Number of students admitted to the M.A. per year: 15.

M.A. Degree Requirements

- The Department appoints an academic advisor for every new postgraduate student.
- The minimum period of full-time study for the M.A. is three semesters.
- Successful completion of 120 ECTS is required for the M.A. degree. These are allocated as following:

<table>
<thead>
<tr>
<th>Course Description</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taught Courses (7 X 9)</td>
<td>63</td>
</tr>
<tr>
<td>Independent Study (1 X 3)</td>
<td>3</td>
</tr>
<tr>
<td>Participation-Presentation of the Research Proposal at the Colloquium (1 X 3)</td>
<td>3</td>
</tr>
<tr>
<td>Preparation and Writing of the Dissertation I and Preparation and Writing of the Dissertation II (21 + 30)</td>
<td>51</td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
</tr>
</tbody>
</table>

The Programme may be offered either on a full-time or part-time basis. Students (either full-time or part-time) have to follow the Programme as organised (see below). The general postgraduate study regulations are applicable as regards the general work load.

Part-time students may begin writing their dissertation after the completion of six of the seven compulsory courses of the Programme.
Suggested Programme of Studies

<table>
<thead>
<tr>
<th>First Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three Courses from two categories of courses X 9 ECTS (optionally: 3 courses</td>
</tr>
<tr>
<td>from one category of courses X 9 ECTS)</td>
</tr>
<tr>
<td>Independent Study and Participation in the Colloquium</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Total 30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three Courses from two or three categories of courses X 9 ECTS (optionally:</td>
</tr>
<tr>
<td>three Courses from a different category from the one that been followed during</td>
</tr>
<tr>
<td>the previous semester X 9 ECTS)</td>
</tr>
<tr>
<td>Presentation of the Research Proposal/of the Independent Study at the</td>
</tr>
<tr>
<td>Colloquium</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Total 30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Course from the offered categories of courses X 9 ECTS</td>
</tr>
<tr>
<td>M.A. Dissertation I X 21 ECTS</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Total 30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.A. Dissertation II X 30 ECTS</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Total 30</td>
</tr>
</tbody>
</table>

A. For Courses with Codes HIS 720-740 (9 ECTS)
- 3 hours of teaching X 13 weeks: 39 ECTS.
- 6 hours of meetings for academic guidance: 6 ECTS.
- Study time required during the semester (10 hours preparation for every course per week average, including the study and the preparation for presentations, presentation of the essay for every course, and the time for archival and bibliographical research required for the writing of the essays): 140.
- Preparation and writing of the final essay for every course: 60.
Total working hours per course per semester: 245.

B. HIS 808 Independent Study/HIS 809 Colloquium (3 ECTS)
- 1.5 hours attendance X 13 weeks: 19.5.
- 2 hours of meetings for academic guidance: 2.5.
- Study time required during the semester preparation for the independent study/research proposal, including the study and preparation for the presentations at the course and the time of archival and bibliographic research, required for the writing of the independent study/research proposal: 40.
- Preparation and writing of the independent study/research proposal for the M.A. dissertation: 18.
Total working hours per course per semester: 80.

C. HIS 810 Preparation and Writing of the M.A. Dissertation I (21 ECTS)
- Meeting with the research advisors: 26.
- Research [indicatively: Locating and reviewing the existing bibliography, selection and application of the research methodology, finding primary material in archives and private collections]. Photographing material, indexing. Documentation and cross-checking information. Familiarisation with software programmes (when necessary): 300.
- Writing pilot parts of the dissertation: 254.
Total working hours: 580.

D. HIS 811 Preparation and Writing of the M.A. Dissertation II (30 ECTS)
- Meeting with the academic advisors: 39.
- Writing of the dissertation: 460.
Total working hours: 770.

Crediting ECTS from a Previous M.A. Degree
Applications are submitted to the coordinator of the Postgraduate Programme during the dates the University sets, as advertised in the press and/or the University and departmental website. Applications must include the following:
1. Copy of the university degree or certification of forthcoming graduation.
2. Grades for courses attended in the first and/or M.A. degree.
3. Short Curriculum Vitae.
4. Two undergraduate essays or published work in Modern History.
5. Proof of good knowledge of English, and of other languages.
6. Letters of reference from at least two academics.
7. Short statement (up to two pages) of research interests of the candidate and research proposal.

Calculation of the Workload (ECTS)
The unit of credit is based on the calculation of the student workload during every semester. One ECTS unit is equivalent to 25-30 hours work per semester.

Consequently, courses of 9 ECTS correspond to 225-270 hours of work, and are allocated as follows:
DOCTOR OF PHILOSOPHY DEGREE

Criteria for Admission to the Ph.D. Programme

1. The candidates must hold an M.A. Degree in History from a recognised university. Candidates, whose M.A. degree is in other fields (such as Political Science, European studies or Turkish studies) and who fulfil all the criteria of the Programme, may also apply. Candidates, whose M.A. degree is in fields other than the above, may also apply for a Ph.D. in the history of their specialisation in Cyprus and/or the Greek World during the modern and contemporary periods. These candidates will be supervised in cooperation with the academic staff of the relevant departments.

2. Good knowledge of the English language is required. The knowledge of a second European language will be considered an added qualification.

3. A committee comprised of the permanent academic staff teaching in the programme will be responsible for the evaluation of the applicants. This committee reserves the right to invite candidates to an interview and/or a written examination.

Requirements and Organisation of the Ph.D. Programme

Course attendance: Students with an M.A. Degree or equivalent in Modern and/or Contemporary History or other relevant M.A. Degree, who satisfy all the requirements for the programme, are exempted from the obligation of attending courses. Candidates may be required to attend M.A. degree programme courses, if the Department considers this necessary for the candidate’s research.

Within the framework of the Programme a cycle of scholarly meetings (Colloquia) will be held. M.A. and Ph.D. students, academic staff and visiting academics will participate in these meetings and present their research. Ph.D. students must present their research proposal and/or part of the Ph.D. dissertation during this cycle of meetings.

Contact Details

PROGRAMME COORDINATOR FOR GSP

George Kazamias, Associate Professor
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E-mail: g.kazamias@ucy.ac.cy

POSTGRADUATE PROGRAMME IN FIELD ARCHAEOLOGY ON LAND AND UNDER THE SEA

The aim of the Programme in Field Archaeology On Land and Under the Sea is to provide advanced knowledge of the theory and methodology of archaeological fieldwork on land as well as under the sea, and to furnish young professionals with the requisite training to rise up to the challenges of both the public and the research aspects of archaeology. The courses on offer examine the nature, the study and the documentation of archaeological finds and sites (both landlocked and maritime), while practical field training is duly encouraged, on land, sea and in the laboratory.

The Programme is offered in English and is addressed to:

• Archaeologists already working in the public sector (archaeological services or in museums), who need to optimize their professional performance in various aspects of fieldwork.
• Young archaeologists who wish to enhance their training and experience in order to pursue a career in the public or private sector.
• Young researchers who need to expand their fieldwork activities or be trained in new/specific methods and techniques.
• Non-archaeology graduates from disciplines closely linked to archaeology, who wish to become familiar with archaeological fieldwork.

Programme Structure

The Programme can be completed in a minimum of three semesters. Successful completion is predicated on the acquisition of 90 ECTS, as follows:

1st Semester (30 ECTS). Three courses on Landscape Archaeology*

2nd Semester (30 ECTS). Three courses on Materials and Artefacts Studies*

3rd Semester (30 ECTS). One course on Practical Training in Field Archaeology*

In order to complete the remaining 20 ECTS, students have two options:

• either conduct an M.A. thesis (12,000-15,000 words) (20 ECTS), or
• attend two elective courses (2 x 10 ECTS).

* For each course, valued at 10 ECTS, students are required to prepare oral presentations, write at least one essay and participate in organised visits.
Course Descriptions

1. Landscape Archaeology

**ARC 650 Settlement and Landscape Archaeology**

The aim of this seminar course is to offer students a cohesive and complete theoretical, methodological, and practical background in Settlement- and Landscape Archaeology as a means of studying built space and the natural environment at a higher resolution, in order to identify, quantify, and comprehend past human activity. With the use of case studies, in situ visits and drills, students will become familiar with (a) state-of-the-art methods and approaches for examining archaeological landscapes and (b) the technical equipment (e.g. robotic total station, Differential GPS, handheld computers) for recording and documenting archaeological features in the field.

**ARC 653 Introduction to Geographical Information Systems (GIS) in Archaeology**

The aim of this course is to provide theoretical knowledge and the fundamental principles in the application of Geographical Information Systems (GIS) in Archaeology. Students will be exposed to a number of past applications of GIS dealing with either Landscape Studies or intra-site analyses to understand the wide spectrum of GIS applications in Archaeology and other Social Sciences. The course will provide theoretical information regarding the different types of digital data (raster and vector format), their analysis and editing, the digitization of historical, topographical, or geological maps and their georeferencing, and the creation of digital thematic maps. The examples that will be provided will be drawn from previous investigations addressing various archaeological and historical questions. The course aims to give a theoretical background to students wishing to pursue research in the fields of Landscape Archaeology and applications related to analyses of the environment and space in History and Archaeology (e.g. predictive modelling, risk assessment, linking information from historical sources with spatial data, communication networks, etc.). With the completion of the laboratory-based part of this course, students will get a hands-on experience of the ArcGIS environment, the digitisation of maps, the importation of their own historical/archaeological datasets and the creation of thematic archaeological maps.

**ARC 654 Maritime Cultural Landscape**

The purpose of the course is to convey to the students the concept of maritime landscape and its components so that they are able to plan a comprehensive fieldwork project in the coastal zone. Upon completion of the seminar, students are expected to (a) have a grasp of the contemporary research regarding the theoretical discussion and the methodological approaches of the concept of maritime cultural landscape, b) be in a position to date and analyse sites of coastal settlements and harbour installations, taking into consideration the coastal changes and the dynamics of human presence in the coastal zone and c) be able to assess the role of certain elements of the seascape (weather conditions and coastal topography, landmarks, and orientation) in the development of pre-industrial shipping. The theoretical discussions are always complemented with examples of completed projects so that students become familiar with the archaeological record and the latest developments in the field.

2. Materials and Artefacts Studies

**ARC 655 Shipwreck Archaeology**

Shipwrecks are entities of special value in the archaeological record because of their distinctive synchronous nature and the direct evidence they provide for trade and contacts in antiquity. The seminar will discuss the main types of archaeological finds discovered on shipwrecks (assemblages of cargo, ship-related material [hull and gear], the personal possessions of those on board), the available methods and techniques for in situ preservation, and the excavation and conservation of recovered, waterlogged material. Particular emphasis will be given to surveying and mapping techniques, which enable more accurate results, and the development of research tools for documenting site formation processes (cultural and natural). Students will be offered the opportunity to implement in the field much of the knowledge they acquire in the classroom, through their participation in the University of Cyprus excavation project on the Mazotos shipwreck, and a practical seminar at the Department of Antiquities’ Conservation Laboratory for Underwater Finds.

**ARC 659 The Interdisciplinary Study of Ancient Materials**

Nowadays, it is widely accepted that the most comprehensive archaeological studies are those which combine traditional methods of typological and stylistic classification with analytical techniques deriving from the natural and digital sciences. The aim of this course is to introduce students to a variety of analytical techniques used for the characterization of ancient materials. The focus will be on the physical, chemical and microscopic analysis of the main groups of inorganic materials namely stone, ceramics, glass, plasters and metals. Students will also be instructed on how the analytical data procured can then be used to answer questions regarding ancient technology, economy, organisation of production and trade.

**ARC 661 Study of Pottery and Small Finds**

This seminar course focuses on methodologies employed to recognize, record, and quantify ceramics from both excavated and survey contexts. Special attention will be given to (a) basic principles applied for the classification of ceramics by ware type and identifying chronological ware-groups, (b) methods for reading (interpreting) pottery functions, (c) models used to record and quantify ceramic assemblages (with the use of the relevant software), (d) practical-classes for both hand-drawing and 3D-scanning and reconstruction of pottery sherds (with the aid of a 3D scanner). Students will also have the opportunity to get involved in the quantification of already dated assemblages and/or participate in the study of ceramic finds.

3. Practical Training

**ARC 615 Practical Training in Field Archaeology**

The purpose of this course is the on-site training in generic and specific practical archaeological skills, supplemented by formal lectures. Students expose themselves to the particular conditions of teamwork in the field and develop communication and collaboration skills. They also experience the challenges and rewards of discovering material remains of the past, while at the same time they get a grasp on the research related to archaeological fieldwork. In total, they complete at least 20 days of practical training in the field (180 hours). They should also write an essay on a related subject, under the supervision of the course instructor. Upon
completion of the seminar, they are expected to have comprehended the nature, potential and purpose of archaeological fieldwork.

4. Electives

ARC 651 Mediterranean Island Landscapes
The primary purpose of the course is (a) to become acquainted with the cultural distinctiveness of the Mediterranean islands, especially the mega islands of Cyprus, Crete, Sicily and Sardinia, but also smaller ones, like the Cyclades in the Aegean Archipelago; (b) to define their cultural choices and their socio-economic resilience through comparisons with each other and with the nearest continents; (c) to investigate how the island populations exploited the landscape and the natural resources; and (d) to ask why some developed early complex societies (e.g. Crete) while others chose to avoid political complexity (e.g. Sardinia).

ARC 652 Introduction to Building Archaeology
Building Archaeology (‘Archéologie du bâti’, ‘Bauforschung’) constitutes a branch of the discipline dealing with the scholarly and scientific analysis of standing historical structures by non-destructive means. Its methodology entails the close ‘reading’ of extant masonry surfaces, the production and study of accurate illustrative documentation, the scientific investigation of mortars, pigments, metal, wood and other materials, and the scrutiny of the documentary record with a view to reconstructing the history of particular edifices within their immediate architectural and cultural surroundings. The course aims to familiarise students with the basic methods employed in this kind of ‘above-ground’ archaeology through the survey of current theoretical approaches and an introduction to photographic and graphic documentation.

ARC 663 Introduction to Cultural Heritage Management (CHM)
The course aims to familiarise students with the concept of cultural heritage, its importance, and the dangers that threaten it, as well as the reasons why it is imperative to manage it and what this entails. Course objectives and outcomes include a) the Introduction to Cultural Heritage Management (CHM) through international instruments and conventions, local legislation regarding CHM, as well as actual practices in Cyprus and abroad, especially in Europe, b) Examination of the theoretical framework (including ethics), methods, and techniques employed to ensure the protection, conservation, and highlighting of cultural resources, c) Familiarity with the concept of cultural heritage, how it is defined and by whom, why it is important, the dangers that threaten it, why it is imperative to be managed, and what this entails, d) Acquaintance with the relevant legal framework (local legislation and international instruments) as well as with the most important organisations involved in CHM locally and internationally, and e) Recognition of the importance of proper CHM for the promotion of scientific knowledge, sustainable development, the improvement of the quality of life of human societies, the cultivation of respect for all human beings and their achievements, and peace-building.

Admission Criteria
Prospective students must have completed an undergraduate degree in Archaeology, History, Classics, Anthropology or other related fields of research (History of Art, Architecture, Geography, Geology, Physics, Chemistry, Engineering) in recognised universities.

Graduates of the University of Cyprus and universities in Greece must have an undergraduate diploma with a cumulative grade of 6.5 or higher. The equivalent is required for graduates from other universities. Applicants must speak English at a satisfactory level (IELTS 5.5 or equivalent).

Submission of Application
The application must be submitted online, according to the general rules of the Graduate School of the University of Cyprus.
Candidates who meet the requirements will be called for an interview. Overseas applicants will be interviewed via teleconference.

Contact Details
PROGRAMME COORDINATORS
Stella Demesticha, Associate Professor
Tel.: +357 22893568, E-mail: demesticha@ucy.ac.cy

Athanasios K. Vionis, Associate Professor
Tel.: +357 22893569,
E-mail: vionis.athanasios@ucy.ac.cy

INTERDEPARTMENTAL POSTGRADUATE PROGRAMME IN BYZANTINE STUDIES AND THE LATIN EAST
See pages 171-184.

Contact Details
PROGRAMME COORDINATOR FOR THE DEPARTMENT OF HISTORY AND ARCHAEOLOGY
Maria Parani, Associate Professor
Tel.: +357 22893565
E-mail: mparani@ucy.ac.cy
POSTGRADUATE PROGRAMME (M.Sc. and Ph.D.) IN DIGITAL HERITAGE AND LANDSCAPE ARCHAEOLOGY

The Postgraduate Programme (M.Sc. and Ph.D.) in Digital Heritage and Landscape Archaeology of the University of Cyprus is a unique postgraduate programme in the area of the Eastern Mediterranean that offers a concrete interdisciplinary academic course platform dealing with the application of Geographic Information Systems (G.I.S.), Spatial Technologies and Geoinformatics in the wider field of Digital Humanities. The Programme acts as an interface between New Technologies and the Humanities, exposing students to the latest spatial technological developments, providing hands-on training and skills to different instrumentation and software, promoting a critical perspective of their application in terms of addressing archaeologically and historically oriented questions and encouraging a dialogue between different disciplines. The Programme is implemented under the auspices of the Sylvia Ioannou Foundation. A number of tuition fee waiver scholarships will be granted to the best candidates according to the points earned during admission. The Programme is taught in English.

Programme Structure

The M.Sc. programme in Digital Heritage and Landscape Archaeology can be completed in a minimum of three semesters. The Ph.D. programme can be completed in a minimum of six semesters.

For the M.Sc. programme, students must successfully complete 90 ECTS, as follows:

• First Semester (30 ECTS). Two compulsory and one elective course.
• Second Semester (30 ECTS). Three compulsory courses.
• Third Semester (30 ECTS). One course on Practical Training in Field Archaeology (10 ECTS) or an elective course (10 ECTS) and a M.Sc. thesis (12,000-15,000 words) (20 ECTS). For each course, valued at 10 ECTS, assessment will be based on one or more of the following: regular homework assignments, midterm and/or final exams, final essays, or projects.

The Ph.D. programme does not require the attendance of courses. In case that a student needs some more specialised training, it is possible that he/she might need to attend a number of master courses, which will be offered from the pool of courses of the M.Sc. programme on Digital Humanities and Landscape Archaeology.

Course Descriptions

Compulsory Courses

ARC 653 Introduction to Geographical Information Systems (GIS) in Archaeology

The aim of this course is to provide theoretical knowledge and the fundamental principles in the application of Geographical Information Systems (GIS) in Archaeology. Students will be exposed to a number of past applications of GIS dealing with either Landscape Studies or intra-site analyses to understand the wide spectrum of GIS applications in Archaeology and other Social Sciences. The course will provide theoretical information regarding the different types of digital data (raster and vector format), their analysis and editing, the digitization of historical, topographical, or geological maps and their georeferencing, and the creation of digital thematic maps. The examples that will be provided will be drawn from previous investigations addressing various archaeological and historical questions. The course aims to give a theoretical background to students wishing to pursue research in the fields of Landscape Archaeology and applications related to analyses of the environment and space in History and Archaeology (e.g. predictive modelling, risk assessment, linking information from historical sources with spatial data, communication networks, etc.). With the completion of the laboratory-based part of this course, students will get a hands-on experience of the ArcGIS environment, the digitisation of maps, the importation of their own historical/archaeological datasets and the creation of thematic archaeological maps.

ARC 670 Applications of Geoinformatics in Archaeology

The course aims to introduce students to the fundamentals and the actual applications of Geomatics in Archaeology. It will offer an overview of terrestrial subsurface mapping techniques, as well as aerial and satellite remote sensing. It will address the issue of Geophysical prospection, photogrammetry and UAVs, GPS mapping, terrestrial and aerial Lidar, and the employment of historical aerial and satellite imagery in the course of archaeological research with emphasis on landscape archaeological studies, Cultural Resources Management (CRM), and the monitoring of historical monuments and buildings. Students are expected to acquire a solid foundation and basic knowledge in the implementation of a wide range of applications of Geomatics related to the content of the course. They shall gain a general knowledge of the capabilities and limitations of each technique, ways of collecting measurements and interpreting them accordingly. The course will provide the theoretical background of the pertinent technologies and demonstrate some of the basic tools used in the field. Students will obtain some practical hands-on experience of working with some of the geophysical techniques (more particularly with Ground-Penetrating Radar/GPR, magnetometers, and soil resistance meters) and they shall be able to collect measurements and process the data.

ARC 673 Geospatial Analysis and Modelling in GIS (GIS II)

This course will build on the basics of GIS I (Introduction to GIS Technologies) and proceed with the introduction of more sophisticated spatial analyses that can be used in the wider field of the Humanities but also of the Environmental Sciences. The aim of this course is to introduce students to the theoretical knowledge and the fundamental principles of advanced spatial analyses through the application of Geographical Information Systems (GIS) that can combine and analyse a diverse data set of
geodata and geographical information. Students will be exposed to different functions and analyses of GIS that are necessary in Landscape Archaeology and Spatial History and learn about the necessary workflows for achieving specific goals that are fundamental in spatial processing. They shall be able to combine, synthesize, and process map layers (both vector and raster), classify different datasets based on their descriptive statistics, and create densities, buffers, and catchments of surface maps. They will experiment with different Digital Elevation Models (DEMs) in order to carry out viewshed analysis, least-cost paths analysis, and hydrological analysis that can be used for studying settlement patterns and the exploitation of the archaeolandscapes. They will also be trained to work with different models (MCDA and AHP). The course will provide theoretical information on the topics discussed in the course, accompanied by practical exercises (hands-on experience) in ArcGIS software with data provided by the instructor. These datasets will simulate real archaeological questions and will train students in the application of similar analyses that can be applied for their own MA or Ph.D. research.

**ARC 671 Computational and Analytic Techniques in the Humanities and Social Sciences**

The course aims at giving students of History and Archaeology a theoretical foundation and practical training in topics related to the application of information technologies and computational methods in the Humanities. The course also aims at familiarising students with specific software dealing with the analysis, processing, and visualization of data which they may be called upon to handle in the future, in their working and academic environment. The goal of the course is to enhance their knowledge and train them on the statistical analysis of measurements, creation of charts and thematic maps, the visualization of spatial-temporal associations and networks, the construction of 3D models, etc.

**ARC 699 Advanced Topics in the Digital Humanities**

This course will address the state of the art and the latest developments in the field of the technical advancements and applications of Geoinformatics in the Digital Humanities. The aim of the course is to stir students’ interest in the latest developments in Geoinformatics arising from scientific publications. The topics to be addressed will evolve according to the latest advances in the field and will be geared towards inspiring and motivating students to implement these unfolding trends in their MA or Ph.D. research. Examples drawn from the international literature will be presented and discussed among students. The course will explain the algorithms and the ways of processing, and apply them in specific archaeological/historical issues. Students will be exposed to a number of advanced-level applications that have been developed by various international groups and research projects, covering topics such as Cultural Heritage management and monitoring through GIS and crowdsourcing, Machine Learning/Deep Learning/Artificial Intelligence (ML/DL/AI), Lidar applications for archaeological and environmental monitoring, methods for addressing the risk assessment of monuments and sites, the effect of soils in the geophysical measurements, the palaeolandcape/archaeoenvironmental reconstruction methods, 3D visibility analysis, photogrammetric methods, etc.

**Elective Courses**

**ARC 650 Settlement and Landscape Archaeology**

The aim of this seminar course is to offer students a cohesive and complete theoretical, methodological, and practical background in Settlement- and Landscape Archaeology as a means of studying built space and the natural environment at a higher resolution, in order to identify, quantify, and comprehend past human activity. With the use of case studies, in situ visits and drills, students will become familiar with (a) state-of-the-art methods and approaches for examining archaeological landscapes and (b) the technical equipment (e.g. robotic total station, Differential GPS, handheld computers) for recording and documenting archaeological features in the field.

**ARC 651 Mediterranean Island Landscapes**

The primary purpose of the course is for students to become acquainted with the cultural distinctiveness of the Mediterranean islands, especially the mega islands of Cyprus, Crete, Sicily, and Sardinia, but also smaller ones, like the Cyclades in the Aegean Archipelago; to define their cultural choices and their social resilience through comparisons with each other and with the nearest continents; to investigate how the island populations exploited the landscape and the natural resources; to ask why some developed early complex societies (e.g. Crete) while others chose to avoid political complexity (e.g. Sardinia). The students are meant to develop an understanding of the field of Island Archaeologies that should allow them to see that islands, irrespective of size or proximity to continents, can afford to ignore continental models. Their idiosyncratic cultural developments should not be interpreted as “weaknesses” or as the result of isolation from the continents but as social choices.

**ARC 654 Maritime Cultural Landscape**

The purpose of the course is to convey to the students the concept of maritime landscape and its components so that they are able to plan a comprehensive fieldwork project in the coastal zone. Upon completion of the seminar, students are expected to a) have a grasp of the contemporary research regarding the theoretical discussion and the methodological approaches of the concept of maritime cultural landscape, b) be in a position to date and analyse sites of coastal settlements and harbour installations, taking into consideration the coastal changes and the dynamics of human presence in the coastal zone, and c) be able to assess the role of certain elements of the seascape (weather conditions and coastal topography, landmarks, and orientation) in the development of pre-industrial shipping. The theoretical discussions are always complemented with examples of completed projects so that the students become familiar with the archaeological record and the latest developments in the field.

**ARC 663 Introduction to Cultural Heritage Management (CHM)**

The course aims to familiarise students with the concept of cultural heritage, its importance, and the dangers that threaten it, as well as the reasons why it is imperative to manage it and what this entails. Course objectives and outcomes include a) the Introduction to Cultural Heritage Management (CHM) through international instruments and conventions, local legislation regarding CHM, as well as actual practices in Cyprus and abroad, especially in Europe, b) Examination of the theoretical framework (including ethics), methods, and techniques employed to ensure the protection, conservation, and highlighting of cultural resources, c) Familiarity with the
concept of cultural heritage, how it is defined and by whom, why it is important, the dangers that threaten it, why it is imperative to be managed, and what this entails, d) Acquaintance with the relevant legal framework (local legislation and international instruments) as well as with the most important organisations involved in CHM locally and internationally, and e) Recognition of the importance of proper CHM for the promotion of scientific knowledge, sustainable development, the improvement of the quality of life of human societies, the cultivation of respect for all human beings and their achievements, and peace-building.

Practical Training

ARC 615 Practical Training in Field Archaeology

The purpose of this course is the on-site training in generic and specific practical archaeological skills, supplemented by formal lectures. Students expose themselves to the particular conditions of teamwork in the field and develop communication and collaboration skills. They also experience the challenges and rewards of discovering material remains of the past, while at the same time they get a grasp on the research related to archaeological fieldwork. In total, they complete at least 20 days of practical training in the field (180 hours). They should also write an essay on a related subject, under the supervision of the course instructor. Upon completion of the seminar, they are expected to have comprehended the nature, potential, and purpose of archaeological fieldwork.

Prerequisites for Admission to the M.Sc. Programme

Candidates must hold a B.A. Degree in Archaeology, History, Classics, Anthropology, or other related fields of research (History of Art, Architecture, Geography, Geology, Topography, Environmental Sciences, Biology, Physics, Chemistry, Computer Science, and Engineering) from recognised universities.

Graduates of the University of Cyprus and Greek universities must have an undergraduate diploma with a cumulative grade of 6.5/10 or higher. The equivalent is required for graduates from other universities. The applicants must also speak English at a satisfactory level.

The applications should include the following:

1. A Curriculum Vitae.
2. Certified copies of university degrees or confirmation of graduation.
3. Copy of English language certificate: (a) for admission of international students, (b) for admission to an English-language postgraduate programme, (c) for admission to a postgraduate programme where knowledge of English is a prerequisite. Applicants must speak English at a satisfactory level: GCE or TOEFL with a “B” grade or higher for GCE- O’ level, and 600 for TOEFL or 6.5 for IELTS (this does not apply to native speakers or holders of a degree from an English-speaking university).
4. Copies of transcripts for all programmes of study, both graduate and undergraduate.

5. A brief (1 page or up to 650 words) statement of personal goals and research interests (in English).
6. The names and emails of at least two (2) referees (university professors/instructors) familiar with the candidate and his/her academic performance. Candidates should request letters of recommendation to be sent directly to the University. The Department may request additional confidential information from referees. The reference letters are electronically submitted through the online application system. Candidates who meet the necessary requirements will be invited to an interview.

Prerequisites for Admission to the Ph.D. Programme

Same as the prerequisites for admission to the M.Sc. programme.

Additionally, candidates need to submit a preliminary research proposal (5-10 pages including references) that will explain the proposed research topic of their Ph.D.

Contact Details

PROGRAMME COORDINATOR
Apostolos Sarris, Professor,
Sylvia Ioannou Chair in Digital Humanities
Tel.: +357 22893568
E-mail: asarri01@ucy.ac.cy

Department of History and Archaeology
<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Research Interests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natasha Constantinidou</td>
<td>Assistant Professor</td>
<td>History of (western) Europe, 1600-1800. History of religious and intellectual movements (the Renaissance, the Reformation, the religious wars of the 16th and 17th centuries and their implications, scientific discoveries, etc.), intellectual history, history of political thought, cultural history, history of the book, Relationship between politics and religion, Church and State, circulation of ideas, communication networks and intellectual exchanges, patronage and ideology (ideology expressed in texts, rituals and pageants, images and iconography), cultural and intellectual production of royal and religious courts, rise of the dynamic states.</td>
</tr>
<tr>
<td>Stella Demesticha</td>
<td>Associate Professor</td>
<td>Maritine archaeology with focus on shipwrecks, amphorae, ancient sea routes, trade mechanisms and economy in the Eastern Mediterranean, Late Roman pottery, Ancient and pre-industrial ceramic technology.</td>
</tr>
<tr>
<td>Maria Iacovou</td>
<td>Professor</td>
<td>The historical dimension of the passage from Prehistory to Protohistory. Cyprus protohistory and the foundation of the city-kingsdoms in the 11th century B.C. Ceramic typology of the late Bronze Age and the Early Iron Age. Distribution of 11th century Cypriot pottery in the Mediterranean. Historical cartography and the topographical development of the cities in Cyprus.</td>
</tr>
<tr>
<td>Vassiliki Kassianidou</td>
<td>Professor</td>
<td>Extractive metallurgy, ancient technology, conservation of metals, production and trade of Cypriot copper in Antiquity.</td>
</tr>
<tr>
<td>George Kazamias</td>
<td>Associate Professor</td>
<td>Contemporary European history (WWII, Cold War, unification of Europe, Europeanization), History of south-eastern Europe (19th - 20th c.), Greek minorities, Diaspora and refugees in the Balkans, Eastern Mediterranean and the Middle East, Oral history.</td>
</tr>
<tr>
<td>Angel Nicolaou-Konnari</td>
<td>Associate Professor</td>
<td>Hellenism under Latin rule. This mainly involves the various aspects of cultural interaction and exchanges between Greeks and Latins in Latin Greece in general and Cyprus in particular (late 12th-17th centuries) and related phenomena in the domains of language, religion, and social institutions, as well as ethnicity, self-perception, and the perception of the Other. The important corpus of Cypriot historiographers (late 12th-13th centuries). A prosopographical study of the Cypriots in the Middle Ages and Early Modern Times and particularly of the Cypriots of the diaspora (16th-18th centuries). The place of women in Latin Greece and particularly Cyprus.</td>
</tr>
<tr>
<td>Dimitrios Kontogeorgis</td>
<td>Lecturer</td>
<td>His research interests lie in Modern Greek and Balkan political and social history, the history of diaspora and migration, and the economic and social history of Greece and Southeastern Europe in particular during the 18th and 19th centuries.</td>
</tr>
<tr>
<td>Theodoros Mavroyiannis</td>
<td>Professor</td>
<td>The history of ancient historiography, The history of the Hellenistic and Roman East, The monumental topography of Greece and Italy, ancient religion and epigraphy.</td>
</tr>
<tr>
<td>Michalis Olympios</td>
<td>Associate Professor</td>
<td>History of medieval art and architecture (6th-16th centuries). More specifically, history of gothic architecture (12th-16th centuries) in Europe and the Latin East: Typology, design, construction techniques, issues of patronage; ecclesiastical art in Latin Europe (altarpieces and assorted altar furnishings, liturgical vessels, etc.), monumental sculpture and small-scale carving in various media (stone, metal, ivory), History of the crusades and art history of the Latin East, History and art history of Lusignan Cyprus (1192-1489).</td>
</tr>
<tr>
<td>Petros Papapolyviou</td>
<td>Professor</td>
<td>Contemporary Greek history (WWII: occupation and resistance, Civil War, Greek national claims), political history of Cyprus, 1878-1960 (British rule, Enosis movement, liberation struggle 1955-1959, Cypriot volunteerism).</td>
</tr>
<tr>
<td>George Papasavvas</td>
<td>Associate Professor</td>
<td>Metalwork of the Late Bronze Age and Early Iron Age, bronze sculpture, sculpture of the archaic and classical periods, Greek structures, relations between the Aegean and the Eastern Mediterranean in the Early Iron Age.</td>
</tr>
<tr>
<td>Maria Parani</td>
<td>Associate Professor</td>
<td>Formation processes of Byzantine art, representation of realia, the relationship between centre and periphery in Byzantine art in Cyprus, cultural exchange in the fields of court ceremonial, dress and art, daily life in Byzantium and the exploration of alternative sources for the study of Byzantine material culture, Byzantine dress.</td>
</tr>
</tbody>
</table>
| Apostolos Sarris              | Professor                       | - Applied Shallow Depth Geophysics & Remote Sensing.  
- Application on Digital Heritage, spatial modelling, networking, Geodatabases  
- Site Assessment & spatial analysis and modelling through the application of Satellite Remote Sensing and Geographical Information Systems (G.I.S.). |
- Satellite image processing and classification techniques.
- Landscape Archaeology, Spatial History, Digital Humanities.
- Digital archaeological maps. Cultural Resources Management (CRM). Web_GIS applications.
- Environmental research. Development strategies.
- Bridging the gap between Innovative Technologies and Cultural Studies.
- Mediterranean Collaborations on Cultural Heritage Issues.

Dionysios Stathakopoulos, Assistant Professor
His research interests are on the social history of the Byzantine Empire with an emphasis on environmental history as well as the history of medicine. He is currently working on wealth and its uses in the late Byzantine empire (1261-1453), particularly investments in afterlife management strategies such as charity and the cult of remembrance.

Athanasios K. Vionis, Associate Professor
Methodological approaches to the study of urban and rural landscapes and material culture of the Byzantine and post-Byzantine Aegean and the Eastern Mediterranean (6th-19th c. AD): The transition from Late Antiquity to the Early Middle Ages; The Archaeology of Death (pagans and Christians); the archaeology of identity (social, religious, ethnic), war, defence, the built environment (cities, castles, towers, rural settlements-villages) and the use of domestic space, urban and rural life-ways and economy through the sources (texts – pictorial evidence – material culture), the history and archaeology of food consumption, technology/production – distribution – use of ceramic vessels.

Contact Details
DEPARTMENT SECRETARIAT
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E-mail: isa@ucy.ac.cy

www.ucy.ac.cy/hisarch/en
THE ARCHAEOLOGICAL RESEARCH UNIT

The Archaeological Research Unit (ARU) collaborates with scholarly organisations in Cyprus and abroad to realize its research objectives. In Cyprus this cooperation involves various governmental services (e.g. the Department of Antiquities and the Geological Survey Department), local authorities (e.g. the Municipality of Yeroskipou, the Community of Kouklia) and other departments of the University of Cyprus. Abroad, the ARU works with scholars from various European, American and Australian universities and research centres.

The range of research foci is determined in accordance with the areas of specialisation of the members of the ARU and in view of the need to investigate sectors of Cypriot archaeology that have not yet been studied in depth.

In addition, members of the academic faculty and students of the Department participate in and conduct Archaeological excavations in Cyprus and abroad (Greece, Turkey).

For information on the research programmes, please visit the ARU and Department of History and Archaeology websites.

Director
Athanasios K. Vionis, Associate Professor

Contact Details
ARCHAEOLOGICAL RESEARCH UNIT SECRETARIAT

Crissa Gregoriou
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Introduction

The Department of Byzantine and Modern Greek Studies (BMGS) and the Department of History and Archaeology (HA) are offering a joint specialised postgraduate programme in Byzantine Studies leading to an M.A. and/or Ph.D. degree.

The goal of the Programme is to promote interdisciplinary approaches in the various fields of Byzantine Studies. More specifically, the Programme aims at a multilevel and multifaceted study of Byzantine culture that combines the various theoretical and practical methodological tools of Philology, History, History of Art and Archaeology. In this way, the historical phenomenon “Byzantium” is firmly placed within the broader geographical framework of Medieval Europe and the Middle East.

History of the Programme

The Interdepartmental Postgraduate Programme (IPP) in Byzantine Studies and the Latin East was established as the first programme of its kind at the University of Cyprus in September 2007. The creation of the IPP became possible due to the felicitous circumstance of several high-calibre philologists, historians, art historians and archaeologists being employed at the Departments of History and Archaeology and Byzantine and Modern Greek Studies and willing to work together. This synergy between the various disciplines of Byzantine and Medieval Studies in the form of an IPP remains uniquely innovative and presents an excellent opportunity to explore the Byzantine and, more generally, the medieval world from various complementary perspectives. This holistic approach is crucially supplemented by Cyprus’ own cultural heritage, thanks to which the University of Cyprus is exceptionally well-suited to promoting the advancement and teaching of Byzantine and Medieval Studies. From the very foundation of the IPP, special emphasis has been placed on the balanced representation of all disciplines and on a variety of methodological approaches. In response to the need for continuous reassessment and improvement of the instruction on offer, the programme’s structure was radically revised in 2020, ushering in today’s simpler and more user-friendly format.

The Programme’s Fields of Study and Aims

The Programme is run by academic staff members of the BMGS and HA Departments, whose specialisms fall within the following fields of study: Byzantine Language and Literature, Byzantine History, Medieval History, the History of Greeks under Latin Rule, Byzantine and Post-Byzantine Art and Archaeology, and Medieval Art and Archaeology. At least three seminars are taught in each semester, one in each of the following areas: (A) Byzantine Language and Literature, (B) Byzantine/Medieval History, (C) Byzantine/Medieval Art and Archaeology.

In order to ensure that, students will become acquainted with the full range of the fields and the various methodological approaches involved, the seminars offered are organised on the basis of the three-area scheme outlined above and address the following themes:

a) Political, social, economic, and ecclesiastical history.
b) Ideology and identity, cultural traditions, and intercultural contacts.
c) Intellectual production and artistic creation.
d) Daily life and material culture.
e) Cyprus within the wider social, historical, and cultural context of the Eastern Mediterranean.

More specifically, the courses offered by the Department within the framework of this IPP aim to further students’ acquaintance with:

• The principles and tools of the scientific fields of Byzantine Philology, Byzantine and Medieval History, Archaeology and Art History.
• Issues and reflections on the gradual transformation of the ancient into the medieval world.
• Phenomena of social stratification in Byzantium, such as the concept of social class, the self-perception of various social groups, as well as their relation to imperial authority.
Various aspects of Byzantine relations with the Islamic world, on the one hand, and with the Latin world, on the other.

The history, literary production, art and material culture of Byzantium and the Latin East from the fourth to the sixteenth century and the transition from Byzantine to Post-Byzantine culture.

**Learning Outcomes**

At the programme’s successful completion, students will:

- Be acquainted with and in a position to appreciate characteristic facets of the literary production, history, material culture, and artistic output of Byzantium and the Latin East.
- Be in a position to appreciate and discuss how the literary genres, texts, events, institutions, practices, monumental constructions, artefacts, and works of art that are the products of Byzantine and medieval culture are integrated into, shaped and invested with meaning by their context, whether historical, political, social, economic, or ideological.
- Be familiar with the theoretical framework of and the current methodological approaches to the analysis of various aspects of Byzantine and medieval culture.
- Appreciate the need to adopt a critical stance towards traditional views and interpretations of Byzantine culture and to re-evaluate them in the light of the results of current research, by employing the appropriate methodological tools.
- Be familiar with the nature of scholarly discourse as well as the methodology and the research tools of the Humanities (e.g. the use of manuscript and printed textual sources, visual testimonies, archaeological evidence, as well as digital technologies), and be in a position to present their views and to write research essays in a well-structured and rationally articulated manner, supported by the appropriate documentation.

Seminars are enriched by visits to archaeological sites, museums, monuments, and monastic libraries in Cyprus. Furthermore, students become familiar themselves with the research of local and visiting scholars, by attending the lectures organised within the framework of the Colloquium of Byzantine and Medieval Studies, while also being encouraged to participate in research projects coordinated by their instructors.

**M.A. IN BYZANTINE STUDIES AND THE LATIN EAST**

**Admission Requirements**

A maximum of ten new students are admitted every September and January. The minimum duration of full-time enrolment is set at three semesters, while the maximum duration of enrolment is eight semesters. The language of instruction is Greek, except in the case of non-Greek-speaking students, in which the language of instruction is English.

For admission to the M.A. programme, the following documents and skills are required:

1. Undergraduate degree in Byzantine Language and Literature, History, Archaeology, History of Art, Classical Studies or a related field with a degree of First or Upper Second Class.
2. In addition to Modern Greek, satisfactory knowledge of one other language from the remaining five international languages of Byzantine Studies (English, French, German, Italian, and Russian). Beside their mother tongue, non-Greek speakers must have a good knowledge of English.

Candidates who meet the requirements will be invited to an interview at the premises of the University of Cyprus. Overseas applicants will be interviewed via teleconference.

**Application Procedure**

Applications can be submitted via the electronic application system of the Graduate School of the University of Cyprus.

The closing date for applications is announced by the Graduate School (in spring for admission in September and in the fall for admission in January). For more information, consult the Graduate School’s webpage: [www.ucy.ac.cy/graduateschool/en](http://www.ucy.ac.cy/graduateschool/en).

All applications must be accompanied by the following documents:

1. The completed application form for admission into the M.A. programme. Applications can be submitted in Greek or in English.
2. Brief CV and description of scholarly and research interests.
3. Scanned copies of university diplomas and other postgraduate diplomas (if applicable), or a verification of expected graduation in the summer or fall preceding enrolment in the postgraduate programme. In case of admission, the candidate will be asked to submit the original diplomas.
4. A transcript and a detailed list of the courses taken by the candidate at the undergraduate level.
5. An essay (at least 4,000 words in length) on a topic of the candidate’s choice in the fields of Byzantine Language and Literature, Byzantine and Medieval History and Archaeology, Byzantine and Medieval History of Art, Classical Studies, or a related field.
6. Two letters of recommendation from specialists, preferably university professors or renowned researchers.
7. A certificate of satisfactory knowledge of one of the five main languages of Byzantine Studies (English, French, German, Italian, and Russian).
Academic Requirements

The M.A. Programme consists of 90 ECTS (1 ECTS = 25 working hours), for the completion of which two options are available with Master’s thesis or without Master’s thesis. Students are expected to choose either of these options, after the successful completion of six (6) seminars.

Option I: With M.A. Thesis

A. Successful completion of six (6) postgraduate seminars, credited with 60 ECTS (each seminar is valued at 10 ECTS). Note that every semester full-time students are required to attend seminars classed under the programme’s three areas: Philology, History, and Art and Archaeology. At the completion of their studies, students will have passed two (2) seminars in each area.

More specifically, the 250 hours corresponding to the 10 ECTS allotted each seminar are allocated as follows:

- 39 contact hours in class.
- 26 hours of preparation for the seminar.
- 120 hours of study and research for writing the seminar essay.
- 65 hours of writing the seminar essay.

B. Writing and defence of the M.A. thesis, which is credited with 30 ECTS, as follows:

- 20 ECTS for the research stage.
- 8 ECTS for the writing stage.
- 2 ECTS for presenting the thesis at the Colloquium of Byzantine and Medieval Studies.
- Defence of the M.A. thesis before a three-member examination committee.

The length of the M.A. thesis must normally be 20,000-25,000 words. The complete work should not exceed 100 pages. At the supervisor’s discretion, the length of the thesis may be negotiable.

C. Attendance and participation in the Colloquium of Byzantine and Medieval Studies. Attendance is mandatory during the first three semesters of study, and a brief summary (200-300 words) of each lecture must be submitted at the end of each semester.

Additional Information

1. At least three postgraduate seminars are offered every semester, one in each area, from a set catalogue of courses (Course Descriptions).
2. In compliance with the Postgraduate Studies Regulations the following assessment methods are used in postgraduate seminars:

- Active and constructive participation in class and punctual submission of coursework: up to 10%.
- Oral and written assignments (e.g., critical review of bibliography, short essays on assigned topics, seminar paper outline, etc.): up to 30%.
- Seminar paper (oral presentation in class and written form ± 6,000 words): up to 60% (evaluation criteria: content, structure, argumentation, methodology, critical thinking, use of sources, expression, honouring of the word limit). The final decision about the word limit rests with the instructor. The percentage may vary according to the field of specialisation and the instructor. In any case, students are informed of current assessment methods during the first week of any given semester, as mandated by the Postgraduate Studies Regulations.

3. At the Colloquium of Byzantine and Medieval Studies, members of the academic staff of the University of Cyprus, invited researchers, and Ph.D. candidates present their research. M.A. students are required to actively participate with questions and comments. In the context of writing their M.A. theses (Option I), students present their work at the Colloquium.

Course Descriptions

A. Byzantine Language and Literature (BMG 500-511)

**BMG 500 Editorial Theory and Practice**

This seminar examines the problems involved in editing Byzantine texts from a broad theoretical perspective in contrast to the traditional methods of reconstructing ‘textual archetypes’. Following an in-depth study of various editorial theories, students are expected to edit passages from prose and poetry in the learned and the vernacular idioms.

**BMG 501 Genre Issues**

Genre constitutes an important tool in the study, the reception, and interpretation of literature. However, Byzantinists have shown little interest in the history and development of the
literary genres produced in Byzantium. In the framework of this seminar, issues referring to Byzantine literary genres and their interrelations are thoroughly discussed.

**BMG 502 Byzantine Narratives**

This seminar examines (through the use of narratological theory) the various narrative techniques and structural devices used by Byzantine authors to construct a narrative. During the seminar, students read texts such as historiographical works, lives of saints, romances, and epic narratives.

**BMG 503 Language and Literature**

This seminar examines the diachronic changes that medieval Greek went through, and the formation of dialects, as well as the development of the written language, which had to strike a balance between the constantly changing necessities of everyday communication, the ambitions of conservative education, and a literature based on antique models. Special emphasis is given to the analysis of a wide range of different linguistic and stylistic levels of the written language.

**BMG 504 Religious Poetry and Hymnography**

This seminar focuses on the history and the role of religious and ecclesiastical poetry in the intellectual life of Byzantium. The form and content of this poetry is studied through representative religious and ecclesiastical hymns from the beginning of the Christian era until the end of the Byzantine Empire. Based on selected genres of Byzantine hymnography, we examine the following issues: the origins of this hymnography, the conditions and reasons that led to the development and decline of specific forms, as well as the hymnographical production, innovative choices and particularities of well-known poets and melodists.

**BMG 505 Biography and Autobiography**

This seminar examines the different ways of self-representation in literary and non-literary texts. These different ways are closely connected with specific Byzantine mentalities and the possibilities of conceiving the Self. For the understanding of Byzantine autobiographical writing, the investigation into today's conventions that define one's self-image are indispensable.

**BMG 506 Byzantine Law**

This seminar provides an introduction both to the principles of Byzantine law (Justinian's Code and its Byzantine redactions, canon law) and to legal institutions (e.g. law courts), as well as to Byzantine jurisprudence (judicial decisions, opinions, etc.). Moreover, we examine texts witnessing everyday judicial procedures that concern primarily family and inheritance law (court decisions, wills), and which make clear that relations between legal theory and social reality were strained.

**BMG 507 Aspects of the Male and Female World**

What did it mean to be a man or a woman in Byzantine society? What were the masculine and feminine ideals of the Byzantine world? How did they evolve over time? And vary according to social milieu? How are the male and female realms represented in Byzantine literature? These are some of the questions addressed in the context of this seminar through an examination of various texts from different genres and eras.

**BMG 508 Authors and their Audiences**

Rhetoric was an indispensable part of education in antiquity and, in spite of various transformations, it maintained its essential role until the end of Byzantium. The influence of rhetoric on the development of Byzantine literature was broad and deep. Based on rhetorical texts of religious and secular content, we examine the relation of the author with his public, the rhetorical rules, and the practices he followed, as well as the level of the language, and the style employed in connection with his education, his aims, and the public that he was addressing.

**BMG 509 Emotions and Mentalities**

This seminar examines the Byzantine emotional and intellectual world, and investigates what kind of emotions the Byzantines had, and how they conceived of both these emotions and themselves. The variability of apparent constants of human life and problems of interpretation connected to this variability are emphasised.

**BMG 510 Representations of the Body**

The meaning of the human body changes across cultures and periods. Different societies and cultures understand and treat the body in dissimilar ways. The relation that the Byzantines had with their bodies, and the meanings they attributed to them, are subjects that have not been sufficiently studied. In the framework of this seminar, the meanings that the body had in Byzantium and its representations in art and literature are examined.

**BMG 511 Conquests of Cities**

This seminar focuses on the subject of the conquest of Byzantine cities as presented in various literary genres. Characteristic examples are studied, beginning with historical accounts of the events and continuing with texts of rhetoric or poetry (monodies, Threnoi, etc.). Special emphasis is placed on works concerning the captures of Thessalonike and Constantinople.

B. Byzantine and Medieval History (HIS 500-511)

**HIS 500 Latin Palaeography and Diplomatics**

After a historical survey of the Latin scripts from Late Antiquity to the invention of movable print in the fifteenth century, this seminar investigates various genres of Latin documents and texts from the Middle Ages in manuscript form. Special emphasis is placed on transcription, with a goal to edit the texts, and create the pertinent scientific apparatus.

**HIS 501 Byzantine Diplomatics**

This seminar provides students with the necessary skills for the scholarly investigation of official acts of the Byzantine State. In particular, we discuss the different forms of transmission of archival sources and the external and internal characteristics of official acts according to the usages of each issuing authority (for example, imperial and ecclesiastical acts, acts of public officials, and private acts). In addition, we treat research problems relating to the terminology and content of the documents. Finally, we present the modern techniques employed in the scholarly edition of documents.

**HIS 502 Byzantine Social History**

This seminar focuses on the specifics of the State machinery and social structures in medieval political units. On the basis of selected examples from Byzantine history, we investigate fundamental notions, such as the bearers and exertion of State authority, the meaning of sovereignty, the dissemination and implementation of political decisions, the role of ceremony in political life, and so on. The second part of the seminar involves phenomena of the social stratification of Byzantium, such as
the concept of social class, the self-perception of social groups, as well as their relationship with imperial authority.

**HIS 503 Byzantium: Politics and Ideology**

After the Christianisation of the Roman Empire the emperor, who used to be considered as a god, became a ruler chosen by God, and embodied the idea of oecumenicity, and the Living Law. However, the emperor never ceased to flirt with the idea of his divine identity. In this seminar, we examine these and other aspects of imperial ideology through ceremonial texts, arengas of imperial documents and laws, literary texts, and Byzantine works of art.

**HIS 504 Byzantium and Its Neighbours**

This seminar examines certain aspects of the relations between Byzantine culture and the neighbouring Islamic world, from the emergence of the Arabic caliphate in the seventh century until the final struggle of the Empire with the Ottoman Sultanate. Special emphasis is placed on the ambivalent character of these relations, which on a political-ideological level present harsh conflicts, whereas on a cultural level they are inspired by a true interest in the other side, and, in turn, lead to fruitful mutual influences.

**HIS 505 Byzantine Economic History**

The Byzantine economic system, just as that of every other medieval state, was based to a great degree on agriculture, while trade did not surpass the level of local exchanges until this sector became a vital factor in economic development with the appearance of the Italian trading republics in the Byzantine world. In this context, we examine sub-topics relating to the methods of production, the transportation of goods, taxation, the circulation of money, the market, etc. Special emphasis is placed on assessing to what extent the economic history of a region can be written when statistical data are completely lacking.

**HIS 506 The Crusades and the Latin East**

The aim of the seminar is to compare the institutions that were created as a result of the conquest and settlement of areas in the Eastern Mediterranean and the Byzantine world by Westerners within the context of the Crusades (Kingdom of Jerusalem, Lusignan Kingdom of Cyprus, Latin Empire of Constantinople, Principality of the Morea, and Venetian Crete). The study of the relationship between, on the one hand, the imported feudal political, legal, social, and economic institutions and, on the other, the preexisting ones allows the drawing of conclusions regarding the nature of the resulting system (whether it was entirely feudal, ‘colonial’; or hybrid) and the extent of the survival of the Byzantine institutions. Furthermore, it allows a better understanding of the formation of a cohabitation framework for the Latin settlers with the indigenous Greek and other groups in both the religious and the cultural domains, as well as of those factors that determined the degree of adaptability and interaction and the creation of new identities.

**HIS 507 Latin Rule in the Greek World**

This seminar investigates various aspects of the history of regions in which Greeks lived under Latin rule during the Middle Ages, namely Sicily and Southern Italy, Syria and Palestine, Cyprus, Frankish Greece, Constantinople, and Crete and other islands. Special attention is devoted to the political, ecclesiastical, and social position and situation of the Greeks.

**HIS 508 Oriens et Occidens**

This seminar examines the image of the Other that Western authors formed about the Byzantines in the Middle Ages and vice versa. It focuses on the question of how this image varies according to the social position of the author, the genre of the text, and the historical period in which it was written.

**HIS 509 Byzantine Cyprus**

Using the example of Byzantine Cyprus, this seminar examines the various difficulties that the investigation and interpretation of the periphery and the border areas of Byzantium present, since the centralisation tendencies of the capital clashed with local traditions and particularities, as well as with the spheres of influence of neighbouring political powers.

**HIS 510 Frankish and Venetian Cyprus**

This course looks at different aspects of the political, social, economic, cultural, ideological, and religious history of Cyprus from the conquest of Richard the Lionheart in 1191 down to the Ottoman conquest of 1571. Under the Lusignan dynasty, the Kingdom of Cyprus gradually evolved from a fragmented cluster of indigenous and alien linguistic and religious communities into a more unified yet still multicultural society of Cypriots by the end of the reign of King Hugh IV (1324-1359). Following Peter I’s murder in 1369, however, this process was radically redirected in the wake of the Genoese and Mamluk invasions of the 1370s and 1420s and finally with the Venetian takeover in the 1470s.

**HIS 511 Historiography: Problems of Historicity and Ideology in the Latin-Ruled Greek World**

The seminar aims at the comparative study of historical texts of a varied nature (chronicles, annals, narratives in prose, narrative poems, manuscript historical notes, memoranda, and relations) from the Latin-ruled Greek world (Cyprus, Morea, Ionian Sea, Crete, the Aegean) during the Byzantine and Post-Byzantine periods. Various aspects of the process of history writing will be investigated, such as historiographical genres, language and style, historicity and reliability of the texts, and the projected ideology in connection with each text’s socio-political context and authorial subjectivity. A comparison with texts of the Byzantine and western historiographical traditions as well as with texts from the Latin East will allow us to trace relationships and influences and will reveal those factors that favoured a historiographical production on Cyprus that surpassed significantly that in other areas in volume, span of time, and variety.

**ARC 500 Survey of Research and Interpretative Approaches to Byzantine Archaeology**

Beyond the materiality of archaeological remains and their positivist documentation, Byzantine culture, very much like any other culture, encompasses symbolic meanings and ideas. Despite the fact that Byzantine Archaeology was long located in the periphery of modern archaeological research, it has recently begun to acquire a new dimension in the international academic scene by applying methodological approaches and interpretative models “borrowed” from other fields of research, such as history, anthropology, sociology, and psychology. The aim of this seminar is to (a) examine the interpretative approaches and advances of Byzantine archaeology in the international sphere of archaeological research, and (b) to...
evaluate the methodological approaches that are currently followed for understanding the Byzantine material remains through the exploration of specific case-studies.

**ARC 501 The Study of Ceramics in Byzantine Archaeology**

Pottery comprises the most common find in an archaeological excavation. The study of Byzantine and Post-Byzantine ceramics, however, had long been overlooked and its precise chronology is being continually refined. The aim of this seminar is the examination of the typo-chronology of Byzantine and Post-Byzantine common- and table-wares, as well as the evaluation of the information they provide for understanding Byzantine society.

**ARC 502 The Archaeology of the Byzantine Economy**

This seminar examines issues related to economy and commercial enterprises in the Byzantine Empire, focusing not only on the study of archaeological finds, such as coins, amphorae, and other items of commercial value, but also on the study of urban economy, the relationship between town and country, and the exploitation of agricultural lands.

**ARC 503 The Archaeology of Death in Byzantium**

Popular reactions to the idea of death and the afterlife, the preparation of the dead, and burial practices are aspects that belong to the sphere of Byzantine ideology. This seminar examines issues related to death and burial in the Byzantine world (fifth-fifteenth centuries) on the basis of archaeological remains and the visual arts, and the aid of written sources. More specifically, the seminar examines the typological development of cemeteries and graves, the decoration of grave monuments and its meaning, items accompanying graves and their symbolism, as well as the evaluation of conclusions regarding Byzantine living standards and conditions through the study of skeletal remains.

**ARC 504 Byzantine Material Culture and Identity**

This seminar aims to study the various “identities” of the Byzantine people, as these are expressed in the material remains of the period. Emphasis is given to the identification of identity in aspects of the material culture (e.g. the built environment, the Byzantine house, costume, items of domestic comfort), in other words, the expression of religious, political, cultural, social, “ethnic”, or other identity. Moreover, the seminar examines the role of the Byzantine civilisation in the formation of the socio-political and/or cultural ideology of contemporary states, such as Greece, Cyprus, and Turkey.

**ARC 505 Byzantine Icon Theory**

The Byzantines’ perception of the role of religious art dictated to a great extent the latter’s formal characteristics and iconography. Through the study of relevant written sources and the analysis of works of art, the principles that governed the creation of religious images in Byzantium are investigated, and the stages of the theoretical discussion that led to the definition of the role of religious images within the context of Orthodox worship are explored.

**ARC 506 Byzantine “Secular” Art**

It is commonly thought that Byzantine art, architecture included, was a predominantly religious art and that its main purposes were the expression and dissemination of Christian dogma and the consolidation of the position of the Church. Still, works of art with a non-Christian content or character were created throughout the Byzantine millennium, ranging from palaces and public buildings to ivory caskets adorned with mythological themes. It is on the study of such works that the present seminar focuses. Theoretical issues concerning the definition of the term “secular” within the context of a Christianocentric culture will be examined parallel to issues relating to the typology, iconography, function, and reception of secular art in Byzantium.

**ARC 507 Dress: The Mirror of Byzantine Society**

In Byzantium, dress was one of the most important means by which individuals and social groups constructed and projected their identity outwards, and by which this identity was perceived by others. This seminar investigates how gender, age, family position, religious beliefs, moral values, ethnicity, profession, social status, and economic situation are expressed in the choice of clothing and accessories, as well as in the adoption of particular hairstyles and make-up.

**ARC 508 Relations between Centre and Periphery: Byzantine Art in Cyprus**

Within the broader context of the dynamics between the centre and the periphery, various manifestations of artistic expression in Cyprus are discussed with the purpose of highlighting its distinguishing features. Special emphasis is given to tracing the mechanisms of transmission and assimilation of the general trends emanating from the major artistic centres of the Empire by the Cypriot artistic idiom.

**ARC 509 From Paganism to Christianity**

This seminar aims to explore the gradual “transition” from the ancient world and paganism to Byzantium and Christianity through the study of archaeological remains and works of art. Emphasis is given to the identification of this procedure through the symbolism of Early Christian art and architecture: the transformation of ancient temples into Christian churches, the building of new basilicas, sculpture and monumental art, the transformation of Late Antique urban space, items facilitating Christian worship and burial practices.

**ARC 510 Art and Identity at the Time of the Crusades**

The seminar explores the various forms of artistic expression that flourished in the service of the multicultural societies of the Eastern Mediterranean during the period of the Crusades. Special emphasis will be placed on the study of the fertile interaction between the arts of the East and West.

**ARC 511 Art in Cyprus under Latin Rule**

This seminar explores both the products and the conditions for artistic creativity on Cyprus during the period of Latin rule. Within this framework, students will have the opportunity to study representative works mainly of secular and ecclesiastical painting and architecture within their historical, religious, social, and cultural context. Particular emphasis will be placed on the exploration of the dynamic interaction between the deeply rooted Byzantine artistic tradition of Cyprus and the artistic traditions imported from the West and the Crusader Levant.
Ph.D. PROGRAMME IN BYZANTINE STUDIES AND THE LATIN EAST

Admissions Requirements

New students are admitted in September and January. The minimum duration of study is three (3) years from the day of admission to the Ph.D. programme, whereas the maximum duration is eight (8) years. The language of instruction can be Greek, English, French, or German (depending on the thesis supervisor).

For admission to the Ph.D. programme, the following documents and skills are required:

1. Postgraduate degree (M.A./Mastère) in Byzantine Studies (Language and Literature, History, Archaeology, History of Art), Medieval Studies (Language and Literature, History, Archaeology, History of Art) or a related field.

2. In addition to Modern Greek, satisfactory knowledge of one other language from the remaining five international languages of Byzantine Studies (English, French, German, Italian, and Russian); Besides their mother tongue, non-Greek speakers must have a good knowledge of English.

Candidates who meet the requirements will be invited to an interview at the premises of the University of Cyprus. Overseas applicants will be interviewed via teleconference.

Application Procedure

The closing date for applications is announced by the Graduate School (in spring for admission in September and in the fall for admission in January). For more information, consult the Graduate School’s webpage: https://ucy.ac.cy/graduateschool/en/. Applications may be submitted in either Greek or English.

The closing date for applications is announced by the Graduate School (in spring for admission in September and in the fall for admission in January). For more information, consult the Graduate School’s webpage: https://ucy.ac.cy/graduateschool/en/.

All applications must be accompanied by the following documents:

1. Detailed CV and research proposal.
2. Copy (scan) of postgraduate degree (M.A./Mastère) from a recognised university or statement of expected graduation in the summer or fall preceding enrolment in the Ph.D. programme. After admission, the candidate will be asked to show the original.
3. Copy (scan) and grade of undergraduate university degree.
4. A transcript and a detailed list of the courses taken by the candidate at the undergraduate and M.A. levels.
5. Two letters of recommendation from specialists, preferably university professors or renowned researchers.
7. Certificate testifying to a satisfactory knowledge of one of the five international languages of Byzantine Studies (English, French, German, Italian, and Russian).

The instructors may also set additional criteria and quality indicators, such as: a) number of candidates' publications in scientific journals, b) candidates' participation in seminars, symposia, research programmes, c) presentations by candidates at conferences, d) professional experience, etc.

Academic Requirements

The Ph.D. programme requires the successful completion of 240 ECTS (1 ECTS = 25 working hours), which are distributed as follows:

- 60 ECTS - Postgraduate courses (possession of an M.A. degree or equivalent entitles the student to a partial or full exemption from this requirement).
- 120 ECTS - Research stages (I-IV).
- 60 ECTS - Writing stages (I-II).
- 0 ECTS - Comprehensive examination.
- 0 ECTS - Examination of thesis proposal.
- 0 ECTS - Colloquium of Byzantine and Medieval Studies (I-IV).

In more detail, candidates having enrolled in the Ph.D. programme are expected to successfully complete the following tasks:

1. Comprehensive examination: Between the third and the end of the sixth semester, at the latest, the Ph.D. candidate must pass a comprehensive examination before a three-member scientific committee, which is appointed by the departments involved (BMGS and HA), following the recommendation of the academic supervisor. The examination is oral and its duration is three hours. It comprises three subjects selected by the candidate from a range of topics representative of all the academic areas of the postgraduate programme, in agreement with the members of the scientific committee.

2. Approval of detailed thesis proposal: Following the comprehensive examination, and within a period of two to four semesters, the Ph.D. candidate submits a detailed thesis proposal. The proposal is evaluated by a three-member scientific committee, which is appointed by the departments involved (BMGS and HA) following the recommendation of the academic supervisor. Once the student’s proposal is approved, the student can begin to write the thesis.


4. Attendance of and active participation in the Colloquium of Byzantine and Medieval Studies, including the presentation of a 45/50-minute research paper.
5. Submission and defence of the Ph.D. dissertation before a five-member committee, within the maximum limit of eight years since admission to the Programme and according to the Postgraduate Studies Regulations of the University of Cyprus. The length of the Ph.D. thesis should normally be about 80,000-120,000 words (including footnotes and bibliography, but excluding appendices, editions of texts, tables, etc.). At the discretion of the academic supervisor, the length of the thesis may be negotiable.

**Contact Details**

**COORDINATORS OF THE INTERDEPARTMENTAL POSTGRADUATE PROGRAMME IN BYZANTINE STUDIES AND THE LATIN EAST**

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For more information, visit the Programme’s webpage: [https://ucy.ac.cy/byz/en](https://ucy.ac.cy/byz/en)
MEDICAL SCHOOL
The Medical School of the University of Cyprus was established by law on the 7th of November 2008. The undergraduate programme of studies is a six-year programme consisting of three phases. Phase I (1st year of studies) is a year of preparatory studies in basic exact and pure sciences. Phase II (2nd and 3rd year of studies) consists of interconnected studies in basic medical and clinical studies. Phase III (4th, 5th and 6th year of studies) consists of clinical studies, which are delivered in hospitals and health centres in Nicosia.

The Medical School offers one postgraduate programme of studies at Master’s level titled: “Precision Medicine in Clinical Practice”. The purpose of this programme is to offer health professionals and professionals working in the field of biomedical sciences, educational training on the applications of precision and personalised medicine in clinical practice, from Cyprus or abroad. It offers postgraduate specialist education on precision medicine to healthcare professionals and biomedical sciences graduates, Cypriots and international students. The M.Sc. in Precision Medicine in Clinical Practice aims to improve the knowledge and understanding of health professionals and associated fields’ specialists in an area of medicine with immediate impact on clinical practice, ultimately improving the level of clinical services wherever needed. It also promotes research in this contemporary and currently expanding field. Students are expected to become familiar with the principles and the concepts of precision and personalised medicine in the following: Ethics in clinical and basic precision research, genetics, molecular diagnostic, pharmacology, statistics, bioethics, contemporary methods of diagnostics, examples of applicability (current and future) of precision medicine in different fields of clinical medicine.

The Medical School has also started the process of introducing two more programmes: a doctorate programme (Ph.D.) and a second Master’s level programme in the field of Medical Research.
Faculty of
PURE AND APPLIED SCIENCES
DEPARTMENTS

Biological Sciences
Chemistry
Computer Science
Mathematics and Statistics
Physics
Introduction

The Department of Biological Sciences is involved in research and teaching in a variety of disciplines within the field of Biological Sciences, including Genetics, Cancer Biology, Immunology, Cell Biology, Developmental Biology, Embryology, Bioinformatics, Epigenetics, Virology, Ecology and Biodiversity. The Department currently represents the most concerted and diverse research effort in biological research, as well as the most competitive, in terms of infrastructure and external research funding, on the island.

Research and postgraduate teaching in the Department are conducted by 13 faculty members, each heading a research laboratory in a distinct field of research. All of them were trained and/or have worked in renowned universities or research institutions, before taking up their current posts.

The research output and external funding of the Department are substantial, despite its relatively short existence (first postgraduate students admitted in September 2003). For example, the Department succeeded in producing internationally competitive, cutting-edge research, that has been published in high impact, peer-reviewed, scientific journals. The Department’s faculty members have succeeded in obtaining major external competitive funding awards for research, amounting to several million Euros. This funding includes the prestigious and highly competitive ERC starting grant, the competitive Marie Skłodowska-Curie and other EU framework programme grants. It also attracted significant funding from the Cyprus Research Promotion Foundation, the national research funding public agency. Overall, since its establishment in 2002, the Department has received more than 16 million Euros in externally sponsored research funding. The core mission of the Department of Biological Sciences is to:

- Strive to engage in high calibre and competitive research that represents cutting edge topics in current Biology.
- Foster international research collaborations and maintain an internationally extrovert profile.
- Educate the new generation of young biologists, and train researchers and scientific leaders of Cyprus in Biology. The overall aim is to produce scientists who are en par with international graduates and can be effectively recruited in the private job market, secondary education, the health sector, or remain engaged in local and international research activity.

The Department actively encourages student exchanges through the ERASMUS+ Programme, in order to provide students with beneficial formative exposure to other European universities.

Postgraduate Programmes

All academic courses in our postgraduate programmes of study are taught in English. M.Sc. and Ph.D. Degrees in Biomedical Sciences, as well as the Ph.D. in Biodiversity and Ecology, encompass classroom training and a strong experimental/laboratory-based research component. The M.Sc. in Molecular Biology and Biomedicine Programme involves bibliography-based research. The M.Sc. in Biodiversity and Ecology offers a research-based or a bibliography-based thesis component. Applicants, who join this programme of study, will be offered one of these two options upon acceptance to the Programme.

Admission to the Postgraduate Programmes

The Department announces positions for each of its postgraduate degrees twice a year, after approval by the relevant authorities of the University: In October for entry the following January and in February for entry the following September. All applications must be submitted online.

It is noted that for English-taught postgraduate programmes of study at the University of Cyprus, admission criteria include certified knowledge of the English language. Prospective students, who have
previously graduated from an English-taught school or English-taught higher education institution, are excluded from this requirement.

Students, who apply for a laboratory-based research degree, are strongly encouraged to contact departmental faculty members prior to or during their application process in order to discuss the possibility of securing a laboratory position for thesis research and to be able to select which laboratory best fits their interests. Upon acceptance to the laboratory-based research degrees, all students must have already identified a faculty member that would agree to supervise them for the laboratory component of their research work. In addition to the general requirements, candidates are encouraged to start the admission procedure before the completion of their undergraduate study. However, they must hold an undergraduate degree before the beginning of the postgraduate programme.

The Department recommends that applicants to the Ph.D. programmes hold a Master’s degree, or expect to obtain it before they start their Ph.D. studies. However, the Department may accept candidates for Ph.D. degrees who do not hold a Master’s degree. Candidates, who have already obtained a Master’s degree from the University of Cyprus or another recognised university, may be exempted from some of the required courses on a case-by-case evaluation. For further information on the application procedures and deadlines, please contact the Department Secretariat or the Graduate School of the University of Cyprus.

**MASTERS IN MOLECULAR BIOLOGY AND BIOMEDICINE**

The Master in Molecular Biology and Biomedicine does not involve a laboratory-based research dissertation. To obtain this degree, candidates must successfully complete 90 ECTS, as follows:

The course BIO 680 carries 20 ECTS and it is compulsory. Students are eligible to sign up for this course, after they have successfully completed at least 60 ECTS of restricted elective courses. Seminar attendances (BIO 800 and BIO 801) in separate semesters are also compulsory, along with seminar BIO 805, the latter of which is offered in the Spring Semester (Table A). The course BIO 605 (Table A) is also compulsory and must be successfully completed during the Fall Semester of the first year of study. The remaining 70 ECTS are completed with restricted elective Courses (Table B).

The duration of study is at least three semesters with a maximum of eight semesters. Students enrolled in this Master’s degree are eligible to apply for a change of Programme, as stipulated by the Postgraduate Studies Regulations. The application is subject to approval by the Postgraduate Studies Committee of the Department and the Departmental Council. For more information, you can consult the Department Secretariat or the Graduate School of the University of Cyprus.

### TABLE A

<table>
<thead>
<tr>
<th>Compulsory Courses (Master in Molecular Biology and Biomedicine)</th>
<th>ECTS</th>
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<tbody>
<tr>
<td>BIO 605 Basic Laboratory Health and Safety Training</td>
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<tr>
<td>BIO 680 Scientific Methodology in Molecular Biology</td>
<td>20</td>
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<tr>
<td>BIO 800 Postgraduate Seminar Series I</td>
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</tr>
<tr>
<td>BIO 801 Postgraduate Seminar Series II</td>
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<td>BIO 805 Search and Management of Bibliographic Sources</td>
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### TABLE B

<table>
<thead>
<tr>
<th>Restricted Elective Courses (Master in Molecular Biology and Biomedicine)</th>
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</thead>
<tbody>
<tr>
<td>BIO 610 Special Topics in Human Molecular and Medical Genetics I</td>
<td>10</td>
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<tr>
<td>BIO 620 Selected Topics in Cell Biology</td>
<td>10</td>
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<tr>
<td>BIO 630 Nucleic Acids</td>
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<tr>
<td>BIO 640 Molecular Biology I</td>
<td>10</td>
</tr>
<tr>
<td>BIO 650 Special Topics in Bioinformatics</td>
<td>10</td>
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<tr>
<td>BIO 660 Selected Themes in Developmental and Stem Cell Biology</td>
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<tr>
<td>BIO 670 Imaging in Biological Sciences</td>
<td>10</td>
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<tr>
<td>BIO 690 Special Topics in Current Biological Sciences I</td>
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<tr>
<td>BIO 691 Special Topics in Current Biological Sciences II</td>
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<td>BIO 710 Special Topics in Human Molecular and Medical Genetics II</td>
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<td>BIO 720 Special Topics in Biochemistry</td>
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<td>BIO 730 Molecular Diagnostics</td>
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<td>BIO 740 Cellular Communication</td>
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<td>BIO 750 Cancer Biology</td>
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<tr>
<td>BIO 760 Topics in Genomics and Proteomics</td>
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<td>BIO 768 Genes, Microbes and Environment in Intestinal Health</td>
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<td>BIO 850 Experimental Embryology Course</td>
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<td>BIO 851 Quantitative Human Genetics</td>
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<td>BIO 860 Molecular Biology of Tumour Viruses</td>
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<td>BIO 867 Selected Topics in Evolutionary Biology</td>
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<td>BIO 869 Current Topics in Drosophila Biology</td>
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<td>BIO 870 Molecular Biotechnology</td>
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<tr>
<td>BIO 871 Molecular Ecology</td>
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</table>
MASTER IN BIOMEDICAL SCIENCES

For the completion of the Master in Biomedical Sciences, 90 ECTS are required, 60 of which must be completed with restricted elective courses (Table C), as well as the two seminar classes (BIO 800 and BIO 801) in two separate semesters, which are also compulsory along with seminar BIO 805 the latter of which, is offered in the Spring Semester (Table D). The course BIO 605 Basic Laboratory Health and Safety Training (Table D) is also compulsory and must be successfully completed during the Fall Semester of the first year of study. After successfully completing at least 60 ECTS in restricted elective courses, students can register for the compulsory laboratory-based research dissertation, which carries 30 ECTS, for at least one semester (Table D). Students, who do not complete their thesis research dissertation in one semester, can register for BIO 600. Upon completion, this dissertation will be written (M.Sc. thesis) and presented in the form of an open seminar. Candidates must also successfully pass an oral examination before a three-member Special Examinations Committee.

The duration of study is at least three semesters, with a maximum of eight semesters. Students enrolled in this degree are eligible to apply for a change of programme, as stipulated by the Postgraduate Studies Regulations. The change of programme is subject to approval by the Postgraduate Studies Committee of the Department and the Departmental Council.

TABLE C

<table>
<thead>
<tr>
<th>ECTS</th>
<th>Restricted Elective Courses (Master in Biomedical Sciences)</th>
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<tbody>
<tr>
<td>10</td>
<td>BIO 610 Special Topics in Human Molecular and Medical Genetics I</td>
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<td>BIO 660 Selected Themes in Developmental and Stem Cell Biology</td>
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TABLE D

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<td>BIO 805 Search and Management of Bibliographic Sources</td>
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<tr>
<td>30</td>
<td>BIO 830 Master Research Dissertation in Biomedical Sciences</td>
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MASTER IN BIODIVERSITY AND ECOLOGY

For the Master in Biodiversity and Ecology, 90 ECTS are required, which can be fulfilled by either taking 60 ECTS in elective courses and a research-based thesis dissertation (30 ECTS) or by taking 70 ECTS in elective courses and a literature-based thesis dissertation (20 ECTS). The route of study is determined during the admission process in the program of study. In addition, seminar attendance (BIO 800 and BIO 801) in two separate semesters is compulsory, along with seminar BIO 805 the latter of which, is offered in the Spring Semester. Course BIO 605 Basic Laboratory Health and Safety Training (Table F) is also compulsory and must be successfully completed during the Fall Semester of the first year of study. The laboratory-based or field-based research dissertation (BIO 831) has a duration of at least one semester and carries 30 ECTS (Table F). Students, who do not complete their thesis research dissertation in one semester, can register for BIO 601 Continuation of Master Research Dissertation in Biodiversity and Ecology. Upon completion, the dissertation will be presented in the form of an open seminar, followed by an oral examination, before a three-member Special Examinations Committee. The literature-based thesis dissertation (BIO 681), which has as a prerequisite the successful completion of at least 60 ECTS in elective courses (Table E), has a total duration of one semester, involves undertaking a bibliographical study and carries 20 ECTS (Table G).

The duration of study is at least three semesters with a maximum of eight semesters. Students enrolled in this Master are eligible to apply for a change from research-based to literature-based thesis (and vice versa), as stipulated by the Postgraduate Studies Regulations. The
application is subject to approval by the Departmental Postgraduate Studies Committee and the Departmental Council.

### TABLE E

<table>
<thead>
<tr>
<th>Restricted Elective Courses (Master in Biodiversity and Ecology)</th>
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<tbody>
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<td>BIO 858 Conservation Biology</td>
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<td>BIO 859 Management of Protected Areas</td>
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<td>BIO 861 Advanced Issues in Ecology</td>
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<td>BIO 862 Biodiversity Patterns</td>
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<td>BIO 864 Biodiversity of Cyprus</td>
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<tr>
<td>BIO 865 Geographical Information Systems and Remote Sensing in Ecology</td>
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<td>BIO 866 Marine Ecology</td>
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<td>BIO 871 Molecular Ecology</td>
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### TABLE F

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### TABLE G

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<th>Compulsory Courses for Literature-based Thesis</th>
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**DOCTORATE DEGREE IN BIOMEDICAL SCIENCES OR IN BIODIVERSITY AND ECOLOGY**

Candidates must complete 80 ECTS in non-research postgraduate courses (Restricted Elective Courses in either Table H or I, depending on the Ph.D. degree) and attend the Postgraduate Seminar Series of the Department (BIO 800-803) for at least four semesters (Table J). Course BIO 605 (Table J) is also compulsory and must be successfully completed during the Fall Semester of the first year of study. Incoming students, who already hold a Master’s degree in a relevant scientific area or who have attended postgraduate classes in relevant subjects (in this or other recognised universities), can be exempted from taking courses up to 60 ECTS. This requires the submission of an application at the beginning of their studies, to the Postgraduate Studies Committee of the Department that is subject to approval by this Committee, as well as the Departmental Council (students are advised to consult with their research supervisor prior to submission of the application).

After the completion of the postgraduate courses (excluding the Postgraduate Seminars), students will have to pass the Comprehensive Examination (BIO 810, Table J). This will involve the preparation and presentation of a research proposal. Students officially become Ph.D. candidates after successful completion of the Comprehensive Examination, which must be completed at the latest by the seventh semester of their studies. Another requirement for obtaining the Ph.D. degree is the preparation and successful presentation of a research proposal, regarding the Ph.D. research dissertation itself (BIO 811 Ph.D. Research Proposal in Table J). Successful completion of the Comprehensive Examination (BIO 810) is a prerequisite for the presentation of the Ph.D. Dissertation (BIO 811), which must be presented within four semesters following success in the Comprehensive Examination. Both the Comprehensive Examination (BIO 810) and the Ph.D. Research Proposal (BIO 811) must include a detailed description of the aims and methodology and must adhere to guidelines and regulations of the Department. Each of these proposals will be presented before a three-member Committee.

After the successful completion of the courses (the aforementioned Restricted Elective Courses that collectively amount to 80 ECTS), and while they are carrying out their Ph.D. research, Ph.D. candidates are obliged to enrol every semester for at least four semesters in the appropriate research stage of their Ph.D. (BIO 820-828 Ph.D. Research Stages I-IX, Table L). Upon completion of their research work, students must enrol in at least one ‘Write-up Stage’ (BIO 835 - BIO 842 Thesis Write-up Stages I-V, Table L) before defending their Ph.D. thesis.

For the evaluation of the progress of their Ph.D. research work, each Ph.D. candidate must give an oral presentation before a three-member Committee.
regarding their research progress, within one year of their successful completion of the Research Proposal and on a yearly basis afterwards (BIO 812-818 Annual Progress Report I-VII, Table K). This Committee will serve as an Advisory Committee of the candidate, as stipulated by the internal regulations of the Department.

The Ph.D. thesis defence takes place before a five-member Examination Committee. In addition, prior to submission of the Ph.D. thesis dissertation, the Department requires that every Ph.D. candidate has at least one first-author publication (or accepted for publication) of innovative research work for their Ph.D., in a peer-reviewed inter-nationally recognised scientific journal.

TABLE H

<table>
<thead>
<tr>
<th>Restricted Elective Courses (Ph.D. in Biomedical Sciences)</th>
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<tbody>
<tr>
<td>BIO 610 Special Topics in Human Molecular and Medical Genetics I</td>
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<tr>
<td>BIO 620 Selected Topics in Cell Biology</td>
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<tr>
<td>BIO 630 Nucleic Acids</td>
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<td>BIO 640 Molecular Biology I</td>
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<td>BIO 650 Special Topics in Bioinformatics</td>
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TABLE I

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<th>Restricted Elective Courses (Ph.D. in Biodiversity and Ecology)</th>
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TABLE J

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TABLE K

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<td>BIO 818 Annual Progress Report VII</td>
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Course Descriptions

**BIO 605 Basic Laboratory Health and Safety Training (0 ECTS)**

This seminar course provides students with a basic knowledge on health and safety, including fire safety, in biological laboratories. Student assessment will be “Pass / Fail”. Enrolment in the course is mandatory within the first year of study, for all the postgraduate programmes of study of the Department. Successful completion of the course is a prerequisite for enrolment in courses that entail personalized laboratory exercises, or field exercises such as BIO 868 Fieldwork, and for Master’s and Ph.D. laboratory-based or field-based research dissertations. The course is offered every Fall Semester.

**BIO 610 Special Topics in Human Molecular and Medical Genetics I (10 ECTS)**

The main objective of the course is the study of the molecular basis of heredity and the contribution of modern genetics to medical pathology. Genetic phenomena will be presented concerning monogenetic and polygenic diseases, the concept of mutation and genetic polymorphisms, the DNA linkage analysis and the molecular diagnostic approach with real examples of diseases and cases for consolidation of knowledge. There will be reference to genetic predisposition and genetic association studies, to germinal and somatic mutations and their importance to disease. Special reference will be made to hereditary cancers, hereditary nephropathies, hemoglobinopathies, neuropathies and other large categories of monogenic hereditary diseases, with frequent reference to the Cypriot gene pool and founding phenomena in the Cypriot population. There will be discussion of the ethical, legal and social implications that govern the application of genetic studies, especially in the context of modern technology that allows for the holistic analysis of the genome.

**BIO 620 Selected Topics in Cell Biology (10 ECTS)**

This course offers an in-depth study of selected, cutting-edge topics in cell biology research. The first topic includes the study of cytoskeleton structure and function and the motor proteins as molecular machines for intracellular transport. It analyses the concerted function of motors in axonal transport in neurons and presents models of molecular pathogenesis in human neurodegenerative disease. The second topic dissects the structural and functional organisation of the nucleus in higher eukaryotes. It explains the high-order organisation of chromatin and how chromatin remodelling is involved in the regulation of gene expression. Additionally, the structure of the nuclear envelope and the molecular mechanisms of regulation of bidirectional nucleoplasmic transport in higher eukaryotes and the structure and function of nuclear organelles is analysed. The third topic gives an in-depth review of state-of-the-art methods in cell biology: high resolution fluorescence microscopy and confocal microscopy, super resolution microscopy, FRET, TIRF, AFM methods.

**BIO 630 Nucleic Acids (10 ECTS)**

*(Prerequisite: Undergraduate level courses in Biochemistry and Molecular and Cellular Biology)*

To register for the course, students must first obtain special approval from the instructor. The course focuses on the structure and function of nucleic acids (DNA and RNA). The course offers a comprehensive and an up-to-date account of the structures and physical properties of nucleic acids, with special emphasis on the biological function. The course is targeted to graduate-level students specializing in molecular biology, biotechnology and molecular genetics. Some key features of the course include topics on technologies used in the study of nucleic acid structure and properties and state-of-the-art nucleic-acid-based.

**BIO 640 Molecular Biology I (10 ECTS)**

This course requires a good knowledge of the principles of molecular and cellular biology. Emphasis will be placed on the mechanisms that control gene expression in eukaryotes. The following topics will be included: nuclear structure and organisation of DNA and the role of topoisomerases in this organisation; transcription factors and DNA binding motifs; control of transcriptional initiation; activators and repressors; promoters and enhancers; coordinated expression of clusters of genes; termination of transcription, RNA processing; chromatin remodelling (DNA methylation and histone acetylation); micro RNAs and RNA interference.

**BIO 650 Special Topics in Bioinformatics (10 ECTS)**

This course provides an in-depth discussion of bioinformatics methods and algorithms routinely used in fields such as molecular biology, genetics and genomics. The main objective of the course is that postgraduate students become aware of the principles on which commonly used bioinformatics tools are based, instead of using applications in a ‘black box’ fashion. This approach is of utmost importance, both for the rational usage and for the correct assessment of the results obtained by such methods. This will be achieved through a series of lectures and discussion sessions. Students will give oral presentations of selected research papers, where usage of bioinformatics methods has provided significant input to wet-laboratory biological research.
BIO 660 Selected Themes in Developmental and Stem Cell Biology (10 ECTS)

This course begins by introducing developmental biology and stem cells and comments on their significance for medicine. It then introduces main concepts of developmental biology and stem cells, such as 'cell type', 'differentiation', 'cell potency', 'cell specification' and 'pattern formation' and the role of genes and signalling pathways in these. The course concentrates on mouse development as a model for human embryogenesis/development. Selected topics of mouse development focus on the cellular and molecular basis of important embryonic and extraembryonic events during the peri-implantation and early post-implantation periods (including gastrulation, embryonic germ layer development, early neural development and placenta organogenesis), as well as ageing. Finally, special types of clinically important stem cells such as embryonic stem cells are introduced and discussed. The students will benefit from discussing selected scientific papers on the topics of the course.

BIO 670 Imaging in Biological Sciences (10 ECTS)

The optical microscope has undergone a radical transformation. Recent innovations in lasers, chemistry, molecular biology, detectors, computation and optics have propelled the microscope to the cutting edge of modern biology. These complex machines are now the tools of choice for revealing structure and function in biology. This course explores the principles and practice of modern microscopy. It consists of lectures, demonstrations, discussions and laboratory exercises. In addition, students will also be expected to present and discuss keynote primary research papers in class. Starting with basic optical theory, the course advances through transmitted, fluorescence, confocal and finally multiphoton microscopies. The techniques used for live cell imaging will be emphasized, as well as the technologies for labelling target molecules. The course will be updated every year to consider new developments in cell imaging approaches and closely related technologies. It is structured towards a technical understanding of techniques, as once they are mastered they can be applied to almost any cell/tissue system or research project.

BIO 680 Scientific Methodology in Molecular Biology (20 ECTS)

Students are eligible to sign up for this course once they have successfully completed 70 ECTS of coursework. This course aims at students' theoretical training in traditional scientific methodology (scientific hypothesis formulation, proof and modification through appropriate experimentation and interpretation of results), as well as in modern data-driven approaches that emerged after the development of high throughput technologies. The course will include the presentation and analysis of various scientific methods and techniques for the design, execution and presentation of molecular biology research. To this end, students will be educated in the critical reading and analysis of published research papers and in the presentation of research results and research proposals to an audience and in writing. Students will analyse a number of original and review articles on a subject in biological sciences, that they choose in collaboration with their tutor, as well as study (using special laboratory manuals) the various methods of modern molecular biology, so that they become familiar with routine laboratory methods that molecular biologists use in their research.

BIO 681 Scientific Methodology in Biodiversity and Ecology (10 ECTS)

This dissertation course includes the evaluation and analysis of crucial and broad-ranged issues in modern theoretical and experimental research on ecology and biodiversity. Students will learn to critically evaluate and analyse scientific publications, as well as to prepare and present a literature review. They will become familiar with scientific writing, the structure of scientific papers, literature citing, statistical analyses, and table and figure preparation. Each student will prepare a bibliographical study on a theme relating to biodiversity and ecology, assigned by one of the programme's instructors (the Supervisor). Students' progress will be monitored by reports and questions that they will present to the Supervisor. The dissertation course will be concluded after an oral presentation and examination of each student's study, in conjunction with the evaluation of the written study by the Supervisor. The examination of the oral presentation will be made by two instructors of the programme (one being the supervisor).

BIO 690 Special Topics in Current Biological Sciences I (10 ECTS)

The course will focus on specific areas of current interest, approaching the material through lectures and reading of primary literature. Topics in the course will vary between semesters, but may include in-depth analysis of specialised areas of biology, advances in methodology, novel applications, etc. Emphasis will focus on developing skills relevant to careers in biology, such as the ability to analyse, discuss, and present primary sources.

BIO 691 Special Topics in Current Biological Sciences II (10 ECTS)

The course will focus on specific areas of current interest, approaching the material through lectures and reading of primary literature. Topics in the course will vary between semesters but may include in-depth analysis of specialised areas of biology, advances in methodology, novel applications etc. Emphasis will be given on developing skills relevant to careers in biology, such as the ability to analyse, discuss, and present primary sources.

BIO 710 Special Topics in Human Molecular and Medical Genetics II (10 ECTS)

Presentation of various selected classes of inherited conditions concerning different human systems such as nephrogenetics, neurogenetics, cardiac genetics, connective tissue conditions, cytogenetics and others. Emphasis will be given on contemporary methods of detecting genes that are responsible for or contribute to the development of multifactorial diseases such as diabetes, cardiovascular conditions, several cancers, chronic kidney disease, etc. There will be discussion of the role of the newly described finding concerning miRNAs, Copy Number Variations (CNVs) and DNA and histone methylation in the development or the influence of the clinical presentation of various diseases. There will be frequent reference to the recent literature, both reviews and original publications, while students will also be given an opportunity to present their own research in coordination with their tutor.

BIO 720 Special Topics in Biochemistry (10 ECTS)

Presentation of selected topics in biochemical processes and their potential involvement in disease progression. Examples of topics to be covered are post-translational protein modifications, signal transduction and signalling pathways, receptors and receptor mediated endocytosis, hormonal regulation of metabolism and others. These and other topics will be taught using classical textbooks, recent publications of original work, and review articles in scientific journals.

BIO 730 Molecular Diagnostics (10 ECTS)

Presentation of the available techniques for routine molecular diagnostic methodology in a clinical set up. Commonly used techniques will be presented, and their strengths and limitations discussed. Such techniques include DNA and RT-PCR sequencing, PCR and restriction digests, Single Strand
Conformation Polymorphism analysis (SSCP), Primer/restriction digest engineering, Denaturing Gradient Gel Electrophoresis (DGGE), Single Nucleotide Primer Extension, Allele Specific Amplification, Denaturing High Pressure Liquid Chromatography (DHPLC).

**BIO 740 Cellular Communication (10 ECTS)**

This course provides an in-depth study of strategies of cellular communication in animal cells. Major topics include: Tissue architecture and general principles of cellular communication, types of junctions and adhesive structures and molecules, extracellular matrix. Signalling molecules, membrane and intracellular receptors, signalling cascades and signal transduction, cellular responses. G-protein-linked membrane receptors, cAMP, PKA, phospholipase C-β, IP3, diacyl-glycerol, PKC, CaM kinase, olfactory receptors and photoreceptors. Enzyme-linked membrane receptors, Ras, MAP, PI3, Src, jak-STAT. Notch, Wnt, Hedgehog and NF-κB pathways. Cellular communication and regulation of gene expression. Neuronal communication, small molecule and neuropeptide neurotransmitters, action potential-ionic hypothesis, neurotransmitter/ion receptors. Molecular mechanisms of synaptic long-term potentiation (LTP).

**BIO 750 Cancer Biology (10 ECTS)**

The course consists of a series of lectures and group discussions on special topics concentrating on the molecular principles of carcinogenesis as well as on the mechanisms of cancer initiation, promotion, progression, invasion and metastasis. The lectures will focus on oncogenes (with emphasis on Ras and Src), tumour suppressor genes (with emphasis on p53 and Rb), growth factors, cell survival and death (with emphasis on apoptosis) and angiogenesis. One of the major goals of this course is to inspire students and teach them how this knowledge can be applied in targeted therapeutics, personalised medicine, and the rational treatment of cancer. Students will be asked to review and evaluate in writing original relevant scientific articles and to discuss them in class. Moreover, students will work in groups in order to prepare a project on an assigned topic, which will then be presented in class at the end of the semester. Prerequisite: Good knowledge of molecular and cellular biology and molecular genetics.

**BIO 760 Topics in Genomics and Proteomics (10 ECTS)**

Genome projects of model organisms: lessons learned through the use of novel technology about the structure, functional organisation and the evolution of genetic information. The postgenomic era and the challenge of deciphering gene product function through the use of next generation sequencing, DNA microarrays, high throughput gene expression analysis, protein and antibody arrays and high throughput protein-protein interactions.

**BIO 768 Genes, Microbes and Environment in Intestinal Health (10 ECTS)**

The goal of this course is to illustrate the importance of genes, microbes and the intestinal environment that predispose for intestinal disease and cancer. The course includes: (a) lectures on cancer and quantitative genetics, (b) analysis by the instructor of the current literature pertaining to the genetics of cancer, (c) student presentations on the role of intestinal bacteria in colon cancer, and (d) experimental analysis of probiotic bacteria in Cypriot market yogurts. The theoretical lectures, analytical discussions on current key literature, and the experimental approach aim towards a better understanding of critical aspects of intestinal human microbial dysbiosis and cancer.
BIO 830 Master Research Dissertation in Biomedical Sciences (30 ECTS)
Laboratory-based research dissertation for students who are pursuing the Master’s Degree in Biomedical Sciences. The project duration is at least one semester. If the thesis is not presented in the given semester, students must enrol in BIO 600 Continuation of Master Thesis in Biomedical Sciences for all additional semesters, as needed. Upon completion of the research, the dissertation includes a written assignment, and an oral presentation and examination in the form of an open seminar, which will be evaluated by a three-member Examination Committee. The examination material will consist, mainly, of the content and context of the research dissertation and, secondarily, of other coursework taught, as part of the requirements for this degree.

BIO 831 Master Research Dissertation in Biodiversity and Ecology (30 ECTS)
Laboratory-based or field-based research dissertation for students who are pursuing the Master in Biodiversity and Ecology. The project duration is at least one semester. If the thesis is not presented in the given semester, students must enrol in BIO 601 Continuation of Master Thesis in Biodiversity and Ecology, for all additional semesters, as needed. Upon completion of the research, the dissertation includes a written assignment, and an oral presentation and examination in the form of an open seminar, which will be evaluated by a three-member Examination Committee. The examination material will consist, mainly, of the content and context of the research dissertation and, secondarily, other coursework taught, as part of the requirements for this degree.

BIO 850 Experimental Embryology Course (10 ECTS)
The goal of this laboratory course is to introduce vertebrate developmental biology to graduate students who are interested in pursuing a research thesis in the field, emphasizing both classic and contemporary approaches. Students will work with living Xenopus laevis material and take active part in the tutorial sessions in order to understand how the fertilised egg can generate, in the Xenopus embryo, such a diversity of cell types and complexity of pattern in a period of only a few days. There is special emphasis placed on the observation and manipulation of living material. The laboratory course includes a comprehensive analysis of both oogenesis and early development, and it is divided into two overlapping parts that combine tutorial and practical approaches. Students will perform “in vitro” fertilisation of Xenopus eggs and mesoderm and neural induction assays of animal cap explants. Successful induction of the explants is confirmed by morphological, histological and molecular analyses. Finally, students will observe and comment on slides selected to illustrate the organisation of the body plan of the amphibian embryo at an early stage of organogenesis. Assigned reading will include materials from Developmental Biology by Gilbert and a large number of published manuscripts. Grading will be based on performance during the laboratory exercises, quality of presentations and a final exam.

BIO 851 Quantitative Human Genetics (10 ECTS)
Are we healthy or very healthy? And when sick, are we just sick or very sick? While we are making an increasingly good job in measuring our phenotypes, the observable manifestations of our traits, we still lag behind in explaining our endotypes, the mechanisms that shape the phenotypes. Quantifying phenotypes and endotypes simultaneously is to deal with both parts of our lives’ equations, which dictate that every Phenotype equals the reading of our Genome by our environmental History. The goal of this course is to understand the importance of synergisms among genetic variation, microbes and the environment in the shaping of personal and collective human traits over time. Through lectures, literature search and presentations by the students, as well as free group discussions we aim to understand key aspects of human trait development. We will do that by highlighting information rooted in classical, quantitative and medical genetics, and the literature describing the environment as a stochastic factor in shaping humans at all levels.

BIO 858 Conservation Biology (10 ECTS)
The principles of biodiversity conservation comprise the core content of this course. The basic principles of ecology and genetics used in conservation will be discussed, as well as the effects of human activities on global and local biodiversity. Particular emphasis will be given on the role of spatial scale in conservation and on the basic principles of species distribution modelling for predicting future distribution changes caused by human activities. The basic principles and methods of biodiversity monitoring will be presented, a selected part of which will be implemented by students during field work. The most important international initiatives and legislation will be presented, and students will be introduced into approaches for communicating and collaborating with researchers from other disciplines to achieve an integrated planning of species and ecosystems conservation.

BIO 859 Management of Protected Areas (10 ECTS)
Protected areas are an important tool in global conservation efforts, with >14% of the terrestrial realm and >4% of the marine realm under some type of protection. In this course, students will be introduced to the key concepts needed to understand protected area management at a national and an international level. The main topics that will form the basis of the course’s lectures include: a) an overview of protected areas and relevant national and international initiatives and policies; b) current definitions of protected areas based on management categories and governance types; c) management planning and effectiveness evaluation; d) designing protected area networks; e) main threats to biodiversity to be alleviated in protected areas. Selected cases of protected areas will be critically evaluated by students in terms of conservation targets’ success.

BIO 860 Molecular Biology of Tumour Viruses (10 ECTS)
The course is aimed at students who are interested in gaining a more in-depth knowledge of the principles of virology, with a particular focus on viruses associated with cancer, many of which have a DNA genome. The genomes of viruses and molecular pathways employed in their replication strategies and the completion of their lifecycles, including interaction with the cellular machinery, will be examined. Strategies of viral replication inadvertently leading to loss of cell cycle control, aberrant cellular differentiation, abrogation of apoptosis, and other processes contributing to carcinogenesis will also be examined (e.g. viruses surveyed will include HPV, EBV, KSHV and others). Current advances in the literature will be studied with a direct examination of experimental techniques used in academic discovery. The course will comprise lectures as well as literature discussions.

BIO 861 Advanced Issues in Ecology (10 ECTS)
Lectures on basic principles of evolutionary ecology, with emphasis on reproductive and life strategies, intra- and interspecific interactions, population ecology and community assembly. The main methods of sampling and data evaluation will be presented, e.g. qualitative, semi-quantitative and
quantitative population and community estimates, recording of environmental variables, sampling, estimation of most important ecological metrics, as well as the main statistical methods for ecological data using examples from real studies. Most methods will also be applied using the respective software. Students will undertake and present essays on selected subjects from the recent literature.

**BIO 862 Biodiversity Patterns (10 ECTS)**

Lectures and essay assignments (selected from modern literature) on biodiversity patterns in space and in time. The patterns will be set within the framework of ecology and biogeography and related concepts, approaches and methods for the detection of patterns along geographical and other environmental gradients will be examined.

**BIO 863 Selected Topics in Behavioural Ecology (10 ECTS)**

A series of lectures and discussions will address the topic chosen for the semester, examining the literature on a particular theme, with a focus on transformative and multidisciplinary research in the field. Examples of topics will include animal communication, sexual selection, migration, social behaviour, and interspecific aggression.

**BIO 864 Biodiversity of Cyprus (10 ECTS)**

This course will focus on the flora and fauna of Cyprus. It will include lectures on the most important elements of Cyprus’ biodiversity, as well as an examination of specimens in the laboratory and observations in the field. Students will conduct either a field-based or review-based project on native species of their choice, focusing on conservation, ecology, physiology, evolution and/or taxonomy and systematics.

**BIO 865 Geographic Information Systems (GIS) and Remote Sensing in Ecology (10 ECTS)**

An introduction to Geographic Information Systems (GIS) and remote sensing, with an emphasis on their applications in ecology. The course will involve a research project applying these methods to an ecological study. Students will learn how to incorporate data obtained from remote transformative and topographic, vegetational and climatic data, into analyses with geographic coordinates (e.g. from GPS) in GIS software and prepare results for presentation of research findings.

**BIO 866 Marine Ecology (10 ECTS)**

Lectures on basic principles of marine ecology and the special methods used in the field, and discussions on subjects selected from the recent literature. Such subjects may refer, among others, to oceanography, marine pollution, distribution of marine organisms, adaptations for life in the sea, marine productivity, diversity of marine taxa, as well as applied issues, such as fisheries and aquaculture.

**BIO 867 Selected Topics on Evolutionary Biology (10 ECTS)**

A series of lectures and discussions will address the topic chosen for the semester, examining the literature on a particular theme, with a focus on transformative and multidisciplinary research in the field. Examples of topics will include speciation, coevolution, adaptation, and phylogenetics.

**BIO 868 Fieldwork (10 ECTS)**

Students will undertake a fieldwork project, during which they will apply the methods and techniques they have learnt in their classes, in order to execute a short but complete research project. They will apply sampling techniques, either individually or in small groups; they will analyse their findings; and they will present their results to the other students during a special one-day workshop.

**BIO 869 Current Topics in Drosophila Biology (10 ECTS)**

This course will focus on current areas of research in Drosophila melanogaster, including stem cells, organ development, growth, regeneration and homeostasis, metabolism and cell signalling, as well as large-scale genomics approaches to developmental problems. The course will entail a close reading of current literature in the field, as well as topical reviews where appropriate. Students will lead discussions of recent papers of interest, with close attention to experimental approaches in the context of their strengths and limitations, as well as an analysis of conceptual advances to crucial biological problems.

**BIO 870 Molecular Biotechnology (10 ECTS)**

(Prerequisite: Undergraduate level courses in Biochemistry and Molecular and Cellular Biology)

To register for the course, students must first obtain special approval from the instructor.

The emergence of molecular biotechnology as a rising field within life science and the principles and applications of genetic engineering (recombinant DNA technology) are the overall aims in this graduate course of the Department of Biological Sciences. The course is targeted for graduate-level and advanced-level undergraduate students specializing in molecular biology, biotechnology and molecular genetics and requires advanced-level biochemistry and molecular and cellular biology as prerequisites. The course offers a comprehensive and a state-of-the-art account of the fundamentals of molecular biotechnology and its major applications in microbial and eukaryotic systems, as well as essential issues of ethics in biotechnology. Some key features of the course include topics in nucleic acid structure and properties, high-tech nucleic-acid-based biotechnological advances, molecular diagnostics, protein therapeutics, nucleic acids as therapeutic agents, vaccines, transgenic animals and societal issues in biotechnology.

**BIO 871 Molecular Ecology (10 ECTS)**

This course will provide an overview of the application of molecular genetic tools to ecological questions and will introduce the genetic markers, techniques and analyses commonly used in this field. The focus will be on how recent advances in molecular techniques can be used at population-, species- and community-levels to explore the dynamics of biodiversity in a changing world, including applications of population genetics, phylogeography, phylogenetics, DNA-based species delimitation and taxonomic assignment, genomics and metagenomics. The course will consist of a series of lectures, group discussions on research papers, hands-on exercises and student presentations on selected topics.

**BIO 872 Field Ornithology (10 ECTS)**

Students will be introduced to the diversity of birds, their evolution, ecology and behaviour. They will then undertake a fieldwork project where they will be able to apply the methods and techniques they have learnt in the class. Field trips introduce students to birds in their habitats, bird migration and communication, and to data collection methods including bird ringing and sampling, bioacoustics, and survey methods such as point counts and line transects. Students will then put together a report on their field project and present it in class.
Yiorgos Apidianakis, Associate Professor
Infectious Diseases and Carcinogenesis Laboratory

Humans have approximately 10 times more bacterial cells than eukaryotic cells, which are in constant interaction. Thus, to a certain degree, we are biologically defined by bacteria. The revolution in the identification of human microbes and their role in health and disease has already begun. For example, intestinal microbes have been linked to various diseases, such as diabetes and cancer. However, the bacterial species responsible for the way they may act to induce disease remain unclear. Our laboratory studies the identification of bacterial species and the way cancer might be caused. Apart from helicobacter pylori, no other bacterial species has been confirmed as a causative agent of gastrointestinal cancer – the second leading cause of cancer related death in both the United States and Europe. Using the simple model organism, Drosophila melanogaster, we recently showed that intestinal bacterial pathogen causes and the proliferation of intestinal stem cells, which can be directed by oncogenic mutations towards tumour formation and metastasis.

Using molecular genetics, cellular biology, microbiology and the fundamental knowledge of Drosophila as a model organism for human infectious diseases and carcinogenesis, we aim to:

1. Identify signalling pathways that link intestinal infection with tumour formation and metastasis.
2. Identify human intestinal bacteria that either induce or suppress cancer.
3. Identify bacterial factors that induce cancer and their inhibition through therapeutic treatments and special diets.

Elias Bassil, Assistant Professor
Plant Molecular Physiology and Biotechnology Laboratory

Plants constitute an important part of biology but are often neglected and understudied. One aim of the Lab is to highlight the unique biology of plants, how they function as organisms and provide food, fuel, and fiber. More specifically the Lab seeks to understand the cellular, molecular and physiological mechanisms that regulate plant growth, development and plant responses to their environment. Climate change has created conditions of more frequent abiotic stresses such as drought, salinity, poor nutrient availability which adversely affect plant productivity. Better understanding of the mechanisms that plant use to overcome environmental stresses can be used to guide agricultural management decisions, improve germplasm via breeding or genetic engineering and therefore improve agricultural productivity, plant performance in natural ecosystems, use of plants and associated microorganisms for environmental remediation, as well as the improve the nutritional make up of plants used for human consumption. The Lab works at the intersection of basic and applied plant biology and uses techniques in cell biology, molecular biology and biotechnology and whole plant physiology to understand how basic plant biological processes drive physiological functions. Recently the Lab has implemented novel systems to monitor plant performance under controlled conditions (plant phenotyping) and thereby extending our understanding of physiological responses that plants take to acclimate to environmental changes. Another focus of the Lab has been to characterize the function of a group of transporters known collectively as cation exchangers (NHX) that have important cellular functions in all plants. To dissect these functions, the Lab routinely uses the model plant Arabidopsis. Please contact Elias Bassil for more details on current projects and research opportunities.

Pantelis Georgiades, Associate Professor
Developmental Biology and Stem cells Lab for Biomedical Research

Dr Georgiades’s research focusses on three main themes:

(a) The investigation of cellular and genetic basis of the early embryonic processes that lead to organogenesis, such as gastrulation and neurulation, with emphasis on the newly discovered, but poorly understood role of extraembryonic tissues. Understanding how embryos make organs is expected to lead to in vitro organogenesis and to revolutionize regenerative medicine.

(b) The use of stem cells from both embryonic (e.g. epiblast stem cells) and extraembryonic (e.g. trophoblast stem cells) tissues, in order to understand their behaviour, differentiation and capabilities at the genetic and cellular levels, and their relation to regenerative medicine.

(c) The investigation of placenta development itself, as well as its interactions with the mother during pregnancy for the understanding of the genetic and cellular factors responsible for embryo viability, growth and a healthy pregnancy. This is expected to lead to treatments for the most common, but still incurable, pregnancy complications including preeclampsia and infertility due to early unexplained miscarriages.

The research of the laboratory combines cutting-edge embryological, genetic, epigenetic, cellular and molecular methodologies such as culture and microsurgery of mouse embryos, the use of transgenic mice, stem cell culture and manipulation, gene inactivation or overexpression in mouse embryos and stem cells, RNA in situ hybridisation, histology, immunohistochemistry and various DNA methodologies.

Antonis Kirmizis, Professor
Laboratory of Epigenetic Gene Regulation

In every eukaryotic cell the genome is packaged into chromatin (the DNA/histone protein complex), whose structure can regulate the transcription of DNA. Post-translational modifications placed on histone proteins, such as methylation, acetylation and phosphorylation, can influence the configuration of chromatin and ultimately control DNA accessibility by the transcriptional machineries. Several cellular enzymes have been discovered that can deposit or remove modifications on histones. Therefore, histone-modifying enzymes and their underlying modifications play a crucial role in the regulation of gene expression. Driven by the fact that many of these histone modifiers are frequently mutated or lost in human cancer, our group is interested in understanding the molecular mechanisms employed by these enzymes and their underlying modifications during gene regulation. Of particular interest to our research are the enzymes that methylate arginine residues on histone proteins known as protein arginine methyltransferases (PRMTs). Our previous work has begun to unravel the precise molecular mechanisms, by which histone arginine methylation and the associated PRMTs modulate gene activity 1,2. To further our knowledge of this epigenetic mode of gene regulation, our current work is focused on three main areas:

1. Identify and characterise novel regulators of histone arginine methylation
2. Investigate the mechanistic link among histone arginine methylation, PRMTs and the development of cancer
3. Identify non-histone substrates of PRMTs and determine the biological function of these novel methylated arginines
In order to accomplish our research goals, we employ interdisciplinary approaches such as molecular biology, biochemical, genetic, genomic and proteomic techniques using both mammalian and yeast cells as model systems. Our long-term goal is to apply the information acquired on the basic biology of histone arginine methylation and PRMTs towards the development of therapeutic targets and diagnostic tools for cancer.

**Alexander Kirschel, Associate Professor**

**Behavioural Ecology and Evolution Laboratory**

The Behavioural Ecology and Evolution Laboratory examines how ecology, behaviour, and biogeography explain patterns of biodiversity. We are particularly interested in understanding how interactions between related species are affected by resource and interference competition, sexual selection, and genetic relatedness, and how these interactions relate to patterns of phenotypic evolution and species distributions. We have a number of projects focusing on different aspects of these themes, including research on interactions between related species of birds in sub-Saharan Africa, interactions at the community level between species in Neotropical rainforests, and impacts on endemic species, conservation of interactions between species in Cyprus. We examine patterns of phenotypic variation in traits such as acoustic signals, and in particular song, plumage coloration and morphology, as well as differentiation in genetic markers between populations. We also use experimental methods to determine the impact of phenotypic variation on evolutionary diversification. Research in the Behavioural Ecology and Evolution Laboratory typically involves extensive work in the field, where animals can be observed in their natural environment. It also examines how genetic variation corresponds with phenotypic variation, and geographic studies incorporating use of remote sensing and GIS to relate species distributions and phenotypes to the environment.

**Leondios Kostrikis, Professor**

**Laboratory of Biotechnology and Molecular Virology**

The Laboratory of Biotechnology and Molecular Virology (BMV) has been a part of the Department of Biological Sciences at the University of Cyprus since 2004. For the last twenty years, our research has concentrated almost exclusively on the study of human immunodeficiency virus type-1 (HIV-1). Our laboratory uses a variety of experimental approaches in order to understand the molecular mechanisms of HIV-1 transmission and the pathogenesis of AIDS. Over the years, our research activity mainly includes studies on (i) determining the global genetic diversity and immunological responses of HIV-1; (ii) understanding the implications of chemokine receptor polymorphisms in the transmission of HIV-1 and disease progression; (iii) understanding the evolutionary dynamics of HIV-1 drug resistance in patients treated with effective anti-retroviral therapy; and (iv) defining the role of the cellular HIV-1 DNA load in the pathogenesis of HIV-1 infection and progression of HIV-1 disease. Our intention is to continue the study of HIV-1 epidemiology and natural history, the detection of further virus variants and their possible association with characteristic clinical conditions, investigate further viral quasispecies and try to identify differences in their capacity to effect virus replication or pathogenesis. Our main future aims include ongoing studies on (i) understanding the molecular epidemiology of HIV-1 infection in Cyprus and in Europe; (ii) understanding the implications of non-CCR5 HIV-1 variants in determining deviations in drug responses and development of drug resistance; and (iii) developing improved methods for production of novel immunogens and original strategies to induce mucosal immunity. A major part of our research is conducted in collaboration with an international multidisciplinary network of colleagues, consisting of molecular biologists, immunologists, human geneticists, molecular biophysicists, clinical microbiologists, virologists and epidemiologists. Such collaborations will involve the provision of clinical material, exchange of reagents or having members of their staff carry out research work in our laboratory, as in the past. In the course of these studies, we hope to contribute to the development of drugs and vaccines that target HIV, as well as other diseases.

**Anna Papadopoulou, Associate Professor**

**Molecular Ecology and Evolution Laboratory**

The Molecular Ecology and Evolution Lab applies molecular genetics and genomic tools to address ecological questions, with a special focus on the study of island communities. Specifically, we use molecular markers and genomic data to study the phylogeny, phylogeography and population genetics of island taxa, as well as to analyse island biodiversity patterns, with the aim to understand the ecological and evolutionary processes that generate and maintain biodiversity in island systems. Islands harbour unique and vulnerable faunas and floras, which are increasingly threatened by intense pressure from invasive alien species, habitat destruction and climate change. Research and conservation efforts tend to focus on certain prominent groups (e.g. mammals or birds), largely overlooking the hidden biodiversity of the “small majority” (i.e. the highly diverse but neglected small-bodied taxa), which is though critical for the functioning of island ecosystems. Recent advances in molecular genetics and genomics hold great promise for accelerating inventories of previously neglected island communities (e.g. belowground biodiversity), as well as helping us to understand how this biodiversity is generated and maintained across space and time. Research topics in the Molecular Ecology and Evolution Lab include:

1. Comparative phylogeography and population genomics to understand the role of ecological traits in the dispersal propensity and diversification of island taxa
2. Studying the effects of Quaternary climatic change and sea-level oscillations on the demographic history and diversification of island taxa
3. Developing and applying DNA-based methodologies for species delimitation, large-scale biodiversity assessment and diet inference of poorly known taxonomic groups

For these purposes, we combine fieldwork, with labwork and bioinformatic analysis of molecular and genomic data. This research is being developed in close collaboration with other research groups in the U.K., the U.S.A., Spain, Greece and Cyprus.

**Chrysoula Pitsouli, Associate Professor**

**Drosophila Development and Homeostasis Laboratory**

We are using the fruit fly, Drosophila melanogaster, as a model of organ remodelling during development, homeostasis and disease. Fruit flies have an extensive tubular network called trachea that functions as both their lungs and their blood vessels, and transports gases and oxygen throughout their bodies via terminal tracheal cells. Similar to human lungs and blood vessels, the Drosophila tracheal system arises from epithelial progenitors that proliferate, differentiate, migrate and ramify in order to generate a complex network of interconnected tubes. Furthermore, the tracheal system undergoes remodelling in response to developmental and environmental signals, such as secreted growth factors and tissue
hypoxia that activate conserved cellular programs. If these remodelling programmes fail or become hyperactive, disease occurs and viability is compromised, similar to humans. Our lab uses genetic, molecular and biochemical methods, as well as state-of-the-art microscopy, in order to study the Drosophila trachea, aiming to identify novel genes and signalling pathways that control development and remodelling of mammalian lungs and blood vessels. We have established a model of developmental tracheal remodelling with similarities to lung development, as well as, a model of disease-induced tracheal remodelling with similarities to cancer angiogenesis. Using microarray profiling we identified the conserved Notch and Wingless/Wnt signaling pathways as key regulators of developmental remodelling through their action on the conserved transcription factor Cut. In addition, we have characterized the tracheal system of the adult Drosophila intestine and found extensive tracheal remodelling in response to bacterial infection, inflammation and cancer. This “neotracheogenesis” process is driven by the conserved Hif1a/FGF/FGFR pathway and shares striking similarities with cancer-induced neoangiogenesis.

Our current efforts in the lab aim to:
1. Identify novel regulators of proliferation, differentiation and migration of tracheal progenitors during developmental remodelling
2. Identify novel regulators of hypoxia-induced tracheal terminal cell remodelling
3. Identify regulators of intestinal neotracheogenesis during inflammation and cancer
4. Assess the effect of tumour genetics in tracheal remodelling and cancer progression

Vasileios Promponas, Associate Professor
Bioinformatics Research Laboratory

The research activities of the Bioinformatics Research Laboratory are mainly oriented towards the interpretation of large-scale genomic data and the use of computational methods, in order to reveal the principles governing the molecular basis of life. We are mainly interested in the elucidation of protein sequence to structure/function relationships using sequence similarity, statistical and machine learning techniques. In particular, our research focuses on:


The Bioinformatics Research Laboratory has ongoing collaborations with research groups in the U.K., Singapore, Denmark, Spain, the U.S.A., Greece, Italy and Cyprus.

Spyros Sfenthourakis, Professor
Biodiversity Laboratory

Spyros Sfenthourakis studies distributional patterns of organisms in order to understand how species richness is controlled, how communities are assembled and how living beings are differentiating through interactions of ecological and evolutionary processes. His research focuses on the study of terrestrial invertebrate communities in island groups and mountain ecosystems, as well as the exploration of general patterns and theories within the wider paradigm of island biogeography. These activities entail both theoretical and applied research in biodiversity conservation. The differentiation of organisms is approached through a combination of morphological and molecular data, using modern morphometric and phylogeographic analysis methods. There is a special emphasis on the study of endemic species, which are the most vulnerable to the ongoing climate change, as well as on a variety of human activities that transform their habitats. The high endemism and the geographic position of Cyprus offer a unique opportunity for the study of climate change effects on endemic species that live in vulnerable habitats. Such study combines fieldwork, where an extremely detailed distribution of species is recorded and a variety of population and environmental variables are measured, with laboratory work, where polymorphic loci are identified and genealogical and population data are studied. In addition, the distribution of species and environmental variables are analysed using GIS, and species distribution models are explored on the basis of several climate change scenarios. Therefore, the Biodiversity and Ecology Laboratory offers possibilities for studying a wide range of animal species in their natural habitats, and it also provides an opportunity for molecular techniques to identify and analyse divergence patterns. Furthermore, it allows us to apply a variety of theoretical models and methods to test hypotheses and predictions concerning community assembly and the future distribution of species.

Paris A. Skourides, Professor
Developmental Biology and Bioimaging Technology Laboratory

The goal of our research group is to understand the cellular and molecular mechanisms involved in generating the three-dimensional organisation of tissues and the overall process, by which the basic body plan of vertebrate embryos is established.
During gastrulation, cell and tissue movements on a massive scale create great complexity from a very simple starting form, resulting in highly diversified organisms with a precise three-dimensional architecture. Elucidating the mechanisms underlying these movements is important, because genetic mutations and environmental insults during gastrulation can lead to significant developmental deformities. A comprehensive understanding of this process and how it is affected by genetic mutations will help develop diagnostic and therapeutic tools for dealing with human developmental disorders. The study of gastrulation and morphogenetic movements has always demanded cutting edge imaging and the pace of discovery in the field has been set by advances in imaging technologies. The complexity of morphogenetic movements, together with our inability to image them in vivo, has forced researchers to study each movement in isolation. Yet, if we are to truly comprehend the way morphogenetic movements give rise to form, we need to begin the process of integrating what we know back to the embryo and view gastrulation as a unified process rather than individual components. Our laboratory, with the use of nanotechnology and specifically the application of Quantum Dot nanocrystals, is developing new imaging methods and technologies that enable the study of morphogenesis at the organismal, cellular and molecular level "in vivo". In addition, we are exploring the development of new types of nanocrystals and a number of wide-ranging applications for Quantum Dots in Biology.

Katerina Strati, Associate Professor
Tumor Viruses and Cancer Laboratory

Our lab is interested in elucidating the mechanisms of carcinogenesis driven by human papillomaviruses (HPVs). HPVs were first associated with cervical cancer due to the detection of HPV DNA in the majority of tumour biopsies. Since then, these viruses have been associated with other types of cancer, such as a subset of head and neck cancers and most other anogenital cancers. Expression of the viral proteins E6 and E7 is thought to be required not only for cancer development but also for maintenance. These two proteins mediate their function by interacting with and modulating important cellular factors, such as the tumour suppressors p53 and pRb. Thus, our study is focused on the viral oncoproteins and their cellular binding partners. Even though the HPV oncoproteins have been abundantly characterized for their interactions with multiple cellular components, the mechanisms of tumorigenesis are not conclusively defined. We employ "in vivo" techniques, in order to study the function of the viral oncogenes in the tissues that the virus would normally infect. We aim at elucidating the molecular function of E6 and E7 and the mechanisms in which they contribute to carcinogenesis. Details on current projects may be discussed with the laboratory head.
Admission to the Chemistry Graduate Programmes

At present, 48 postgraduate students are enrolled in the graduate programme, 32 of which are at the Doctoral level. To date, the Department of Chemistry has awarded 98 Ph.D. and 104 M.Sc. degrees.

The Department admits graduate students every year at the M.Sc. and Ph.D. levels. The applications are submitted via the Online Application System and are examined by the Graduate Studies Committee (GSC), which is comprised of three faculty members.

For details on the application procedure and evaluation of candidates, refer to the Admission and Attendance Regulations – Application Requirements or consult the Graduate School (tel.: 22894021/44) or the Department Secretariat.

In addition to the general application requirements, candidates are requested to submit a cover letter explaining the reasons they wish to enter the Chemistry Graduate Programme and to indicate the research area(s) of their interest(s).

Scholarships

The University of Cyprus provides a number of scholarships to new and existing graduate students. Teaching assistantships are also available. Moreover, graduates can also obtain financial support from University, national and international research programmes for research work carried out during their M.Sc. or Ph.D. studies.

Credits (ECTS)

The Chemistry Graduate Programme (M.Sc. and Ph.D. levels) includes both lecture courses and bibliographical studies, totalling 60 ECTS. Doctoral students holding a M.Sc. degree from another university can be credited for part or all of the 60 ECTS, pending the recommendation of the GSC and approval by the Departmental Council. Moreover, doctoral students may spend up to one calendar year at universities abroad, under student exchange programmes. M.Sc. and Ph.D. students can also attend courses at universities abroad, corresponding to a maximum of 20 ECTS.

MASTER OF SCIENCE (M.Sc.) DEGREE

The minimum duration of studies towards an M.Sc. degree is 1.5 years (full-time students) and the maximum duration is 4 years.

M.Sc. Requirements

To obtain an M.Sc. degree, students must successfully complete 120 ECTS of the M.Sc. Chemistry Graduate Programme. These are obtained by attending 4 of the courses listed below (10 ECTS each), 2 Graduate Literature Studies (CHE 800 and CHE 810, 10 ECTS each), and 6 research modules (10 ECTS each) that include the preparation and defence of an M.Sc. thesis.

CHE 800 Literature Study (10 ECTS)

M.Sc. students, in agreement with the research supervisor, must enrol in CHE 800, in the context of which they are required to select a topic from their wider area of expertise, but not directly related to their research area. Students must study this topic and present it in the form of a short report and seminar (10 ECTS). The examination of CHE 800 is carried out by a Chemistry faculty member, who may be the student’s supervisor or another Chemistry professor. The examination and grading of this seminar is conducted, after an open presentation, by a two-member committee.

For details about the examination procedure, the grading system and the presentation of the CHE 800 Literature Study, students may consult the Department’s Secretariat.

CHE 810 Literature Study (10 ECTS)

M.Sc. students, in agreement with the research supervisor, must enrol in CHE 810, in the context of which they are required to select a topic directly related to their research interests. Students must study this topic and present it in the form of a short report and seminar (10 ECTS). The examination and grading of this seminar are conducted, after an open presentation, by a two-member committee.

For details about the examination procedure, the grading system and the presentation of the CHE 810 Literature Study, students may consult the Department’s Secretariat.
M.Sc. Research

The research topic (experimental or theoretical, or a combination of the two) is chosen in agreement with the research supervisor, aiming at the production of new, original knowledge in chemistry. The originality of the research must be based on the research findings of the student and must be separated from the work of others, clearly indicating the student's personal contribution. The thesis must include a literature survey, a description of the research methods used, a discussion of the results, conclusions, and literature references. The thesis is defended before a three-member Examination Committee.

For details on the thesis defence and the composition of the Examination Committee, refer to the Admission and Attendance Regulations – Application Requirements or consult the Graduate School, or the Department Secretariat.

DOCTOR OF PHILOSOPHY (Ph.D.) DEGREE

The minimum duration of studies for a Ph.D. degree is 3.5 years (full-time students).

Ph.D. Requirements

To obtain a Ph.D. degree, students must successfully complete 240 ECTS of the Doctoral Chemistry Graduate Programme, which includes writing and successfully defending a Ph.D. thesis on an approved topic. An essential requirement for the defence of a Ph.D. thesis is that the student succeeds in the chemistry comprehensive examination, which takes place between third and seventh semester. The required 240 ECTS are obtained by attending 4 of the courses (listed below) carrying 10 ECTS each, 2 graduate Literature Studies (CHE 800 and CHE 810, 10 ECTS each), the Chemistry Department Seminars (CHE 860 - CHE 865, 10 ECTS units), while 15 research modules carrying 10 ECTS units each are credited through research for the Ph.D. thesis. Procedures for course selection and the 20 ECTS which must be obtained (CHE 800 and CHE 810) are the same as those for the M.Sc. thesis.

Departmental Seminars

Within CHE 860 - 864, Ph.D. students who have passed the chemistry comprehensive examination are required to attend all the seminars of the Department, with only one absence allowed within the semester. Students must present a seminar within that period. The seminar is graded by a three-member Committee (Chemistry faculty) appointed by the Chairman of the Department, after the recommendation of the research supervisor. The grade is submitted upon fulfilment of the requirement for attendance at the Departmental Seminars. In case of failure, the student must present a new seminar during the next semester.

Upon their enrolment in the Ph.D. programme, students must register for five semesters, 1 ECTS per semester, for a seminar series (CHE 860 – CHE 864) and attend at least four seminars per semester. Towards the end of their studies, they must register for CHE 865 (10 ECTS) and present a seminar to the Department.

Ph.D. Research

In addition to the requirements described in the M.Sc. research given above, Ph.D. research must be of a very high standard, such that the results are publishable in recognized, peer-reviewed, international research journals. The Department of Chemistry demands, as a minimum prerequisite towards a Ph.D. degree, that candidates have at least one scientific paper either published or accepted for publication in a journal of their research area.

Ph.D. Comprehensive Examination

Students are required to successfully pass this exam, which is an oral examination, by the seventh semester of graduate studies.

Each student is examined by a three-member Committee (Chemistry faculty). The comprehensive examination evaluates the level of understanding of the material in the 4 graduate courses that the student attended. Furthermore, the overall research work of the student, as this appears in a written report submitted by the student to the Committee, is also evaluated in terms of the level of understanding of the research topic and the quality and quantity of the work.

For more details about the comprehensive examination (content of written report, composition and procedure followed by the three-member committee), please consult the Graduate School or the Department's Secretariat.

Thesis Proposal

The Thesis Proposal examination takes place up to four semesters after the student passes the Comprehensive Examination and one year before the final support of the doctoral thesis. The thesis proposal must be successfully presented in front of a three-member Committee. The purpose of the proposal is to examine the quality, quantity and novelty of the research work and to ascertain whether the students have made sufficient progress and understand the forward requirements for the successful completion of their studies.

Ph.D. Thesis Defence

The Ph.D. thesis is submitted and defended only with written permission of the research supervisor and the subsequent submission of the thesis to the Chairman of the Department. The Department has a minimum prerequisite for the award of a Ph.D. degree, that the candidates have at least one scientific paper published or accepted for publication in an international peer-reviewed journal in their research field. The final examination (defence) of the doctoral dissertation is conducted in front of a five-member examining committee.

For details about the procedure for Ph.D. thesis defence and the composition of the five-member examining Committee, students must consult the Graduate School or the Department's Secretariat.
committee, refer to the Admission and Attendance Regulations – Application Requirements or consult the Graduate School or the Department’s Secretariat.

List of Courses (M.Sc. and Ph.D.)

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Course Descriptions

**CHE 610 Physical Methods in Inorganic Chemistry II (10 ECTS)**

- Magnetism: Introduction, types of magnetic behaviour, diamagnetic and paramagnetic susceptibility, the Van Vleck equation, applications of the Van Vleck equation to specific situations, Curie-Weiss Law, high spin-Low spin equilibrium, introduction to neighbour-neighbour interactions, antiferromagnetic mechanisms, the Heisenberg-Dirac-Van Vleck (HDVV) Approach, determination of the values of the exchange parameters (J) in dinuclear and trinuclear complexes, ferro-magnetic coupling, magnetic properties of high nuclearity metal clusters, single – Molecule magnetism behaviour.
- Electron Paramagnetic Spectroscopy (EPR): Basic principles, hyperfine couplings, experimental parameters that affect the EPR spectra, examples.
- Electrochemistry: Basic principles, classification of electrochemical techniques, cyclic voltammetry, polarography, chemical reaction on electrodes, electrochemical study of metal complexes (experimental parameters that affect electrochemical studies, evaluation of the redox properties of metal complexes and determination of the experimental parameters from cyclic voltammograms and polarograms – E1/2, EPA, EPC, IPA, IPC, n, etc– reversible, quasi-reversible and irreversible redox processes, examples).

**CHE 611 Physical Methods in Inorganic Chemistry I (10 ECTS)**

- Group theory: Symmetry, geometric transformations, irreducible representations, character tables, applications of group theory to spectroscopy, molecular orbitals.
- Introduction to spectroscopy: Transitions of atoms and molecules, selection rules, determination of concentration and application in the calculation of equilibrium constant and chemical kinetics, isosbestic points.
- Vibrational spectroscopy: Vibrations in molecules, 3N-6(S) Rule, selection rules, symmetry of vibrations, normal coordinate analyses, absorption bands assignment, group vibrations, assignment of vibrations by isotopic enrichment, kinetics of fast reactions, RAMAN spectroscopy, Resonance RAMAN, finger-printing, applications of vibrational spectroscopy in bioorganic models and metalloenzymes.
- Nuclear Magnetism Spectroscopy (NMR): Description of NMR experiment, Bloch equations, pulse NMR, NMR quantum mechanics, relaxation, inverse recovery and spin echo experiments, chemical shift and nuclear coupling, determination of structure base on chemical shift and nuclear coupling, selective excitation, NOE, Multinuclear NMR, quadrupolar nuclei, Variable Temperature (VT), reaction rate determination by VT, two dimensional spectroscopy (2D), 2D-J-resolved, 2D-COSY, 2D-HETCOR, 2D NOESY, 2D EXSY and 2D-Inadequate spectroscopy, kinetics reaction rate determination by 2D and 1D transfer magnetisation, paramagnetic NMR, structure determination, applications.

**CHE 612 Physical Chemistry of Polymers (10 ECTS)**

- Differences between small molecules and macromolecules, characteristic lengths and relaxation times, variation of structure, tacticity, homo- and co-polymers, stereochemical effects, ternary structure, polyelectrolytes, molecular weights and their distributions and methods to measure them. Osmotic pressure, vapour pressure, light, X-ray and neutron-scattering, ultracentrifugation, viscosity, size exclusion chromatography.
- Theoretical studies of the conformations of polymer chains.
CHE 615 Separation Methods and Applications (10 ECTS)

The main purpose of this course is to familiarise students with the basic concepts of separation science. It examines a number of chromatographic separation methods and their applications in different areas of industry, medicine, environment, forensic science, food science, etc. The separation methods described in this course are the following:
- Gas chromatography (gas-solid chromatography, gas-liquid chromatography).
- High-performance liquid chromatography (partition chromatography, adsorption or liquid-solid chromatography, ion exchange chromatography, size exclusion or gel chromatography, thin-layer chromatography).
- Capillary electrophoresis (capillary isoelectric focusing, capillary gel electrophoresis, capillary isochromatography, capillary zone electrophoresis, micellar electrokinetic chromatography, capillary electrophoroscopy).

CHE 620 Introduction to Solid State Chemistry and Nanomaterials (10 ECTS)

Solid-state chemistry is concerned mainly with crystalline inorganic materials, their synthesis, structures, properties, and applications. Crystal chemistry combines this basic structural information with information about the elements, their principal oxidation states, ionic radii, coordination requirements, and ionic/covalent/metallic bonding preferences. Many of the properties and applications of crystalline inorganic materials revolve around a surprisingly small number of structure types, sizes, and shapes. This course will delve into the crystal structure of different types of solids and discuss their physical and chemical properties as outlined below:
- Introduction to Crystal Structures
- Chemical bonds in solids
- Defects and non-stoichiometry
- The electronic structure and properties of crystalline solids
- Chemistry of Metals, Insulators, Oxides and Semiconductors
- Introduction to solid surfaces
- Quantized solids: Nanomaterials and Nanostructures
- Fabrication methods of nanostructures (wet chemistry techniques, FIB, CVD, MBE, lithography)
- Materials Characterisation techniques (TEM, SEM, XPS/UPS, AFM, XRD)

CHE 626 Supramolecular Chemistry (10 ECTS)


CHE 630 Medicinal Chemistry (10 ECTS)

Introduction to drugs, medicinal chemistry definitions and types of biological targets (proteins, enzymes, receptors, nucleic acids, cell membranes, building blocks). Types of intermolecular interactions. Biologically-active compound discovery, optimisation of access and interaction with target, drug development process, clinical trials. Quantitative structure-activity relationships (QSAR), Pharmacodynamics and pharmacokinetics. Major classes of drugs: Antibacterial agents and their targets, mechanisms of antimicrobial action. Antiviral agents, principles of antiviral action, structure and life cycle of representative viruses (HIV, influenza, SARS-CoV2). Anticancer agents, causes of cancer, targets for anticancer therapies. Cholinergic, anticholinergic, anticholinesterases, receptors in the peripheral nervous system. Drugs acting on the adrenergic nervous system and adrenergic receptors. Opioid analgesics and opioid receptors. Synthesis of pharmaceuticals based on recent primary literature, through student presentations, synthetic methodologies useful to pharmaceutical chemistry.

CHE 631 Advanced Organic Chemistry I (10 ECTS)

Introduction to the organic chemistry of sulfur; di-, tri-, and tetracoordinate sulfur compounds; organosulfur compounds in natural product chemistry and synthesis; organoselenium compounds. Introduction to the organic chemistry of nitrogen; saturated nitrogen compounds (amines, ammonium compounds and nitrogen bases); unsaturated nitrogen compounds (imines, enamines, amides, nitriles, urethanes, ureas, imides and dicyclic compounds; nitrogen compounds with N-O or N-N bonds (compounds with N-N bonds, oximes, N-oxides, nitroso compounds, nitro compounds).

CHE 636 Organic Reactive Intermediates (10 ECTS)

The course examines reactive intermediate compounds of organic chemistry and it is based on articles from the chemical literature referring to their structure and physicochemical properties and to experimental methods for their preparation, detection and identification. The compounds examined are neutral species (e.g. diradicals, carbones and nitrenes, strained alkenes) and ions (carbocations, carbonions).

CHE 638 Methods for Structure Characterisation (10 ECTS)


CHE 640 Introduction to Colloid Science (10 ECTS)

- Interparticle forces in colloid systems. Van der Waals forces, modern theory of Lifshitz. Modern electric double layer theory. Colloid stability, DLVO theory.
CHE 651 Raman Spectroscopy (10 ECTS)

The course provides an in-depth study of quantum mechanical theory, which forms the basis for molecular spectroscopy and especially Raman spectroscopy, aiming for the understanding of how Raman spectroscopy can be employed beyond the mere structural characterisation of molecules.

- Review of Quantum Mechanics and Statistical Mechanics.
- Electrical properties of molecules and matter.
- Time-independent and time-dependent perturbation theory.
- Absorption, Emission and Scattering.
- Vibrational spectroscopy of diatomic and polyatomic molecules.
- Raman and resonance Raman spectroscopy.
- Time-resolved methods: Pump-probe spectroscopy, Time-resolved resonance Raman (Stokes and anti-Stokes).
- Applications of Raman spectroscopy.

CHE 670 Heterogeneous Catalysis (10 ECTS)

- Influence of external mass and heat transport processes on the rate and selectivity of a heterogeneous catalytic reaction.
- Influence of internal mass (diffusion) and heat transport processes within porous catalysts on the rate and selectivity of a catalytic reaction.
- Analysis of experimental rate data of a catalytic reaction.
- Environmental Catalysis: The selective catalytic reduction of NO. From the fundamental research to its applied technology.
- Techniques for studying catalytic reaction mechanisms.

CHE 681 Biochemical Engineering (10 ECTS)


CHE 690 Synthesis, Characterisation and Technology of Polymers (10 ECTS)


CHE 695 Aquatic Chemistry of Heavy Metals (10 ECTS)

The course provides chemical principles that are important to the chemistry of heavy metal ions in natural environments and in natural aquifer systems. The chemical principles that can be applied in order to understand the chemical behaviour and the use of chemical thermodynamics for describing reactions of metal ions under natural conditions and in the presence of naturally occurring ligands, are reviewed extensively. The course includes introductory chapters on nucleogenesis, metal distribution on the geosphere and characterisation of aquatic systems, and a main chapter on the chemistry of metal ions in aquatic solutions. Specific topics such as solid phase solubility, hydrolysis, chloride, carbonate and humate complexation, redox reaction, colloid formation and geochemical reactions are discussed in detail and numerous examples of analytical methods/techniques, used in the determination and characterisation (speciation) of metal species under environmental conditions, are also discussed.

CHE 715 Mass Spectrometry (10 ECTS)

The course covers the micro-analytical method of mass spectrometry for the detection of traces of chemicals in simple and complex matrices. The contents of the course include a brief history in mass spectrometry, the understanding of the basic terminology, the theory behind mass spectra interpretation, the essential parts and modes of instrument operation (tune, SIM, SCAN mode), references to simple process mass spectrometers, the wide coupling (hyphenated) of single (GC-MS, LC-MS, ICP-MS, TG-MS, etc.) and double mass spectrometers (tandem GC-MS/MS, tandem LC-MS/MS), the portable mass spectrometers (field/on-site spectrometers), the MALDI technique and various applications at environmental, food and beverages, forensic and pharmaceutical sectors.

CHE 789 Synthetic Organic Chemistry (10 ECTS)


Areas of Research

Research in the Department of Chemistry focuses on the following areas:

- Chemistry of Porous Solids
- Physical Chemistry of Colloids and Interfacial Systems
- Computational Chemistry/Molecular Simulation
- Heterogeneous Catalysis/Environmental Catalysis and Technology
- Polymer Synthesis and Characterisation
- Synthetic Organic Chemistry
- Synthetic Inorganic Chemistry
- Materials Chemistry
- Analytical and Environmental Chemistry and Radiochemistry
- Instrumental Analysis
- Molecular Spectroscopy
- Fullerene and Supramolecular Chemistry
- Bioorganic Chemistry and Chemical Biology

Faculty members in the Department participate in
national and international research projects and collaborate with several foreign universities and research centres. Specifically, the research of the faculty members has been funded by programmes of the European Commission, bilateral programmes, and by programmes of the Cyprus Research and Innovation Foundation (RIF) with a budget over 16 million euros in the last 20 years. As a result of the applied research carried out in the Department of Chemistry, four patents have already been issued (one German, one European and two USA) and two others have been submitted (European Patent Office).

Research Laboratory Equipment

The Chemistry postgraduate students carry out their experimental studies in the research laboratories of the Chemistry faculty. The equipment in these laboratories, valued at millions of euros, has been purchased through the University budget (internal funding) and via competitively awarded European and national research grants (external funding).

The most important research equipment of the Department is summarized below:

**SPECTROSCOPY**
- 300 and 500 MHz Bruker NMR Spectrometers
- Circular Dichroism
- JASCO 6300 and 8300 Fluorescence Spectrophotometer with capacity for solid state measurements and a plate reader
- Time-resolved Photoluminescence Spectrophotometer (phosphorescence)
- Shimadzu FTIR Spectrophotometer, three with ATR capacity and one with NIR kit
- Step-scan FTIR
- Shimadzu UV-Vis-Near-IR Spectrophotometer
- Shimadzu UV-Vis Spectrophotometers
- Steady-state and Time-Resolved Resonance Raman setup

**CHROMATOGRAPHY**
- MALDI TOF-TOF MS
- Waters HPLC System with dual pump and UV detector
- LC-ESI-MS (Agilent 1260 Infinity II)
- Preparative High-Performance Liquid Chromatography (HPLC) System from Waters, with autosampler and fraction collector
- Gas chromatograph with autosampler (GC-FID 8890 Agilent)
- Capillary Electrophoresis/MS

**MOLECULAR CHARACTERISATION**
- Polarimeter
- CHNS-O Eurovector Elemental Analyser
- MK I Sherwood Magnetic Balance
- Princeton Electrochemistry Equipment (Cyclic Voltammetry, Polarography, Potentiometry)
- NO\textsubscript{x}, CO\textsubscript{2}, CO, H\textsubscript{2} and CH\textsubscript{4} Infrared Gas Analyzers
- TA Instruments Isothermal Titration Calorimeter (ITC)

**CHARACTERISATION OF CRYSTALS AND MATERIALS**
- Xcalibur III Oxford Single-crystal X-ray Diffractometer
- Powder X-ray Diffractometers (Shimadzu and Rigaku)
- Q100 TA Differential Scanning Calorimeter (DSC)
- TA Instruments Advanced Rheometer
- Shimadzu Thermal Gravimetric Analyser (TGA)
- Dynamic Mechanical Analyser
- Dynamic Light Scattering
- KSV 2000 Langmuir-Blodgett apparatus equipped with Brewster-Angle Microscope
- Kibron Langmuir trough with a Biolin Polarisation-Modulation Infrared Reflection-Absorption spectrometer (PM-IIRRAS)
- Multiscop (Surface Plasmon Resonance (SPR) and Ellipsometry) by Optrel
- Quartz-Crystal Microbalance (QCM) QA920 by Ametek
- Spin coater και Dip coater (Nima)
- BET Micromeritics Apparatus (porosimeter)

**MICROSCOPY**
- Agilent Atomic Force Microscope (PicoPlus Molecular Imaging)
- Leica Polarised Microscope
- Raman Microscope

**MOLECULAR AND MATERIALS SYNTHESIS**
- N2 Liquefier
- Buchi Laboratory Spray Drier
- Avestin high-pressure homogenizer for nanoemulsion formation
- Glove box

**OTHER EQUIPMENT**
- Computational Chemistry Cluster (PQS) QuantumCube CPU (64-bit Opteron Processors)
- Alpha/beta Radioactivity Proportional Counter
RESEARCH INTERESTS OF THE ACADEMIC STAFF

Agapiou, Assistant Professor
His research is focused on the use and development of analytical chemistry methods, especially instrumental methods of analysis, for the qualitative and quantitative determination of Volatile Organic Compounds (VOCs) and their exploitation in novel medical, biochemical, environmental, food, safety and security applications. Specifically, his research includes the following:
• Identification and mapping of the chemical signatures of human presence, emanating from expired air, urine, blood, sweat and other biological excretions.
• Assess and manage solid waste and municipal sewage treatment plants.
• Evaluate indoor air quality (workplaces, car cabins, transportation means, catering facilities, clean rooms, etc.) for exposure to toxic environmental contaminants.
• Monitor the quality of bottled and tap water based on the transfer of VOCs from the packaging to the water or the aging of the water distribution system.
• Early diagnosis and monitoring of various diseases and metabolic disorders such as cancer, diabetes, asthma, liver or kidney failure by correlating VOCs with human metabolic pathways.
• Detection of adulteration, spoilage and authenticity of food based on the spatial modification of the chemical signature.

Nikos Chronakis, Associate Professor
His research is focused on: The tether-directed remote functionalisation of fullerene C60; the synthesis of enantiomerically pure bis- and trisadducts of C60 with C2- and C3-symmetrical inherently chiral addition patterns; the study of enantiomerically pure bis- and trisadducts of C60 with C2- and C3-symmetrical inherently chiral addition patterns in chiral recognition and in chiral photosensitization; the synthesis of organic materials with well-defined 3D-structures consisted of fullerene building units (Platonic solids, COFs); and, the synthesis of giant fullerene amphiphiles and study of their self-assembling behaviour in water.

Sotirios Christodoulou, Lecturer
His research is focused on the synthesis and characterisation of colloidal nanocrystals from metals and metals oxides to semiconductor materials. The versatile synthesis offers a variety of tools to manipulate the shape, size and composition of the nanocrystals at the atomic level tuning the optoelectronic properties on demand. In particular, his group aims to synthesise shape-controlled semiconductor nanocrystals emitting in the near-infrared such as PbS, InAs and GaAs quantum dots, while they are also interested in high band-gap materials such as ZnO, CuO for optoelectronic devices and magnetic Fe3O4 nanocrystals for biological applications. In addition, he is interested in the optoelectronic characterisation of quantum dots and inorganic materials (inorganic complexes, metal-organic-frameworks etc). Finally, his research involves the fabrication and characterisation of proof-of-concept optoelectronic devices such as lasers and photodetectors mainly in the infrared.

Angelos Efstathiou, Professor
His research is focused on the field of heterogeneous catalysis, as a means for solving critical environmental problems (e.g. air and water pollution), problems related to the production of valuable chemical products, and the effective utilisation of significant energy-related sources (e.g. natural gas, biomass) towards H2 production. To achieve these goals, new materials-catalysts must be developed and tested or existing ones improved. The design of new catalytic materials requires fundamental knowledge of the relationships between physico-chemical and catalytic (activity/selectivity) surface properties, knowledge of the reaction mechanism and the mechanism of catalyst deactivation.

The main instrumentation that is used in the Heterogeneous Catalysis laboratory at the University of Cyprus for the above described research consists of specially designed gas flow-systems that allow steady-state and transient catalytic experiments to be conducted, quadrupole mass spectrometers, a gas chromatograph, CO, CO2, NOx, N2O and H2 gas analysers, in-situ DRIFTS, UV-vis / DRIS and Raman flow-cells. Several other catalyst characterisation techniques are used in collaboration with other laboratories abroad (e.g. XPS, SEM, HRTEM, Mössbauer, Raman, Photoluminescence). Pioneering research has also been undertaken regarding industrial NOx control by the use of H2 in the low-temperature range of 120-200oC; this has resulted in one U.S.A. and three European patents, as well as a License Agreement with LINDE ENGINEERING AG for exploitation of these patents.

Savvas N. Georgiades, Assistant Professor
• Synthetic organic chemistry: Synthesis of natural products and drug-like compound libraries; Application of metal-catalyzed C-H bond activation (arylation, fluorination) for generation of (hetero)aryligomer compounds; Photoredox catalysis; C-H hydroxylation and amidation of terpenic substrates; Natural product synthesis originating from “chiral pool” precursors.
• Biorganic chemistry: Design and synthesis of novel families of ligands/binders/stabilizers and optical probes/bioimaging agents against guanine-quadruplex (G-quadruplex) DNAs and RNAs of anticancer interest (telomeric, oncogene promoters, 5'-UTRs of RNAs, ribosomal DNA, etc); Organoplatinum(II) agents bearing aminoacid-reminiscent peripheral groups, for G4-targeting; All-organic oligomers with aryl-aryl connectivity, generated via cycloaddition reactions (pyridyl-oxazoles, -triazoles, etc), for G4-targeting. Receptor tyrosine-kinase inhibitors and their conjugates with fluorescent molecules. Signal transduction modulators (EGFR, CAMP pathways) and generation of structural analogues.
• Self-assembly of nucleobases and organic dyes to produce biomaterials for energy and other applications.

Sophia C. Hayes, Associate Professor
Her research interests are focused on two different fields, biophysics and organic semiconductors, with a common thread the understanding of interactions between molecules and their environment using vibrational spectroscopy, and specifically resonance Raman spectroscopy, as a structural probe. Current research focuses on:
• Characterisation of structure and photophysics of conjugated polymers for use in optoelectronic devices.
• Biophysics: Characterisation of the interactions between small molecules and biomolecules (proteins and DNA) for inhibition of aggregation that can lead to many neurodegenerative diseases,
or for stabilisation of the G-quadruplex, for the development of cancer drugs.

- The two fields come together in very recent work on biosensors, where conjugated polyelectrolytes complex with DNA to detect base mismatches, but at the same time to template specific polymer conformations for nanotechnology.

**Constantina P. Kapnissi-Christodoulou, Associate Professor**

- Development of electrophoretic, chromatographic and electrochromatographic methods for improved achiral and chiral separations of various classes of analytes.
- Use of the hyphenated techniques capillary electrophoresis-mass spectrometry (CE-MS) and ultra-performance liquid chromatography-MS-MS for the separation, detection and quantitation of various classes of analytes.
- Application of the optimum separation conditions in biological, natural and food samples.
- Use of enantiomers as diagnostic biomarkers for diseases
- Determination of the most effective sample pre-treatment methods.
- Synthesis, characterisation and use of chiral ionic liquids in capillary electrophoresis for improved separations and greater efficiency.
- Modification of the capillary columns for improved separations.
- Evaluation of synergistic enantioseparation systems.
- Use of cyclofructans as chiral selectors in electrokinetic chromatography (EKC).

**Anastasios D. Keramidas, Professor**

Basic research of transition metal complexes. Bioinorganic chemistry of vanadium, chromium, manganese, iron, molybdenum and selenium, including: synthesis and characterisation of model transition metal compounds for the active centre of biomolecules, synthesis and characterisation of metal compounds with pharmaceutical properties such as antidiabetic vanadium molecules, and organic selenium compounds with anticancer and antioxidant properties.

Supramolecular chemistry of metal-organic compounds, including: synthesis and characterisation of multinuclear metal complexes with defined shape, with Host-Guest properties and novel magnetic and optical properties, synthesis and characterisation of supramolecular compounds formed from lipids of transition metal complexes.

**Panayiotis A. Koutentis, Professor**

Discovery and development of novel heterocyclic chemistry. Sulfur-nitrogen rich heterocycles 1,2,3-dithiazoles and 1,2,6-thiadiazines are under investigation.

Novel conjugated organic polymers based on 1,2,6-thiadiazines; analogues of poly(pyroles) and poly(thiophenes).

Design, synthesis and characterisation of electronically unusual compounds; organic neutral radicals, diradicals, and zwitterion radicals.

**Epameinondas Leontidis, Professor**

His main research interest is in the area of physical chemistry of colloids and Interfaces. Emphasis is on the study of lipid monolayers on liquid and solid substrates and their interactions with ions and small molecules. The goal is to understand specific ion effects in biophysical and physicochemical systems and in various technological applications, and the use of lipid mono- and multilayers as sensors. The Langmuir-Blodgett and Layer-by-Layer methods are the main tools for these investigations. In other applications, the sol-gel method is used to produce novel mesoporous silicate powders for the removal of boron and heavy metals from aqueous solutions. Mesoporous inorganic oxide films for photocatalytic and biomedical applications are also produced using the Evaporation-Induced Self-Assembly (EISA) method. A recent activity concerns the formulation of multilayer emulsions for protection of sensitive food ingredients.

There is also activity in the area of computational and theoretical chemistry with the goals of modelling the structure of electrolyte solutions close to surfaces and of understanding salt effects on peptide conformations in solution.

Currently, EL collaborates with the Institute for Separation Chemistry (Marcoule, France), the University of Regensburg (Germany), the National Hellenic Research Institute (Athens, Greece), and several groups in the Departments of Chemistry, Physics, and Mechanical Engineering of the University of Cyprus.

**Athanassios Nicolaides, Associate Professor**

His research interests lie: a) in the area of organic reactive intermediates with an emphasis on pyramidalized alkenes, carbones and nitrenes and b) in the application of quantum chemical computations to various organic and environmental chemistry problems. He is working in collaboration with researchers in Italy (ISOF-Biofreeradicals) within the COST framework (Action CM0603) to examine the mechanism of oxidation of methionine and other organic substrates. In the area of pyramidalized alkenes his research efforts are directed towards the synthesis of new pyramidalized alkenes and organometallic derivatives of such species with the aim of synthesizing complex polycyclic organic compounds with well-defined rigid geometries.

**Ioannis Pashalidis, Professor**

Study of the chemical behaviour of element ions in natural aquifer systems and the application of experimental methods for the analysis of adsorbed species on surfaces (e.g. metal oxides, biomasses, biochars and microplastics) and colloids. Aqueous nuclear chemistry of actinide ions and environmental alpha radiometry. Study of the interaction of f element ions with chelating agents of clinical use in order to determine and characterize the formed species, assess their behaviour under physiological conditions and evaluate their possible use in the decorporation of radionuclides from contaminated persons.

**Costas S. Patrickios, Professor**

Synthesis, characterisation, modelling and applications of functional polymers. Research is focused on the design and preparation of polymers with improved properties and applications in biotechnology, medicine, optoelectronics, colloidal and environmental chemistry. These polymers are obtained with the polymerization of the appropriate monomer or
monomers bearing functional groups with the desired properties. Such properties are the ionic charge (the resulting polymers can be used in protein separation), the nucleophilic character (synthetic polymers mimicking enzymes), the high refractive index (optoelectronic applications), the amphiphilic character (detergency), the very low surface tension (compatibility with the environmentally friendly supercritical carbon dioxide). Other central characteristics of the present polymers are the precise molecular weight (narrow size distribution), the well-defined composition (in case of copolymers) and the controlled architecture (e.g. linear polymers, star polymers or polymer networks; block or random copolymers). These characteristics, which allow the derivation of accurate structure-property relationships, are afforded with the use of “living” synthetic techniques, such as anionic polymerization and group transfer polymerization (GTP), where all polymers grow uniformly during their preparation. The molecular weight and composition of the polymers are characterized using gel permeation chromatography (GPC) and nuclear magnetic resonance (NMR) spectroscopy, respectively. Finally, thermo-dynamic theories are applied for the prediction of polymer behaviour upon aggregation in selective solvents and upon adsorption onto surfaces.

Eftychia Pinakoulaki, Associate Professor

Her research programme addresses a wide range of fundamental problems in Biophysical/Bioanalytical Chemistry. Fourier transform infrared spectroscopy, Attenuated Total Reflection FTIR, time-resolved step-scan FTIR, and resonance Raman are the spectroscopic tools along with high performance liquid chromatography (HPLC) for the investigation of basic mechanisms in Biochemistry and Food Chemistry.

Charis R. Theocharis, Professor

The research interests of his group are: the study of adsorption on porous solids, the surface properties of zeolites, ALPOs, and the reactivity of their surfaces with gases and vapours. Surface properties of the oxides and hydroxides of calcium and magnesium. Chemistry of organic solids.
The Department of Computer Science attaches major importance to research, since it is through research that it accomplishes one of its foremost missions, while, on the other hand, research enables Computer Science to contribute to local industry and, more generally, to Cypriot society at large. Beyond the foundational topics that concern it, Computer Science also aims at developing methods that will form the basis for the effective solution of “real” problems from every other discipline, with the ultimate goal of improving the quality of life. Moreover, our Department also attaches great significance to applied research and, more specifically, to research which, as far as possible, will be directly useful to local industry. The Department of Computer Science offers four Master programmes and postgraduate programmes at the Ph.D. level in different specialisations of Computer Science.

Research

The general research areas of the Department include: Parallel and distributed systems and computation, fixed and wireless high-speed networks, internet technologies, concurrent systems, mobile computing, parallel processing, intelligent systems, computer architecture, open and distance learning, medical informatics and telemedicine, and multimedia systems. Part of this work is financed through European research projects, the Cyprus Research and Innovation Foundation and local industry. In the last eight years, the Department has secured its participation in more than 170 research programmes funded by the European Union. This budget exceeds ten million Euros and has assisted in the employment of new researchers and postgraduate students.

Computer Laboratories and Research Facilities

In total, the Department houses six teaching laboratories, including a digital lab and a walk-in lab. Ten research laboratories accommodate approximately 40 postgraduate students and research associates, who participate in the various research projects of the Department. The computer equipment of the Department includes modern multiprocessor servers, connected through high-speed Gbit network. A state-of-the-art wireless local area network allows access to the computer systems of the Department from anywhere on campus.

M.Sc. Programmes

To be admitted to a Master’s programme, a candidate must possess a first degree in Computer Science or a related subject from an accredited university with an overall grade of “Very Good”. Any relevant industrial experience may be considered as an additional advantage.

MASTER IN COMPUTER SCIENCE (MCS)

The Master in Computer Science is designed primarily for Computer Science and other science-related graduates, who seek to develop research skills and enhance their knowledge in advanced areas of Computer Science. Students who attend this programme may pursue a Ph.D. degree after their graduation.

The completion of the Programme requires 90 ECTS, and the duration of studies must be at least three semesters. These 90 ECTS correspond to eight courses and a Master’s thesis. More specifically:

- Seven postgraduate courses (8 ECTS each) (any seven from the postgraduate course list).
- One postgraduate course (4 ECTS) (CS 671 Research Methodologies in Computer Science).
- Master’s thesis (30 ECTS).

MASTER IN ADVANCED INFORMATION TECHNOLOGIES (PROFESSIONAL - PM)

The aim of the Professional Master in Advanced Information Technologies is to help information technology professionals to extend and update their knowledge in advanced computer technologies and to acquire up-to-date know-how in subjects related to the national Information Technology industry like software engineering, the internet, and intelligent systems.

The completion of the course requires 75 ECTS and the duration of studies must be at least four semesters. In particular:

- Seven postgraduate courses of 8 ECTS, out of which 4 should be related to the programme’s scope (identified as such in the Table of Specialisation Courses and in the course descriptions).
- One postgraduate course of 4 ECTS (EPL 672 Seminar on Professional Computer Science Practices).
• Master’s thesis worth of 15 ECTS, which can be replaced with two extra postgraduate courses.

The needs of employees and professionals in the information technology industry will be considered during the scheduling of courses (afternoon and evening courses and three-hour meetings).

MASTER IN COGNITIVE SYSTEMS
This is a distance-learning programme, taught exclusively online, in collaboration with the Open University of Cyprus and the Department of Psychology of the University of Cyprus. The Programme is taught in English. Cognitive Systems form a new generation of systems that aim to collaborate with their users at a level cognitively compatible with a non-computing expert, in order to provide personalized and adaptive services, with each party, system and human, learning and adapting to the capabilities of the other. The need for developing such cognitive systems has been widely recognized.

Students are required to take:
• Three first courses under the Foundations theme (COS511, COS512, COS513), where at least the two introductory courses (COS511, COS512) are expected to be taken during the first semester.
• Electives among all other courses, as long as at least one third of the courses come from Cognitive Psychology (CP), and one third of the courses come from Computer Science (CS).

MASTER IN DATA SCIENCE (MDS)
The Programme is offered jointly by the Department of Business and Public Administration, the Department of Computer Science, and the Department of Mathematics and Statistics. It is offered in English. Data Science is an inter-disciplinary field that uses scientific methods, processes, algorithms and systems to extract knowledge and insights from Big Data. Data Science is quickly becoming a field of central importance to the strategy of modern organisations. There is an increasing need for highly trained employees, who can think across disciplines to transform data into actionable insights. The objective of the Programme is to provide students with a strong understanding of basic and advanced methods in statistical inference, machine learning, data visualisation, and data mining, which are the essential skills a modern data scientist needs to possess. The completion of the Programme requires 90 ECTS and the duration is 1.5-year. The Programme offers 3 tracks (Computer Science Track/Statistics Track/Business Analytics Track). The first two semesters will be dedicated to core courses, while students will select a track at the end of the second semester.

MASTER IN ARTIFICIAL INTELLIGENCE (MAI)
The development of this Master’s programme is co-funded by the European Commission (Connecting Europe Facility (CEF)—Telecommunications Sector) under the MAI4CAREU project (Master Programmes in Artificial Intelligence 4 Careers in Europe). Europe’s initiative to fund new Master’s programmes in Artificial Intelligence demonstrates the importance Europe attaches to recent developments in this area, in providing solutions to global problems related to every aspect of human life, contributing to growth and competitiveness. The programme’s collaboration network includes four European Universities (University of Cyprus, University of Bologna, Technical University of Dresden, and University of Ruse Angel Kanchev), the CYENS Centre of Excellence and four high-tech SMEs (Nodes & Links Labs, 3AeHealth LTD, INJENIA SRL, MLPS AD). The strong links with industry provide significant added value to the educational experience. The Programme is offered in English only and lasts 1.5 years (90-102 ECTS credits), namely three academic semesters and an optional summer period during which students have the opportunity to participate in the AI Camp teaming with students from the other collaborating universities and/or to pursue an internship. As of September 2023, this programme will be run jointly with the Department of Electrical and Computer Engineering.
Course Descriptions

CS 601 Distributed Systems (8 ECTS)
Restricted Choice for MCS, PM
Basic concepts and principles of distributed systems. Communication, processes and synchronisation. Naming. Distributed file systems and distributed operating systems. Security and cryptography in distributed systems. Distributed shared memory and its consistency. Fault-tolerance. Distributed algorithms and distributed programming. Design and development of applications in distributed environments. Case studies of specific distributed systems (e.g. Planet Lab). Practical exposition with programming project or programming exercises.

CS 603 Advanced Software Engineering (8 ECTS)
Restricted Choice for MCS, PM

CS 604 Artificial Intelligence (8 ECTS)
Restricted Choice for MCS, PM

CS 605 Advanced Computer Architecture I (8 ECTS)
Specialisation Course for PM
Restricted Choice for MCS
Performance evaluation and comparison, as well as benchmarking programmes; Basic microarchitecture concepts of modern processors; pipelining, instruction-level parallelism, prediction, speculation, memory hierarchy, and static/dynamic instruction scheduling; Examples of modern processors; Current research projects in the area of computer architecture.

CS 606 Computer Networks and the Internet (8 ECTS)
Specialisation Course for PM
Restricted Choice for MCS
Introduction to internet and networking technologies. TCP/IP suite of protocols, Quality of Service (QoS), new networking architectures. Protocols and standards (e.g. DiffServ, IPv6, MPLS). Network Performance Evaluation (e.g. queuing theory, and simulation tools). Traffic modelling and traffic engineering, congestion control and resource allocation. Network design and optimisation.

CS 607 Visual Computing (8 ECTS)
Specialisation Course for PM
Restricted Choice for MCS
Binary image processing, intensity transformations, the discrete Fourier transform, linear and nonlinear filtering, image compression, image analysis, basic principles of video processing. Basic principles of 3D graphics: polygonal representations, transformations, local and world coordinate system, scene graph, camera and field of view specification, orthographic and perspective projection, clipping in 2D & 3D, polygon rasterisation, back face elimination, visible surface determination with the Z-buffer method and binary space partitioning trees, local illumination - flat, Phong & Gouraud shading, real-time graphics, applications.

CS 646 Advanced Topics in Data Management (8 ECTS)
Specialisation Course for MCS, MDS
Restricted Choice for PM
(i) Fundamentals of modern Database Management Systems (DBMSs): storage, indexing, query optimisation, transaction processing, concurrency and recovery. (ii) Fundamentals of distributed DBMSs, web databases and cloud databases: semi structured data management (XML/JSON, XPath and XQuery), document data-stores, key-value data-stores (e.g. BerkeleyDB, MemCached), Introduction to Cloud Computing (GFS, NFS, Hadoop HDFS, replication/consistency principles), "Big-data" analytics (MapReduce, Apache’s Hadoop, PIG), column-stores (e.g. Google's BigTable, Apache's HBase, Apache’s Cassandra), Graph databases (e.g. Twitter's FlockDB) and overview of NewSQL. (iii) Spatio-temporal data management (trajectories, privacy, analytics) and index structures (e.g. R-Trees, Grid Files), as well as other selected and advanced topics.

CS 651 Mobile Computing and Data Management (8 ECTS)
Specialisation Course for PM
Restricted Choice for MCS

CS 653 Computer Networks (8 ECTS)
Specialisation Course for PM
Restricted Choice for MCS
Game structure and design, computer animation, movement and deformation, interactive cameras, visual simulation of physically-based models, special effects using particle systems, collision detection, articulated characters, navigation and other behavioural models for autonomous characters.

CS 655 Advanced Computer Architecture II (8 ECTS)
Specialisation Course for PM
Restricted Choice for MCS
Support for parallel programme execution, parallel architectures, different types of multiprocessor interconnection networks, compilation of parallel programmes, and performance analysis of various parallel applications.
Computer Graphics: Modelling and Realism (8 ECTS)
Specialisation Course for PM
Restricted Choice for MCS

Wireless Networks (8 ECTS)
Restricted Choice for MCS, PM
Wireless environment, interference and other problems in wireless communications, basic principles of wireless local and metropolitan area networks, and cellular wireless networks. New architectures and technologies of wireless networks and wireless communication (e.g. ad-hoc and sensor networks, VANETs). Resource management techniques, next generation wireless networks of 3rd, 4th and 5th generation (3G UMTS, LTE, 4G, 5G), design and planning of wireless networks, protocols for wireless and mobile networks. Internet/web of Things.

Digital Video Processing (8 ECTS)
Restricted Choice for MCS, PM

Design on Embedded Systems (8 ECTS)
Specialisation Course for PM
Restricted Choice for MCS
A review of embedded system processors. Organisation of embedded systems: CPUs, RAM, ROM, buses, peripherals, sensors, actuators, interfacing. Examples of widely used processors buses and peripherals. Interfacing with peripherals: sampling, interrupts, advantages and disadvantages. Process distribution between hardware and software. Tools for the development of embedded systems and real-time operating systems. Hands-on experience with the development and implementation of embedded systems.

Information Retrieval and Search Engines (8 ECTS)
Specialisation Course for MDS
Restricted Choice for MCS, PM

Machine Learning and Data Mining (8 ECTS)
Restricted Choice for MCS, PM
Data Warehouse and OLAP Technology for Data Mining. Data Processing, Data Mining Primitives, Languages, and System Architectures. Concept Description: Characterisation and Comparison. Mining association rules in Large databases.
CS 670 Research Methodologies and Professional Practices in Computer Science (8 ECTS)

Seminars/lectures in computer science and practice. Research or technical literature reviewing. Presentation of technical study.

CS 673 Algorithmic Game Theory (8 ECTS)

Restricted Choice for MCS, PM

Strategic games. Pure and mixed strategies, utilities, best responses, equilibrium concepts. Pure and mixed Nash equilibria, their refinements and generalisations. Classical existence theorems of equilibria and their algorithmic aspects. Algorithms and complexity of equilibrium searching. The complexity classes PLS and PPAD and their relation to equilibrium computation. Bimatrix games and algorithms to compute their approximate equilibria. The Price of Anarchy and its variants. Analysis of the Price of Anarchy for both general and specific games (e.g. selfish routing games, congestion games, security games). Applications to realistic cases (e.g. social networks, Internet formation).

CS 674 Network and System Security (8 ECTS)

Specialisation Course for PM

Restricted Choice for MCS


CS 675 Web Services and Service Oriented Computing (8 ECTS)

Specialisation Course for PM

Restricted Choice for MCS

Introductory concepts. Relationship and difference between services and other related formalisms (distributed systems, component-based systems, etc). Fundamental architectures and protocols (REST, SOAP, WSDL, UDDI). Fundamental development platforms (J2EE, NET, etc). Problems and challenges. Information modelling and representation (ontologies, RDF and OWL protocols, etc). Cooperative information systems and service composition.

CS 678 Temporal Information Systems in Medicine (8 ECTS)

Restricted Choice for MCS, PM


CS 679 Electronic Health (eHealth) (8 ECTS)

Restricted Choice for MCS, PM

Information retrieval from medical databases, data, medical records, live signals, and data mining using intelligent techniques. Study of application systems that are currently in use for managing medical data and suggest ways for better handling and building, medical knowledge bases, electronic health record, and decision support systems for the medical profession.

CS 680 Cognitive Programming (8 ECTS)

Restricted Choice for MCS, PM

Basic elements of cognitive science and the relation between logic and argumentation. Computation models for cognitive intelligence that follow representational models from cognitive psychology. The structure of knowledge and the human mechanism for common logic. The architecture of cognitive systems and their dynamic development cycle. Utilisation of STAR, IBM Watson and other similar systems in the development of cognitive systems.

CS 681 Advanced Topics in Software Reus (8 ECTS)

Restricted Choice for MCS, PM


CS 682 Advanced Security Topics (8 ECTS)

Restricted Choice for MCS, PM

Short introduction to security basics and then special topics are presented. Special topics include advanced cryptographic attacks in protocols, software exploitation through code-reuse (return-oriented programming, jump-oriented programming, and call-oriented programming), heap exploitation, side channels, advanced software hardening, exploiting special network protocols (DNS, NTP, etc.), complex attacks in network applications, and privacy issues. The course is seminar-based in part. Once the basics are introduced by the instructor, students will study advanced papers in class and will have the opportunity to get a feeling of what are the important topics in modern security research.

CS 683 Technology Entrepreneurship (8 ECTS)

Free Elective

Study and experimentation with methodologies for innovation-driven entrepreneurship and associated tools, pursuing the translation of students’ ideas into entrepreneurial endeavours. Key stages of turning an idea or invention into a commercial product: the Lean Product Process and the Business Model Canvas methodologies; the Disciplined Entrepreneurship methodology; techniques for the creative ideation and the design of software applications, products and services; fundraising and financing options for start-ups; the basics of incorporation and company structure; attracting talent, establishing and managing a team; tools for project and team management, collaboration, ideation, rapid prototyping; preparation of pitch decks, and pitch presentations in front of potential investors.
The content of the course is according to the specific topic. Prerequisites: With consent of the Lecturer.

DSC 510 Introduction to Data Science and Analytics
The course will examine how data analysis technologies can be used to improve decision-making. It will study the fundamental principles and techniques of data science, examine real-world examples and cases to place data science techniques in context, to develop data-analytic thinking, and to illustrate that proper application is as much an art as it is a science. Lastly, the course will work hands-on with the Python programming language and its associated data analysis libraries.

DSC 511 Big Data Analysis
Big data analysis is the process of examining large and varied big data sets that has been generated by various sources such as eCommerce, mobile devices, social media and the Internet of Things (IoT). It involves integrating different data sources, transforming unstructured data into structured data, and generating insights from the data using specialised tools and techniques that spread out data processing over an entire network. The course focuses on the processes involved in processing efficiently large amounts of data of a variety of types and covers the major analytics platforms including Hadoop and Spark. The course includes lab sessions using the Python programming language.

DSC 512 Information Retrieval and Search Engines
The course will examine the main computer science principles that lie behind Google and other search engines. To this end, the course will focus on basic and advanced techniques for text-based information systems: efficient text indexing; Boolean and vector space retrieval models; evaluation and interface issues; text classification and clustering. The course will also focus on web search including crawling, link-based algorithms, and web metadata.

DSC 513 Advanced Topics in Data Management
The course provides an in-depth understanding of advanced concepts and research directions in the field of databases. The course is organised in three parts: (i) Fundamentals of Database Systems Implementation; (ii) Distributed, Web and Cloud Databases; (iii) Spatio-temporal Data Management, Sensor Data Management, other selected and advanced topics from the recent scientific literature.

DSC 514 Natural Language Processing
The course will examine modern computational approaches based on representation learning for understanding, processing and using human language. Natural language processing (NLP) is one of the most important technologies of the information age, and a crucial part of artificial intelligence. Applications of NLP are everywhere because people communicate almost everything in language: web search, advertising, emails, customer service, language translation, medical reports, etc. In this course, several models and algorithms for automated textual data processing will be described: (1) morpho-lexical level: electronic lexica, spelling checkers; (2) syntactic level: regular, context-free, stochastic grammars, parsing algorithms; (3) semantic level: models and formalisms for the representation of meaning. Several application domains will be presented: Linguistic engineering, Information Retrieval, Text mining (automated knowledge extraction), Textual Data Analysis (automated document classification, visualisation of textual data).

DSC 515 Deep Learning
The course aims at developing the necessary skills to use deep learning methods on applied problems. It will show how to design and train a deep neural network for a given task, and the sufficient theoretical basis to go beyond the topics directly seen in the course. The planned content of the course: What is deep learning, introduction to tensors. Basic machine learning, empirical risk minimisation, simple embeddings. Linear separability, multi-layer perceptrons, backprop. Generalized networks, autograd, batch processing, convolutional networks. Initialisation, optimisation, and regularisation. Drop-out, activation normalisation, skip connections. Deep models for Computer Vision. Analysis of deep models. Auto-encoders, embeddings, and generative models. Deep learning for sequences - Recurrent neural networks (RNNs); vanishing and exploding gradients; Long Short-Term Memory (LSTM); deep RNNs; bidirectional RNNs; combination of CNNs with RNNs - pytorch tensors, deep learning modules, and internals.

DSC 516 Cloud Computing
The course covers topics and technologies related to Cloud Computing and their practical implementations. The course is organised in four parts: (i) Fundamental concepts and models of Cloud Computing; (ii) Cloud-enabling technologies: warehouse-scale machines, virtualisation, and storage; (iii) Cloud application programming models and paradigms. (iv) Cloud resource orchestration, monitoring, and DevOps. Students will explore different architectural and service models of cloud computing, the concepts of virtualisation, containerisation, and cloud orchestration. Through lectures, tutorials, and laboratory sessions, students will gain hands-on experience with various features of popular cloud platforms, such as Openstack, VMware, Docker, and Kubernetes, as well as commercial offerings like Google App Engine, Microsoft Azure and Amazon Web Service. Advanced cloud programming paradigms such as Hadoop’s MapReduce and Microservices are also included in the course. Students will also learn the concept of modern Big Data analysis on cloud platforms using various data mining tools and techniques. The lab sessions will cover cloud application development and deployment, use of cloud storage, creation and configuration of virtual machines and data analysis on cloud using data mining tools. Different application scenarios from popular domains that leverage the cloud technologies such as online social networks will be explained. The theoretical knowledge, practical sessions and assignments aim to help students to build their skills to develop large-scale industry standard applications using cloud platforms and tools.

DSC 517 Data Security Processing data
Data Security Processing data is often realised through systems that can operate under hostile conditions, where adversaries try to monetise access to sensitive data. A short introduction to data security is provided to the students and the basic arsenal we have for protection is reviewed. A large portion of applied cryptographic primitives and protocols that facilitate secure transmission of data is covered. How systems that process data can be attacked and protected are also reviewed. Finally, advanced attacks, and potential defences for systems that are based on Machine Learning are discussed.
DSC 551 Data Visualisation
During the course, students will learn how to design, judge, build and present their own interactive data visualisations. Introduction to Data visualisation, Web development, Javascript, Data driven documents (D3.js), Interaction, filtering, aggregation, Perception, cognition, Designing visualisations (UI/UX), Text visualisation, Graphs, Tabular data viz Music viz, Introduction to scientific visualisation, Storytelling with data / data journalism, Creative coding.

MAI 601 AI Camp (4 ECTS)
Optional Summer Activity for MAI
The course raises students’ awareness of the career opportunities in the various countries and further studies at the partner universities. Teaming with students from the other partner universities. Initiating joint supervision and joint research. Language of instruction: English.

MAI 611 Artificial Intelligence Fundamentals (8 ECTS)
Mandatory Course for MAI. Restricted Choice for MCS, PM.
The course introduces students to the fundamental principles and techniques that underlie software systems that exhibit “intelligent” behaviour. Language of instruction: English.

MAI 612 Machine Learning (8 ECTS)
Mandatory Course for MAI. Restricted Choice for MCS, PM.
Machine Learning (ML) is the branch of Artificial Intelligence (AI) that allows a computational system to improve itself through experience. It involves the development of systems that are trained to discover patterns in datasets, which can later be used to provide predictions on new data. ML is a rapidly evolving field, which has disrupted almost all scientific disciplines. This introductory course aims to provide a holistic view of ML covering sufficient breadth and depth, so that students understand the principles that drive most scientific and industrial AI innovations. Language of instruction: English.

MAI 613 Research Methodologies and Professional Practices in AI (4 ECTS)
Mandatory course for MAI. Restricted Choice for MCS, PM.
The course introduces students to the methods and tools of Artificial Intelligence Research, professional practices, and associated technological culture, bearing in mind EC’s regulatory framework. Moreover, the course objectives encompass familiarisation with reading, reviewing and presenting of relevant literature, technical writing and literature surveying. Language of instruction: English.

MAI 614 AI on the Edge Webinars I (2 ECTS) and MAI 632 AI on the Edge Webinars II (2 ECTS)
Mandatory Courses for MAI
The main objective of these two courses is for students to become aware of the latest developments in AI and appreciate the wide breath of study that AI requires. Language of instruction: English.

MAI 621 AI Ethics I (6 ECTS)
Mandatory Course for MAI
The course aims to raise awareness of the dangers that can arise from the development, deployment, and usage of intelligent autonomous systems and to introduce the students to socio-technical solutions for mitigating the risk of exhibiting unwanted non-ethical behaviour. Students will understand the basics of implementing systems that are not only high performing, but also adhere to our ethical socio-legal cultural values. Language of instruction: English.

MAI 631 AI Ethics II and AI Policy Making (4 ECTS)
Mandatory Course for MAI
The main purpose of the course is to help students understand in-depth the major ethical issues that concern various sectors of the society and how these are reflected into AI policy by governments and organisations, particularly by EU policy on AI. Students will understand how research into AI Ethics feeds into policy and how policy requirements affect the development of AI systems. Language of instruction: English.

MAI 622 AI Entrepreneurship (8 ECTS)
Mandatory Course for MAI. Restricted Choice for MCS, PM.
The course examines issues faced by Startup Founders and Chief Technology Officers who need to innovate at the boundaries of AI, Information Technology and Business by understanding all perspectives. Language of instruction: English.

MAI 623 Natural Language Processing (8 ECTS)
Restricted Choice for MAI, MCS, PM
Natural language processing (NLP) seeks to provide computers with the ability to intelligently process human language, extracting meaning, information, and structure from text, speech, web pages, and social networks. The goal of this course is to provide the fundamental aspects of NLP systems, as well as introduce recent advancements in the field of NLP and Deep Learning. The course is organized into two parts: (1) Fundamental knowledge, concepts, and techniques of NLP. (2) Introduction to Deep Learning methods for NLP. Language of instruction: English.

MAI 641 Master Thesis (16 ECTS)
Restricted Choice for MAI
The main objective of this course is to enhance students’ knowledge, understanding and develop their skills, attitudes in the context of the programme of study. The thesis must be written at the end of the programme and offers the opportunity to delve more deeply into and synthesise knowledge acquired. The thesis will place emphasis on the technical and/or scientific aspects of the subject matter. Language: English.

MAI 642 Deep Learning (8 ECTS)
Restricted Choice for MAI, MCS, PM
The objective of this course is to provide a concrete understanding of the fundamental concepts of deep learning used for computer vision applications for image and video processing and understanding. Deep Learning is a key driving force behind Artificial Intelligence (AI) breakthroughs over the past few years and a paradigm shift in most computer vision tasks performed today. Language of instruction: English.

MAI 643 AI in Medicine (8 ECTS)
Restricted Choice for MAI, MCS, PM
The medical domain has presented key challenges to the AI community from the early days of AI research. It is not an exaggeration to say that this pioneering work, particularly in
medical expert systems, and its undisputable successes, some in real-life settings, has helped both in restoring confidence in the promise of AI, that at some point was disturbed after its failure to deliver fully on the very ambitious initial goals that it had set, and in paving the way towards more viable paths harnessing the mechanisation of knowledge and human expertise. The aim of this elective course is to familiarise students with the past, present and future of Artificial Intelligence in Medicine, illustrating the discussion with several case studies, and pinning down the human-centric and ethical aspects underlying the given applications. Language of instruction: English.

MAI 644 Computer Vision (8 ECTS)

Restricted Choice for MAI, MCS, PM

This course aims to build a fundamental understanding of classic computer vision, starting at extracting and describing features such as edges and corners from images, moving to mid-level tasks such as model fitting and image stitching, then, high-level tasks such as semantic segmentation, recognition, and detection, and ending with motion and extracting scene geometry from images. Language of instruction: English.

MAI 645 Machine Learning for Graphics and Computer Vision (8 ECTS)

Restricted Choice for MAI, MCS, PM

The course offers an introduction to machine learning algorithms, the use of deep learning and its applications in computer vision and graphics. The course is offered as a graduate-level seminar with weekly readings (1 hour per week), summarisations, and discussions of recent papers. Language of instruction: English.

MAI 646 Cognitive Programming for Human-Centric AI (8 ECTS)

Restricted Choice for MAI, MCS, PM

The course introduces students to the new framework for Cognitive Computing for the development of Cognitive Systems that serve the needs of Human-centric AI. The theoretical understanding of the challenges of such cognitive systems and the development of knowledge for their practical application. Language of instruction: English.

MAI 647 Computational Neuroscience (8 ECTS)

Restricted choice for MAI, MCS, PM

Computational Neuroscience is an emerging and dynamically developing field aiming to elucidate the principles of information processing by the nervous system. This course aims to develop and apply computational methods for studying brain and behaviour as well as understanding the dynamics of the conscious mind. Language of instruction: English.

MAI 648 Human-Centered Intelligent User Interfaces (8 ECTS)

Restricted Choice for MAI, MCS, PM

The purpose of the course is to introduce students to the fundamental principles and methods within the intersection of Artificial Intelligence and Human-Computer Interaction, aiming to design and develop more efficient and effective user interfaces through the use of intelligent computation methods. Language of instruction: English.

MAI 649 Principles of Ontological Databases (8 ECTS)

Restricted Choice for MAI, MCS, PM

Nowadays we need to deal with data that is very large, heterogeneous, distributed in different sources, and incomplete. At the same time, we have very large amounts of knowledge about the application domain of the data in the form of ontologies that can be used to provide end users with flexible and integrated access to data. This gave rise to ontological databases, which lie at the intersection of traditional databases, and knowledge representation and reasoning. The purpose of the course is to introduce students to the principles of ontological databases and demonstrate the importance of studying data-intensive problems in a mathematically rigorous way, as well as the implications of such studies for real-life applications. Language of instruction: English.

MAI 650 Internet of Things (8 ECTS)

Restricted Choice for MAI, MCS, PM

The internet of things (IoT) is a computing concept that describes the idea of everyday physical objects being connected to the internet and being able to identify themselves to other devices. IoT has emerged as a new paradigm aimed at providing solutions for integration, communication, data consumption, and analysis of smart devices. To this end, connectivity, interoperability, and integration are inevitable parts of IoT communication systems. Whereas IoT, due to its highly distributed and heterogeneous nature, is comprised of many different components and aspects, providing solutions to integrate this environment and hide its complexity from the user side is inevitable. In the course, different building blocks of IoT, such as sensors and smart devices, M2M communication, data collection and processing and the role of humans in future IoT scenarios are elaborated upon and investigated. The course mainly focuses on IoT tools and applications and introduces hands-on IoT communication concepts through lab exercises. Language of instruction: English.

Ph.D. Programme

Apart from the general requirements of the University of Cyprus for the acquisition of a Ph.D. degree, the Department expects Ph.D. candidates to publish their research results in the proceedings of international conferences and, possibly, academic journals.

A Ph.D. programme comprises the completion of post-graduate courses amounting to at least 60 ECTS (holding a relevant M.Sc. Degree may result in full or partial satisfaction of this requirement), success in a comprehensive examination, acceptance of a research proposal and, finally, the submission of an original thesis which represents a substantial contribution to the relevant field of knowledge.

Admission to a Ph.D. programme requires high academic qualifications in Computer Science and the Department's ability to supervise the research topic that is of interest to the students.
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<tr>
<th>Course Code and Title</th>
<th>Master in Computer Science</th>
<th>Master in Advanced Information Technologies (Professional)</th>
<th>Master in Data Science</th>
<th>Master in Artificial Intelligence</th>
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<td>CS 601 Distributed Systems</td>
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<td>✓</td>
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<td>CS 606 Computer Networks and the Internet</td>
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<td>CS 664 Systems Analysis and Verification</td>
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<td>CS 665 Constraint Solving Methods</td>
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<td>CS 668 Mechanical Vision</td>
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<td>CS 675 Web Services and Service Oriented Computing</td>
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<td>CS 681 Advanced Topics in Software Reuse</td>
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<td>CS 682 Advanced Security Topics</td>
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<td>CS 683 Technology Entrepreneurship</td>
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<td>CS 699 Special Topics in Computer Science</td>
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<td>Course Code and Title</td>
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<td>Master in Advanced Information Technologies (Professional)</td>
<td>Master in Data Science</td>
<td>Master in Artificial Intelligence</td>
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<td>DSC 551 Data Visualisation</td>
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</table>
Andreas Aristidou, Assistant Professor
3D motion analysis and classification, motion portrayal and synthesis using deep learning techniques, human animation in games and simulations, including intangible cultural heritage, and involve motion capture, inverse kinematics, and applications of conformal geometric algebra in graphics.

Elias Athanasopoulos, Associate Professor
System security and privacy.

Eleni Constanti, Assistant Professor
Software Evolution, Software ecosystems, Mining Software Repositories.

Chris Christodoulou, Professor
Computational and cognitive neuroscience, Neural networks, Machine learning.

Yiorgos Chrysanthou, Professor
Computer graphics, Virtual and augmented reality, Computer games.

Marios D. Dikaiakos, Professor
Network centric computing, with emphasis on grid computing, Web technologies, Mobile computing.

Yannis Dimopoulos, Professor
Artificial intelligence, Knowledge representation and reasoning, Al planning, Non-monotonic reasoning, Constraint satisfaction.

Chryssis Georgiou, Professor
Distributed and parallel computing (Theory and Practice), Fault-tolerance and dependability, Algorithms and complexity, Dynamic computing environments.

Georgia Kapitsaki, Associate Professor
Software engineering, Open source software, Service-oriented computing, Privacy protection.

Elpida Keravnou-Papailiou, Professor
Artificial intelligence in medicine, Diagnostic systems, Temporal information systems in medicine (temporal data abstraction), Intelligent data analysis in medicine/Temporal data mining, Hybrid decision support systems.

Marios Mavronicolas, Professor
Algorithmic game theory, Distributed and parallel computing, Algorithmic issues in communications networks, Computational complexity.

George Pallis, Associate Professor
Internet computing, Cloud computing, Internet of things, Online social networks.
The Department offers postgraduate programmes which lead to the following degrees:

- Master in Mathematical Sciences
- Master in Data Science
- Ph.D. in Mathematics - Applied Mathematics
- Ph.D. in Mathematics - Pure Mathematics
- Ph.D. in Statistics

The Master's programme in Data Science is offered jointly by the Department of Mathematics and Statistics, the Department of Business and Public Administration, and the Department of Computer Science.

Postgraduate Programmes

The Departmental postgraduate programmes are supervised by the postgraduate programmes coordinator, who can be either the Chairperson of the Department or a faculty member appointed by the Departmental Council. The coordinator is the Chairperson of the Postgraduate Studies Committee, of which the members are assigned by the Departmental Council.

Admission to Postgraduate Programmes

The number of postgraduate students to be admitted is announced separately for each specific programme at the Master's or Doctorate level.

For more information, refer to the Admission and Attendance Regulations – Application Requirements or consult the Graduate School, or the Department Secretariat.

Criteria for the evaluation and ranking of the candidates:

1. Prior university training in an appropriate field of study and a transcript of the degree. Appropriate fields of study are Mathematics, Statistics or other related subjects such as Computer Science, Physics, Engineering, etc.

2. Recommendation letters (at least two) from university professors.

3. Personal interview (if necessary).

4. Other qualifications, such as exams, awards, distinctions, etc.

5. Sufficient knowledge of the English language (recommended).

Candidates with insufficient knowledge of mathematics will be required to attend a number of undergraduate courses, in addition to those required by the regulations of the Department.

MASTER IN MATHEMATICAL SCIENCES

Regulations

To obtain a Master's degree in Mathematical Sciences, in order to obtain a Master's degree in Mathematical Sciences, successful completion of 90 ECTS is required by the student. Each course corresponds to 10 ECTS and the Master's thesis to 30 ECTS.

Master’s Thesis

Every postgraduate student must complete a Master’s thesis (MT) (30 ECTS), and each student is responsible to find a supervisor for his/her thesis in accordance with the regulations for a Master’s thesis. A student may choose whether to work on a thesis in Pure or Applied Mathematics.

The Master's thesis has the following codes:

- MAS 801 Master Thesis in Applied Mathematics I (30 ECTS) or
- MAS 802 Master Thesis in Pure Mathematics I (30 ECTS)
- MAS 600 Continuation of Master’s Thesis (0 ECTS) – if needed

Indicative Programme of Studies

<table>
<thead>
<tr>
<th>Options</th>
<th>ECTS per Course</th>
<th>Total</th>
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<td>2 Compulsory Courses</td>
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<td>4 Elective Courses</td>
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<td>Master Thesis</td>
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Indicative Programme of Studies per Semester

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<tr>
<td>1 Compulsory Course</td>
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<td>10</td>
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<td><strong>TOTAL</strong></td>
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<tr>
<td>2 Elective Courses</td>
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<td>20</td>
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<td><strong>TOTAL</strong></td>
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<tr>
<td><strong>Fall Semester</strong></td>
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<tr>
<td>Master Thesis</td>
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<td><strong>Grand Total</strong></td>
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List of Courses

**Compulsory Courses:**
2 compulsory courses (one of each team)

**Group A – One of the following:**
- MAS 601 Measure Theory and Integration
- MAS 606 Function Theory of One Complex Variable
- MAS 632 Riemannian Geometry
- MAS 625 Group Theory
- MAS 626 Galois Theory

**Group B – One of the following:**
- MAS 603 Partial Differential Equations
- MAS 671 Numerical Solution of Ordinary Differential Equations
- MAS 682 Classical Mechanics

**Elective Courses (4 from the following list):**
- MAS 601 Measure Theory and Integration
- MAS 602 Fourier Analysis
- MAS 603 Partial Differential Equations
- MAS 604 Functional Analysis
- MAS 605 Second Order Elliptic Partial Differential Equations

**Elective Courses (4 from the following list):**
- MAS 601 Measure Theory and Integration
- MAS 602 Fourier Analysis
- MAS 603 Partial Differential Equations
- MAS 604 Functional Analysis
- MAS 605 Second Order Elliptic Partial Differential Equations

**Note:** Courses will be offered according to the capacities of the Department.
MASTER IN DATA SCIENCE (MDS)

The Master in Data Science is offered jointly by the Department of Mathematics and Statistics, the Department of Business and Public Administration, and the Department of Computer Science. Data Science is concerned with extracting knowledge from large volumes of data. Nowadays, it constitutes a field of key strategic importance for modern organisations, creating a growing need for highly skilled data scientists. This programme aims at providing students with a strong understanding of basic and advanced methods in statistical inference, machine learning, data visualisation and data mining, which are essential skills for a data scientist. More information can be found on the programme’s website: http://www.datascience.cy.

Ph.D. IN MATHEMATICS
(APPLIED MATHEMATICS)

Requirements for the Ph.D. Programme

Indicative Programme of Studies

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<th>Obligations</th>
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<tr>
<td><strong>Teaching Part</strong></td>
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<td>(partial or full recognition</td>
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<td>of a Master’s degree)</td>
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<tr>
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<td>2 Writing Stages</td>
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<td>Comprehensive Examinations</td>
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<td>(2 three-hour exams)</td>
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<td>Submission of proposal for</td>
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For the completion of a Ph.D. in Applied Mathematics, apart from the general prerequisites for study at the Department, the following are required:

1. **The successful completion of 60 ECTS at the postgraduate level is a prerequisite for the undertaking of a doctoral dissertation according to the programme of studies of the Department.** Partial or full exemption to this requirement may be granted by the Departmental Council, provided that the doctoral student already has a Master’s degree or equivalent title.

2. **Successful completion of the written Comprehensive Examination (CE)**

Candidates must complete the CE requirement up to the seventh semester of their studies. The CE consists of two, three-hour written examinations. The first written examination must be in Analysis (see the syllabus below). For the second exam, the candidate must choose one of four areas (Applied Mathematics, Numerical Analysis, Partial Differential Equations, Numerical Solution of Ordinary Differential Equations – syllabi are given below) in which he/she will take the exam according to the requirements of the Ph.D. programme. Once the doctoral candidate successfully completes both parts of the CE, he/she is considered capable to proceed to the Doctoral Dissertation stage of their studies.

If the candidate succeeds only in one part of the CE, then he/she may attempt to re-take the unsuccessful part during one of the following CE periods. If the candidate fails both parts, then he/she will be given one more chance to pass the CE. The CE in each area is written and corrected by the Department’s faculty who specialise in the chosen areas. A passing score on the CE amounts to a minimum of 50% of the total points. Failure to pass any part of the CE a second time will automatically amount to the termination of the candidate’s doctoral studies. A student must successfully complete the CE before submitting his/her research proposal.

3. **Other Requirements for the Ph.D. Programme**

All other requirements conform to the Rules and Regulations for postgraduate studies of the University of Cyprus.

_Syllabus for the Comprehensive Examination_

**MAS 780 Comprehensive Examination in Analysis (0 ECTS)**


_Bibliography:_

- Royden, H. L. Real Analysis, New York, Macmillan Rudin, W. Principles of Mathematical Analysis.
- Rudin W. Real and Complex Analysis, New York, McGraw-Hill.
- John B. Conway, Functions of one complex variable, Springer Verlag.

_Useful Courses: MAS 601, 606_

Choice of 1 of the following 4 areas:

**MAS 783 Comprehensive Examination in Applied Mathematics (0 ECTS)**

Lie groups and algebras, Equations of Motion (Newton, Lagrange), Poisson structures, Integrable systems, Lax pairs, Bi-Hamiltonian systems, Symmetries, Noether’s theorem, variational calculus, integral equations.
Ph.D. IN MATHEMATICS (PURE MATHEMATICS)

Requirements for the Ph.D. Programme

Indicative Programme of Studies

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<tr>
<td>2 Writing Stages</td>
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<td>Comprehensive Examinations (2 three-hour exams)</td>
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<td>0</td>
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<tr>
<td>Grand Total</td>
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For the completion of a Ph.D. in Pure Mathematics, apart from the general prerequisites for study at the Department, the following are required:

1. The successful completion of 60 ECTS at the postgraduate level is a prerequisite for the undertaking of a doctoral dissertation. Partial or full exemption to this requirement may be granted by the Departmental Council provided that the doctoral student already has a Master's degree or equivalent title.

2. Successful completion of a written Comprehensive Examination (CE)

The candidate must complete the CE requirement up to the seventh semester of their studies. The CE consists of two three-hour written examinations. The CE is based on two out of the three areas (Analysis, Algebra, Geometry – syllabi are given below) that the candidate chooses.

Once the doctoral candidate successfully completes both parts of the CE, he/she is considered capable to proceed to the Doctoral Dissertation stage of their studies.

If the candidate succeeds only in one part of the CE, then he/she may attempt to re-take the unsuccessful part during one of the following CE periods. If the candidate fails both parts, then he/she will be given one more chance to pass the CE. The CE is written and corrected by the Department’s faculty who specialise in the chosen areas. A passing score on the CE amounts to a minimum of 50% of the total points. Failure to pass any part of the CE a second time will automatically amount to the termination of the candidate’s doctoral studies. A student must successfully complete the CE before submitting his/her research proposal.

3. Other Requirements for the Ph.D. Programme

All other requirements conform to the Rules and Regulations for Postgraduate Studies at the University of Cyprus.
Syllabus for the Comprehensive Examination

Choice of 2 of the following 3 areas:

**MAS 780 Comprehensive Examination in Analysis (0 ECTS)**

**Bibliography:**
- Royden, H. L. Real Analysis, New York, Macmillan
- Rudin, W. Principles of Mathematical Analysis.
- Rudin W. Real and Complex Analysis, New York, McGraw-Hill.
- John B. Conway, Functions of one complex variable, Springer Verlag.

**Useful Courses: MAS 601, 606**

**MAS 781 Comprehensive Examination in Algebra (0 ECTS)**

**Bibliography:**
- I. Herstein, Topics in Algebra, N.Y. Wiley.
- P. Cameron, Introduction to Algebra, Oxford University Press.

**Useful Courses: MAS 625, 626**

**MAS 782 Comprehensive Examination in Geometry (0 ECTS)**

**Bibliography:**
- M. Do Carmo, Riemannian Geometry, Birkhauser.

**Useful Courses: MAS 631, 632**

**Ph.D. IN STATISTICS**

**Requirements for the Ph.D. Programme**

**Indicative Programme of Studies**

<table>
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<tr>
<td>Teaching Part (partial or full recognition of a Master’s degree)</td>
<td>At least 60</td>
<td></td>
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<tr>
<td>4 Research Stages</td>
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<tr>
<td>2 Writing Stages</td>
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<td>60</td>
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<tr>
<td>3 Comprehensive Examinations</td>
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<td>0</td>
</tr>
<tr>
<td>Submission of proposal for</td>
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</tr>
<tr>
<td>Dissertation</td>
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<tr>
<td>Defense of Dissertation</td>
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<td>0</td>
</tr>
<tr>
<td>Grand Total</td>
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</tbody>
</table>

For the completion of a Ph.D. in Statistics, the following are required:

1. The successful completion of 60 ECTS at the postgraduate level for the undertaking of a doctoral dissertation according to the provisions of the programme of studies of the Department. Partial or full exemption to this requirement may be granted by the Departmental Council provided that the doctoral student already has a Master’s degree or equivalent title.

Among the 60 ECTS, the student must complete:
- At least 10 ECTS in Probability Theory (MAS 660)
- At least 10 ECTS in Statistical Theory (MAS 670)
- At least 10 ECTS in Simulation and Data Analysis (MAS 658)

A Ph.D. student who fails a postgraduate course, may re-take the same course one more time. If the course is a
compulsory one, a second failure entails the student’s automatic termination of studies.

In accordance with the regulations of the University of Cyprus, an undergraduate course from any University Department may be included in the compulsory courses of the Ph.D. programmes.

The remaining 30 ECTS may be completed with any postgraduate courses offered by the Department, including reading courses.

2. Comprehensive Examination (CE)
Successful completion of the following CEs with a grade equal to at least 7.5 for every examination:
• CE in Probability Theory (MAS 760) – 0 ECTS
• CE in Statistical Theory (MAS 770) – 0 ECTS
• CE in Simulation and Data Analysis (MAS 758) – 0 ECTS

The CEs in Probability Theory (MAS 760) and Statistical Theory (MAS 770) correspond to the final exams for MAS 660 and MAS 670. The CE in Simulation and Data Analysis (MAS 758) is comprised of an open lecture on a project involving data analysis and computations. The relevant project will be assigned during the semester and students will have maximum four weeks to complete the relevant analysis.

The CEs are graded on a pass/fail basis. A student must complete the CE requirement by the seventh semester of their studies and prior to the submission of his/her Research Proposal.

3. Additional Requirement for Ph.D. Students
All doctoral students must enrol in the Seminar of Applied Statistics for at least 6 semesters.

<table>
<thead>
<tr>
<th>Seminar Codes</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAS 751 Seminar in Applied Statistics (Ph.D.) I</td>
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<tr>
<td>MAS 752 Seminar in Applied Statistics (Ph.D.) II</td>
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<tr>
<td>MAS 753 Seminar in Applied Statistics (Ph.D.) III</td>
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<tr>
<td>MAS 754 Seminar in Applied Statistics (Ph.D.) IV</td>
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<tr>
<td>MAS 755 Seminar in Applied Statistics (Ph.D.) V</td>
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<tr>
<td>MAS 756 Seminar in Applied Statistics (Ph.D.) VI</td>
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</tbody>
</table>

4. Other Requirements for the Ph.D. programme
All other requirements conform to the Rules and Regulations for Postgraduate Studies at the University of Cyprus.

The Syllabus Content for the Comprehensive Examination (CE) in Statistics

MAS 758 Comprehensive Examination (CE) in Statistical Simulation and Data Analysis (0 ECTS)
The CE in Statistical Simulation and Data Analysis consists of an open-to-the-public presentation of a project on statistical data analysis and computations. The relevant project will be assigned during the semester and students will have maximum 4 weeks to complete the relevant analysis.

MAS 760 Comprehensive Examination in Probability Theory (0 ECTS)
Measure theoretic probability, measure theory and integration, σ-algebras, monotone classes, events, probability spaces, stochastic independence, 0-1 laws, the Borel-Cantelli lemmas, random variables, distribution of a random variable, continuous and discrete random variables, distribution of a function of a random variable, random vectors, expectation of a random variable, expected value and independence, expected value as the integral with respect to a probability measure, properties of integration, moments, probability inequalities, conditional expectation, modes of convergence of a sequence of random variables, uniform integrability, convergence of moments, moment generating functions, characteristic functions, theorems of continuity and inversion, infinite divisibility laws and stable laws, central limit theorem, Lindeberg-Feller theorems, weak and strong laws of large numbers, properties of random walk, limit theorems, definition and properties of martingales, martingale inequalities, convergence criteria, weak and strong laws of large numbers for martingales, central limit theorem for martingales.

Bibliography:

MAS 770 Comprehensive Examination in Statistical Theory (0 ECTS)

Bibliography:
Moreover, the following courses may be offered as restricted electives within the Department, and students may enrol in them in order to deepen their knowledge in the relevant fields.

**Course Descriptions**

**MAS 601 Measure and Integration (10 ECTS)**

**MAS 602 Fourier Analysis (10 ECTS)**

**MAS 603 Partial Differential Equations (10 ECTS)**

**MAS 604 Functional Analysis (10 ECTS)**

**MAS 605 Elliptic Partial Differential Equations of Second Order (10 ECTS)**
Laplace equation, fundamental solutions, Green’s function, maximum principle, Poisson kernel, Harmonic functions and their properties, equations with variable coefficients, Dirichlet problem, existence and regularity of solutions.

**MAS 606 Function Theory of One Complex Variable (10 ECTS)**

**MAS 607 Function Theory of Several Complex Variables (10 ECTS)**
Basic facts about holomorphic functions of several complex variables. Power series and multi-circular domains. Laurent and Hartogs series. Division Theorem and different type of convexities. Integral representations of holomorphic functions of several complex variables (Bochner-Martinelli, Cauchy - Fantappie and Bergman-Weil formulas), Christoffel- Darboux kernels and applications to several complex variables.

**MAS 613 Ordinary Differential Equations (10 ECTS)**

**MAS 617 Topics in Mathematical Analysis I**
Topics in Real Analysis, Complex Analysis or Differential Equations, depending on the special interests of the faculty member teaching the course.

**MAS 620 Approximation Theory (10 ECTS)**
Introduction to Normed spaces and Linear Operators, Theorems of Stone-Weierstrass, Spaces of Functions, Best Approximation, Chebyshev Theorem, Degree of Approximation by Trigonometric and Algebraic Polynomials, Wavelet orthonormal basis, Non linear Wavelet Approximation.

**MAS 621 Numerical Linear Algebra (10 ECTS)**

**MAS 622 Algebraic Coding Theory (10 ECTS)**

**MAS 623 Number Theory (10 ECTS)**
Introduction to algebraic number theory. Quadratic reciprocity, Gauss and Jacobi sums. Field extensions, finite fields, ideal classes. Quadratic and cyclotomic fields. Applications to Diophantine equations.

**MAS 624 Introduction to Commutative Algebra (10 ECTS)**

**MAS 625 Group Theory (10 ECTS)**

**MAS 626 Field and Galois Theory (10 ECTS)**
Polynomial rings. Field extensions, splitting fields. Separable extensions, normal extensions. The fundamental theorem of
Galois theory. Roots of unity and cyclotomic polynomials. Solution by radicals and the Abel-Ruffini theorem.

**MAS 627 Group Representation Theory I (10 ECTS)**


**MAS 628 Group Representation Theory II (10 ECTS)**


**MAS 629 Topics in Algebra I (10 ECTS)**

Topics from algebra.

**MAS 630 Algebraic Geometry (10 ECTS)**


**MAS 631 Differential Topology (10 ECTS)**


**MAS 632 Riemannian Geometry (10 ECTS)**


**MAS 633 General Relativity (10 ECTS)**

Lorentz geometry. Special relativity, Newton spacetime, Minkowski spacetime. Lorentz transformation. Einstein equations. Special solutions (Schwarzschild).

**MAS 634 Algebraic Topology I (10 ECTS)**

Fundamental group, Van Kampen theorem, Covering spaces, Homology and Cohomology, The Mayer Vietoris sequence, Excision, Relation between homology and fundamental group.

**MAS 635 Lie Groups and Lie Algebras (10 ECTS)**


**MAS 636 Algebraic Topology II (10 ECTS)**


**MAS 637 Spectral Geometry (10 ECTS)**


**MAS 638 Spin Geometry (10 ECTS)**


**MAS 640 Topics in Geometry I**

Topics from Differential Geometry, Algebraic Geometry and Algebraic Topology. Depends on the special interests of the staff member teaching it.

**MAS 641 Topics in Geometry II (10 ECTS)**


**MAS 653 Generalised Linear Models (10 ECTS)**


**MAS 654 Nonparametric Statistics (10 ECTS)**

Survey design and sampling, clusters and non-sampling errors, simple random sampling, stratified sampling, systematic sampling, cluster sampling, ratio estimators, regression estimators, determination of optimal sample size, bias in survey sampling, modern techniques of survey sampling. Special techniques for human populations in cases of stigmatizing characteristics.

**MAS 656 Time Series Analysis (10 ECTS)**


**MAS 657 Analysis of Discrete Data (10 ECTS)**

MAS 658 Statistical Simulation and Data Analysis (10 ECTS)
Introduction to R, diagnostic statistics, simulation methods, Monte-Carlo simulation, optimisation, bootstrap and resampling techniques.

MAS 659 Multivariate Analysis (10 ECTS)

MAS 660 Probability Theory (10 ECTS)
Measure spaces and a-algebras, independence, measurable functions and random variables, distribution functions, Lebesgue integral and expectation, convergence concepts, law of large numbers, characteristic functions, central limit theorem, conditional probability, conditional expectation, martingales, central limit theorem for martingales.

MAS 661, MAS 662, MAS 663 Topics in Statistics I, II, III (10 ECTS)
Topics from Statistics and their applications.

MAS 665 Computational Statistics (10 ECTS)

MAS 666 Biostatistics (10 ECTS)

MAS 670 Statistical Theory (10 ECTS)
Stochastic convergence, estimation, asymptotic properties of estimators, efficiency, testing hypotheses, asymptotic properties and efficiency of testing procedures, convergence in metric spaces, empirical processes.

MAS 671 Numerical Solution of Ordinary Differential Equations (10 ECTS)

MAS 672 Numerical Solution of Partial Differential Equations (10 ECTS)

MAS 673 Finite Element Methods Sobolev spaces (10 ECTS)

MAS 677 Topics in Numerical Analysis I
MAS 678 Topics in Numerical Analysis II
MAS 679 Topics in Numerical Analysis III (10 ECTS)
Topics in Computational Mathematics and Approximation Theory.

MAS 682 Classical Mechanics (10 ECTS)

MAS 683 Fluid Dynamics (10 ECTS)

MAS 684 Scientific Computation with MATLAB (10 ECTS)

MAS 687 Topics in Applied Mathematics I
MAS 688 Topics in Applied Mathematics II
MAS 689 Topics in Applied Mathematics III (10 ECTS)
Topics from Applied Mathematics

MAS 697 Topics in Differential Equations I
MAS 698 Topics in Differential Equations II
MAS 699 Topics in Differential Equations III (10 ECTS)
Topics in Differential Equations, Partial differential equations, Potential theory, Calculus of variations.
Andreas Anastasiou, Lecturer
Asymptotic statistics, Distributional approximations, Change-point detection in time series.

Sergios Agapiou, Assistant Professor
Bayesian nonparametric statistics, Inverse Problems

Anastasia Baxevani, Associate Professor

Nelia Charalambous, Associate Professor
Global analysis, Mathematical physics.

Tasos Christofides, Professor

Cleopatra Christoforou, Professor

Konstantinos Fokianos, Professor
Integer-Valued time series, Semiparametric statistics, Analysis of spatial data, Analysis of large data sets, bioinformatics.

Georgios Georgiou, Professor
Computational rheology, Computational fluid dynamics, Numerical analysis, Numerical solution of partial differential equations, Computational oceanography.

Evis Ieronymou, Assistant Professor
Arithmetic algebraic geometry, Number theory.

Andreas Karageorghis, Professor
Numerical algorithms, Scientific computing.

Stamatis Koumandos, Professor
Harmonic analysis, Orthogonal polynomials, Special functions, Approximation theory, Analytic number theory.

George Kyriazis, Professor
Approximation theory, Harmonic analysis.

Emmanouel Milakis, Professor
Partial differential equations, Free boundary problems, Geometric measure theory.

Chrestos Pallikaros, Associate Professor
Group representation theory, Representations of hecke algebras.

Efstathios Paparoditis, Professor
Time series analysis, Bootstrap methods, Multivariate analysis, Non-parametric statistics.

Evangelia Samiou, Associate Professor
Differential geometry, Riemannian geometry.

Theofanis Sapatinas, Professor
Functional time series analysis, Non-parametric statistical inference.

Yiorgos-Socrates Smyrlis, Professor

Christodoulos Sophocleous, Professor
Mathematical physics, Non-linear optics and Non-linear partial differential equations.

Xenia Miscouridou, Lecturer

Nikos Stylianopoulos, Professor

Nicolaos Tziolas, Professor
Algebraic geometry.

Alekos Vidras, Professor
Complex analysis (Multidimensional Residues, Mean Periodicity), Carleman Formulas, Bohr phenomena.

Chrestos Xenophontos, Professor

Contact Details
DEPARTMENT SECRETARIAT
Tel.: +357 22892600
E-mail: commas@ucy.ac.cy
www.ucy.ac.cy/mas/en
The objective of the postgraduate programmes in Physics is to promote research and knowledge in the area of Physics. The Department offers postgraduate programmes leading to M.Sc. and Ph.D. degrees in Pure and Applied Sciences.

Department’s Objectives
A deep understanding of current and new physical principles comes through the creation of theoretical models and, of course, their experimental verification. The objective target is the combination of all these theories and the understanding of the physical world. The results of these efforts are the promotion of new knowledge, which can be used in order to improve the standard of living. Electronic devices, telecommunications, artificial fibres, lasers and detectors are some of the technological applications. Also, solutions to many problems such as environmental pollution, the discoveries of new energy sources, and the protection from physical catastrophes are found through progress and achievements in fundamental and applied Physics.

Postgraduate Physics students can be employed in regional industry or in high technology companies; they can become researchers/teachers in research centres/universities; or, they can become teachers in secondary schools.

Since the study of Physics not only provides knowledge in the field but also offers a unique and efficient way of solving problems, postgraduate students in Physics are usually employed in other disciplines.

Postgraduate Programmes
The Department of Physics offers M.Sc. and Ph.D. degrees in Physics. Students must successfully complete a number of graduate courses with a minimum of 120 ECTS. Fifty of these ECTS correspond to five mandatory core courses, whereas 10 ECTS correspond to an elective course in the area in which the student will specialise. The remaining 60 ECTS are fulfilled by the successful completion of the M.Sc. thesis.

Postgraduate students in the Doctoral programme must pass the five compulsory core courses and one specialisation course. After the successful completion of these six postgraduate courses, the Ph.D. candidate must pass a comprehensive examination in the area in which the candidate will specialise. Candidates must also take at least 40 ECTS in courses in addition to the five core courses. These courses must comprise specialisation courses relevant to their field, as well as at least one course outside their area of specialisation. The possession of an M.Sc. degree partially or completely exempts students from the required completion of the above 90 ECTS. The final requirement for the Doctoral degree is the submission of an original thesis. After the completion of the thesis, students will defend their work before a five-member Committee.

Table of Courses

<table>
<thead>
<tr>
<th>Core Courses for Master and Ph.D</th>
<th>ECTS</th>
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<tbody>
<tr>
<td>PHY 625 Quantum Mechanics I</td>
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<tr>
<td>PHY 626 Quantum Mechanics II</td>
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<tr>
<td>PHY 631 Electromagnetism</td>
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<tr>
<td>PHY 641 Statistical Physics</td>
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<td>PHY 811 Experimental Physics</td>
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<table>
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<th>Master Specialisation Course</th>
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<td>One Course outside the area of specialisation</td>
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<td>PHY 873 Research Stage IV</td>
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<td>PHY 880 Writing Stage I</td>
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<td>PHY 881 Writing Stage II</td>
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</tr>
</tbody>
</table>

Research Interests
The postgraduate students, in addition to their research activity, also help in the organisation of the Department laboratories.

The Department staff participates in research programmes in collaboration with research centres and universities abroad as well as research programmes of the European Community, which are increasing annually. In addition, the Department works with regional industry and other research communities in Cyprus.
The research interests of the Department focus on the following areas:
• Theoretical and Experimental Nuclear Physics
• Theoretical and Experimental High Energy Physics
• Photonic, Lasers and Optoelectronics
• Theoretical and Experimental Condensed Matter Physics
• Theoretical and Computational Biophysics

Course Descriptions

Core Courses

PHY 625 Quantum Mechanics I (10 ECTS)
• Double slit experiments: The Complementarity Principle is more fundamental than the Uncertainty Principle, its quantification with recent inequalities, Quantum Eraser.
• Dirac formalism: Application but also its “dangers” (cases of Hermiticity but non-self-adjointness), Emergent non-Hermiticity in Ehrenfest and Hellmann-Feynman theorems.
• Position and momentum representations: Systems with Spatially-uniform force fields, Propagators, Harmonic Oscillator.
• Schrödinger picture: Conservation laws, Dynamical symmetries and degeneracies, Galilei transformation.
• Angular momentum (orbital and spin): Pauli algebra, Systems with bound states.
• Quantum particle in external electric and magnetic fields: Gauge transformations (ordinary but also singular), Magnetic Aharonov-Bohm (AB) effect and relevant nanosystems, Electric fields and time-dependent Hamiltonians, Electric AB effect, Landau Levels, Quantum hall effect.
• Perturbation theories and time-dependent phenomena.
• Adiabatic approximation: Geometric and topological phases (Berry curvature, Aharonov-Annandan phase).

PHY 626 Quantum Mechanics II (10 ECTS)
• Classical fields: Action of electromagnetism. Gauge symmetry. Non-Abelian fields; Application to the standard model.
• Topics in perturbation theory; Time-dependent perturbations. Radiation emission, Absorption. Raman scattering.
• Functional integrals: Heisenberg - Schrödinger pictures. The Propagator as a sum over paths.

PHY 631 Electromagnetism (10 ECTS)
• Electrostatics and magnetostatics: Boundary value problems, Electric and magnetic dipole moments, Multipole moments, Static fields in matter, Conductors, Dielectrics, Magnetic materials, Electromagnetic forces and energy.
• Time varying fields: Maxwell equations, Gauge transformations, The electromagnetic energy density, Poynting Vector and Maxwell stress tensor, Conservation laws, Advanced and retarded green functions, Lorentz transformations of the electromagnetic fields.
• Electromagnetic waves in matter, dispersion, Applications in optics, Waveguides, Simple harmonic radiating systems, Dipole radiation, The Lienard-Wiechart potentials, Radiation by moving charges and applications.

PHY 641 Statistical Physics (10 ECTS)
From quantum mechanics to statistical mechanics, coherence-decoherence transition, from the wave function to the density matrix, ensembles in statistical mechanics, the concept of entropy, the role of second law of thermodynamics, the three basic ensembles (microcanonical, canonical, grand canonical), the partition function, the free energy Helmholtz and Gibbs, energy and density fluctuations, from the Schrodinger equation to the equation of state, the ideal gas in canonical and grand canonical ensemble, the ideal Fermigas, Bose systems, photons and phonons, Bose-Einstein condensation, the principles of Classical Statistical Mechanics, phase space and the Liouville theorem, equipartition theorem, real gases, cluster and virial expansion, phase transitions, the Lee-Yang theory, the Ising model, critical phenomena, order parameter, correlation length, critical exponents, the scaling hypothesis, Goldstone excitations, the Ginzburg-Landau theory, critical and tricritical points, anomalous dimensions, the Kadanoff-Wilson Theory, introduction to the renormalisation group.

PHY 681 Graduate Experimental Physics (10 ECTS)
• Fluorescent/phosphorescent decay time: use of an optical setup with a pulsed laser to excite a variety of fluorescent and/or phosphorescent materials in order to determine characteristic decay times. The time dependent information is obtained via the use of boxcar integrator electronics.
• Gamma ray spectroscopy: use of an ultra-pure Ge detector at low temperature for measurements of gamma ray spectra. Use of specialised pulse amplification and conditioning electronics.
• Non-ionising radiation: use of a spectrum analyser for the analysis of electromagnetic signals ranging in frequency from 10 Hz to 10 GHz.
• Photothermal radiometry: measurement of photo-induced thermal response. Use of cryogen cooled infrared photodetector and acousto-optically modulated photooxcitination in combination with a lock-in technique.
• Paramagnetic resonance: measurement of the gyromagnetic ratio of the electron using an electron spin resonance experiment and lock-in techniques.

Specialisation Courses

PHY 650 Quantum Field Theory I (10 ECTS)
PHY 651 Ultrashort Laser Pulse Phenomena (10 ECTS)
Characteristics of femtosecond pulses, femtosecond optics, light-matter interaction, coherent phenomena, ultrashort sources, femtosecond pulse amplification, pulse shaping, measurement techniques of femtosecond spectroscopy, generation of extreme wavelengths.

PHY 652 Fiber Optics and Applications in Telecommunications (10 ECTS)
Introduction to fiber optics, planar waveguides, fiber optics fundamentals, materials and fabrication of optical fibers and cabling, non-linear phenomena in optical fibers, fiber optics in telecommunications and the revolution of fiber Bragg gratings. Photosensitivity in optical fibers, properties of fiber Bragg gratings, fabrications of Bragg gratings in optical fibers, theory of Bragg gratings in optical fibers, applications of fiber Bragg gratings in telecommunications.

PHY 653 Quantum Field Theory II (10 ECTS)
- The systematics of renormalisation. Dimensional regularisation. Perturbation theory to one loop and beyond.
- Functional quantisation: Functional integrals in quantum mechanics and field theory. Connection to statistical mechanics, Quantisation of fermions and gauge fields.
- Renormalisation a la Wilson, renormalisation group: The Callan-Symanzik equation, Running coupling constant.

PHY 654 Ultrafast Spectroscopy of Semiconductors and Semiconductor Nanostructures (10 ECTS)
Semiconductor basic concepts, Band structure, Exciton, Phonons in semiconductors, Scattering processes in semiconductors, Carrier relaxation, Carrier transport, Ultrafast lasers, Ultrafast spectroscopy techniques, Interpretation of results. Coherent spectroscopy of semiconductors, Initial relaxation of photo-excited carriers, Cooling of hot carriers, Phonon and exciton dynamics, Carrier tunnelling in semiconductor nanostructures, Carrier transport in semiconductor nanostructures, Monte-Carlo simulation of carrier and phonon dynamics, Experimental pump-probe techniques, Luminescence spectroscopy.

PHY 655 Lattice Gauge Theories (10 ECTS)

PHY 656 Modern Topics in Theoretical Condensed Matter Physics (10 ECTS)
Electrons in a magnetic field: Integer and fractional quantum hall effect (Composite fermions), Two-dimensional electron-hole systems and their hidden symmetries (conservation of pseudomomentum), Wigner Crystal and competitive phases. Graphene, Topological Insulators, Topological (Dirac and Weyl) semimetals, Topological superconductors and Majorana fermions.

PHY 657 Quantum Many-Body Theory and Applications in Solid State Physics (10 ECTS)

PHY 658 Physics of Hot and Compressed Nuclear Matter (10 ECTS)
- Creation of hot and dense nuclear matter in relativistic heavy-ion collisions
- Chiral dynamics of Quantum chromodynamics
- Chiral symmetries
- Breakdown and restoration of chiral symmetry in hot and dense hadronic medium
- Experimental evidence of chiral symmetry restoration in heavy-ion collisions
- Creation of particles and resonances near to the production energy threshold
- Production of vector mesons in hadronic nuclear medium
- Production and spectroscopy of di-leptons in heavy-ion collisions

PHY 659 Advanced Topics in Nuclear Physics (10 ECTS)
- Fundamental building blocks and interactions in the subatomic nucleus
- Creation and interactions of composed nuclear systems
- Chiral symmetry and chiral dynamics in Quantum Chromodynamics (QCD)
- Nuclear reactions
- Production of mesons and resonances
- Particle accelerators and particle detector systems

PHY 660 Exotic States of Matter in a Magnetic Field (10 ECTS)
Integer quantum hall effect in conventional heterostructures and quantum anomalous hall effect in graphene. Topological insulators and Dirac and Weyl semimetals in a magnetic field, exotic magnetoellectric properties (with appearance of magnetic monopoles), Fractional quantum hall effect and composite fermions. Wigner Crystal in 3- and 2-dimensional condensed matter, competition with Laughlin liquid and with fractional quantum hall effect states. Paired electronic states and the passage to exotic superconductivity. Bubble and stripe phases in higher Landau levels.
PHY 661 Advanced Topics in Particle Physics (10 ECTS)
- The Quark-Parton model
- Deep inelastic scattering and sum rules
- Weak interactions
- Gauge theories in fundamental interactions
- Electroweak unification: The Glashow-Weinberg-Salam model
- Problems of the standard model
- Supersymmetry and dark matter

PHY 662 Special Topics in Particle Physics (10 ECTS)
- Neutrino oscillations
- Electron-positron collider physics
- Proton- (Anti)Proton collider physics
- Detectors and methodology for new particle searches
- Cosmology and particle physics

PHY 663 Measurement and Detection Techniques of Nuclear Radiation (10 ECTS)
- Introduction to nuclear radiation
- Statistical distributions and experimental errors in radiation measurements
- Interaction of nuclear radiation with matter
- Nuclear electronics
- Gas-filled detectors
- Scintillation detectors
- Semiconductor detectors
- Introduction to nuclear spectroscopy
- Determination of activity concentration of radioisotope
- Dosimetry
- Application of nuclear radiation to medicine

PHY 664 Statistical and Computational Physics of Biomolecular Systems (10 ECTS)
A. Theoretical Topics (5 weeks)
- Elements of protein and nucleic acid structure
- Intra- and intermolecular interactions in biomolecular systems
- Thermodynamics of biomolecular systems
- The effect of solvent on the thermodynamic stability of biopolymers. Implicit solvent models (from liquid state theory and continuum electrostatics)
- Statistical mechanical theories of protein stability and folding

B. Computational Topics (4 weeks)
- Hamiltonians employed in atomic-detail simulations of biomolecules
- Molecular Dynamics (MD) simulations. Basic concepts (MD algorithms; MD in various ensembles; Langevin dynamics)
- MD simulation methods for the efficient sampling of biomolecular phase space
- Monte Carlo (MC) simulations; General methodology
- MC simulation methods for the efficient sampling of biomolecular phase space
- Protein folding simulations in implicit and explicit solvent
- Free-energy calculations in biomolecular systems Theory and implementation

C. Computational Applications (3 weeks)
This part is carried out as a set of computational exercises, utilizing specialised software (e.g., CHARMM, UHBD):
- Energy minimisation methods and determination of normal modes of vibration in biomolecular systems
- MD simulations in vacuum; heating, equilibration and production stages
- MD simulations with implicit solvent models
- MD simulations in explicit solvent; periodic boundary conditions; stochastic boundary conditions
- Principal component analysis of MD trajectories
- Free-energy perturbation calculations; application in biomolecular systems
- Determination of the electrostatic field of a solvated biomolecule by finite-difference solution of the Poisson-Boltzmann equation

PHY 665 Quantum Mechanics of Biomolecular Systems: Theoretical and Computational Methods (10 ECTS)
1. Electronic and Vibrational States of Molecules
- The Born-Oppenheimer approximation
- Molecular electronic states and potential energy surfaces
- Molecular vibrational states and normal coordinates
- The adiabatic and diabatic representations of the molecular Hamiltonian

2. Quantum Mechanics of Open Systems
(The density matrix formalism for the interaction of a system with a bath)
- The reduced density matrix for a system interacting with a bath
- The bath correlation function
- Quantum master equations
- The Markov approximation and the Redfield equations for the calculation of quantum transition rates within the system
- Numerical examples

3. Methods for the Computation of the Electronic Structure of Molecules
- Many-electron states
- The Hartee-Fock method
- The density functional method
- Methods based on perturbation theory
- Configuration interaction methods
- Computational examples

4. Applications to Biomolecular Systems
Charge transfer reactions:
- Marcus and Levich-Dogonadze theories
- Electron transfer pathways in proteins
- DNA electron transfer
- Proton transfer in enzymatic reactions
Energy transfer reactions:
- Relaxation and redistribution of vibrational energy in biomolecules
- Exciton transfer in photosynthesis

PHY 667 Group Theory in Physics (10 ECTS)
Symmetries: definition, physics consequences of symmetries, symmetries in classical mechanics and in quantum mechanics. Discrete/continuous symmetries, Local/Global symmetries.
Finite groups: reducible representations, characters, Schur’s lemma, tensor products, permutation groups, young tableaux, crystallography groups, Brillouin zones in crystals, Energy level splitting in atoms.

Continuous groups: Lie groups, Lie algebras.

Rotation group: Representations in classical mechanics, Angular momentum in quantum mechanics, Clebsch-Gordan coefficients, Lorentz group and its spinorial representations.

Root and weights: Dynkin diagrams, Classification of classical groups.

SU(N) groups in particle Physics: Isospin, Hypercharge, Hadronic spectrum, Construction of grand unification models.

Supersymmetry: Supersymmetric algebras and groups, applications to the minimal symmetric standard model and to supergravity.

Infinite dimensional algebras: Virasoro algebra, Kac-Moody algebra. Applications in conformal field theory and String theory.

PHY 668 Terahertz Pulse Spectroscopy (10 ECTS)

This course will provide an up-to-date reference on state-of-the-art terahertz spectroscopic techniques, focusing particularly on time-domain methods based on femtosecond laser sources and reviewing important recent applications of terahertz spectroscopy in Physics. The course will cover the following:

- Terahertz time-domain spectroscopy with photoconductive antennas
- Nonlinear optical techniques for terahertz pulse generation and detection-optical rectification and electro-optic sampling
- Time-resolved Terahertz spectroscopy and Terahertz emission spectroscopy
- Time-resolved Terahertz studies of carrier dynamics in Semiconductors
- Superconductors and strongly correlated electron materials
- Time-resolved terahertz studies of conductivity processes in novel electronic materials

PHY 669 Optical Properties of Semiconductors (10 ECTS)

Energy states: Phonons, Electronic/excitonic states, Impurity states, perturbation of states by Strain/ Temperature/Electric/ Magnetic fields

Optical absorption: Interband/Intraband/Excitonic absorption, Free carrier/Lattice absorption, Kramers-Kronig relationships, Optical constants, Absorption spectroscopy

Emission: Einstein relationships, Interband/excitonic emission, Impurity radiative transitions, Luminescence spectroscopy

Non-radiative transitions: Recombination via surface states/defects/impurities, Auger

Optical properties of quantum structures: Quantum Well/dots/wires, carbon nanostructures

Light emission devices: Light emitting diodes, Lasers

Magneto - optical effects: Faraday/Voigt/Kerr effects, Magneto-absorption/Luminescence, Magneto-optical techniques

Photovoltaic structures: Optical properties of solar cells: p-n junction, Schottky, Inorganic/organic/hybrid hetero-structures

PHY 670 Spintronics (10 ECTS)

Introduction: Spin physics in solids, Spin relaxation mechanisms, Spin-orbit interaction, Spin coherence in semiconductors.

Spin dependent electronic transport: Spin diffusion, Spin tunnelling, Spin injection/detection, Optical spin Orientation and spin pumping, Giant and tunnelling magnetoresistance (GMR and TMR), Local and non-local phenomena.

Pure spin currents: Spin Hall Effect (SHE or ISHE), Spin caloritronics.

Spintronic devices: Magnetic recording, Magneto-resistive Random Access Memory (MRAM), Spin-transfer memory and oscillators, Spin transistors, Spin lasers, Devices for Logic or quantum computing.

PHY 671 Nanomagnetism and Applications (10 ECTS)

Introduction: Magnetic materials, Units in magnetism, Contributions to magnetic energy, Domains and domain walls.

Magnetism in low dimensions: Anisotropy in reduced dimensions, Magnetic textures in thin films and nanostructures, Domain walls.

Dynamics: The Landau-Lifshitz-Gilbert equation, Ferromagnetic resonance, Domain wall motion.

Experimental techniques: Static and dynamic magnetometry, Magnetic imaging, Ultra high purity crystal nanostructure growth.

Exotic states of magnetic textures: Domain wall bound states, Vortices, Skyrmions.

PHY 672 Particle Detectors – Physics and Applications (10 ECTS)

Introduction to the experimental techniques used in nuclear and particle physics. Design and operational principles of modern detectors used in High Energy Particle Physics. Topics covered include the theory of interactions of particle with matter, scintillators and time of flight detectors, gas detectors, semiconductor detectors, tracking devices and algorithms for track reconstruction, operation principles of calorimeters and the design of modern calorimeters, detectors for particles identification. Triggering and Data acquisition systems. Large and complex detectors like the ones in LHC, Tevatron and future lepton colliders. Presentation of modern algorithms for jet reconstruction, and for the identification of b-quark and top-quark jets. Hands on experience with these algorithms using Monte Carlo events. Modern Cherenkov detectors, Σύγχρονοι ανιχνευτές Cherenkov, semiconductor scintillators and photomultipliers, TPC detectors and their use in collider and neutrino experiments. Particle physics and particle detectors in medical applications.

PHY 674 Physics at the TeV Regime (10 ECTS)

Presentation of the Physics at the energy scale of LHC and future hadron and lepton colliders. Connection between theory and recent results from LHC experiments with emphasis to topics from the physics of QCD, proton structure functions and hadronisation in p-p collisions, emerging phenomena from heavy ion collisions, new observations in the heavy quark sector (top and b), rate B-meson decays, Electroweak gauge bosons, and studies related to the properties of the Higgs boson. Presentation of new ways and techniques in searching for SUSY, and other topics related to searches for new phenomena beyond the Standard Model like dark matter candidates, extra space dimensions, microscopic black holes, flavour changing neutral currents, lepton flavour violation models, composite
Higgs models, leptoquarks, technicolour and alternative solutions for the dynamics of Electroweak Symmetry Breaking. Connection of the results from LHC to the results from other non-accelerator based experiments and the constraints imposed to various theoretical models.

PHY 675 Principles of Mössbauer Spectroscopy (10 ECTS)

A. Introduction to the Mössbauer spectroscopy – basic principles
   • The γ-ray resonance
   • The Doppler effect
   • The recoil effect
   • Mössbauer effect and the interpretation of the spectra
   • Hyperfine interactions
   • Isomeric shift
   • Electric quadruple splitting
   • Magnetic hyperfine splitting

B. Mössbauer Spectroscopy
   • The Mössbauer spectroscopy experimental setup
   • Calibration procedure
   • Radioactive sources
   • Determination of the valence and the spin
   • Preparation of samples – absorbers
   • Spectra measurements procedure
   • Mössbauer spectra analysis and interpretation
Constantia Alexandrou, Professor
Lattice QCD, Variational methods in field theories, Many-body systems, Stochastic Techniques for Many-Fermion Systems.

George Archontis, Associate Professor

Constantinos Christofides, Professor
Laser photothermal physics and instruments, Material sciences, Sensor devices, Solar cells and solar materials, Solar energy applications, Photothermal applications in archaeometry and art.

Grigorios Itskos, Associate Professor

Konstantinos Moulopoulos, Associate Professor
Theoretical physics of condensed matter: Microscopic theories of strongly correlated systems (Superconductivity, Metal-Insulator Transitions), Electronic properties in exotic potentials (Quasicrystals), Aharonov-Bohm configurations and quantum Hall effect.

Andreas Othonos, Professor

Haralambos Panagopoulos, Professor
Quantum field theory, Theoretical particle physics, Physics of strong interactions, Computational physics.

Photis Ptohos, Associate Professor
Experimental high energy physics in proton-antiproton and proton-proton colliders. Design, construction and calibration of particle detectors, data analysis with emphasis on heavy quark physics (top and bottom) and their connection to the physics of Higgs boson and exotic phenomena beyond the standard model predictions (Supersymmetry, extra dimensions, new dynamics).

Panos Razis, Professor
Experimental high energy physics, Electron-positron and proton-proton colliders, Particle detectors, Data acquisition, Calibration, supersymmetry, Higgs, Rare decays, Unification theories, Cosmology, Medical physics.

Spiros Skourtis, Associate Professor
Theory of molecular electron transfer reactions, Chemical and biological tunnelling phenomena, Theory of reaction rates in condensed phases, Protein structure-function relationships, Protein dynamics-function relationships, Molecular electronics.

Stavros Theodorakis, Associate Professor
Theoretical condensed matter physics (Bose-Einstein condensates, phenomenology of high temperature super-conductors, phenomenology of superfluid helium). Nonlinear physics.

Nicolaos Toumbas, Associate Professor
Theoretical high energy physics, M/Superstring theories of quantum gravity, black holes, gravity/gauge theory dualities and their holographic interpretation and non-commutative geometry. Applications of non-commutative geometry to dense matter systems with quantum disorder.

Theodosis Trypiniotis, Assistant Professor

Halil Saka, Lecturer
Experimental particle physics at the energy frontier. Searches for physics beyond the standard model with the Compact Muon Solenoid (CMS) detector at the CERN Large Hadron Collider (LHC), in particular for extensions of the electroweak sector in unconventional leptonic signatures. Use of machine-learning methods in big data analysis at the LHC. Operations and software development for the CMS hadron calorimeter.

Contact Details

DEPARTMENT SECRETARIAT
Panagiota Georgiou
Tel.: +357 22892820
E-mail: georgiou.p@ucy.ac.cy

www.ucy.ac.cy/phy/en
Faculty of SOCIAL SCIENCES AND EDUCATION
DEPARTMENTS

Education
Law
Psychology
Social and Political Sciences
The Department of Education currently offers nine postgraduate programmes, leading to Master and Doctoral degrees in the following areas:

- Educational Administration and Evaluation (Master and Doctoral)
- Curriculum, Teaching and Comparative Education (Master and Doctoral)
- Pedagogical Sciences (Master and Doctoral)
- Mathematics Education (Master and Doctoral)
- Learning in Natural Sciences and Environment (Master and Doctoral)
- Special and Inclusive Education (Master and Doctoral)
- Language, Literacy and Education (Master and Doctoral)
- Instructional Technology (Master and Doctoral)
- Inter-departmental and Inter-disciplinary self-financed Programme in Gender Studies (Master and Doctoral)

**Important Note:** All postgraduate programmes of study (Master’s and Ph.D.), have been evaluated and approved by the Agency of Quality Assurance and Accreditation in Higher Education.

### Postgraduate Programmes

The Programmes are supervised by the coordinator of the postgraduate programmes (CPP) of the Department, who is always the Chairperson of the Department. The coordinator chairs a three-member Committee, the members of which are appointed by the Departmental Board. The postgraduate programmes are based on ECTS.

### Completion of the Master’s Programme

All courses are credited with 12 ECTS and students need to complete 90 ECTS for all the programmes. Students may choose one from the following options:

- **Option A (completion of 7 courses)**
  
  7 Courses X 12 ECTS (84 ECTS) and 1 Seminar X 6 ECTS = 90 ECTS.

- **Option B (completion of 5 courses, 1 seminar and dissertation)**
  
  5 Courses X 12 ECTS (60 ECTS), 1 Seminar X 6 ECTS and Dissertation (24 ECTS) = 90 ECTS.

### Seminars

The seminar includes lectures which will focus on a specific topic of the discipline. Each seminar is credited with 6 ECTS.

### Requirements for the Ph.D. Degree

All Ph.D. programmes require students to successfully complete 273 ECTS, distributed as follows:

<table>
<thead>
<tr>
<th>Requirements</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Courses x 12 ECTS</td>
<td>60</td>
</tr>
<tr>
<td>Research Stages (8 stages x 15 ECTS)</td>
<td>120</td>
</tr>
<tr>
<td>Comprehensive Examination</td>
<td>33</td>
</tr>
<tr>
<td>Dissertation (4 stages x 15 ECTS)</td>
<td>60</td>
</tr>
<tr>
<td>EDU 750 Submission of Research Proposal</td>
<td>0</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>273</strong></td>
</tr>
</tbody>
</table>

In cases where a candidate for the Ph.D. programme holds a Master’s degree from any department of the University of Cyprus or any recognised university, he is required to complete 3-5 courses (36-60 ECTS), following recommendation of the programme coordinator and the academic advisor. It is the student’s responsibility to request credit transfer.

Students may also be examined by taking a comprehensive examination on three to five courses, depending on the demands of each programme, and in accordance with the academic advisor of each programme.

**Note:** All work beginning with Dissertation III onwards receives 0 ECTS.

### Application for Admission – Evaluation

For information on the application procedure and the evaluation of the candidates, refer to the Admission and Attendance Regulations - Application Requirements or please consult the Graduate School, or the Department Secretariat.

In addition to the general requirements, candidates are requested to submit any certificates and/or other documentation that prove English language
competency, and any other documentation they consider necessary to strengthen and further support their application for admission, such as articles, research reports, academic distinctions.

EDUCATIONAL ADMINISTRATION AND EVALUATION

Objectives of the Master’s Programme

The general aim of this degree is to provide a broad-based view of educational administration and educational evaluation, both through the explicit and focused study of specific concepts and issues, and through their application in the conduct of individual research projects. The teaching team draw on their research to illustrate ideas, and occasionally welcome visiting academics to further enrich the programme. Students are encouraged to share their experiences and perceptions, and to learn from each other while relating knowledge, principles and insights to their own contexts. The ultimate aim of this programme is to promote the terms and practices of quality and equity in education through the professional development of educators, that will be able to cope with the demands of a contemporary and competitive society.

Learning Outcomes

The basic intention of the Master’s Programme in Educational Administration and Evaluation is to assure that students gain contemporary knowledge, methods and basic principles in the field of educational administration and evaluation, so as to enable them to develop:

• An advanced knowledge and understanding of educational administration and educational evaluation.
• A set of skills for analysing educational administration and educational evaluation issues and practices.
• The ability to bring together theoretical perspectives on educational administration and evaluation and apply an informed critique of their inter-relationship.
• The ability to contribute to informed development of policy and practice in educational contexts.

Master’s Programme Structure

The Programme consists of 90 ECTS, which are distributed as follows:

• Option A

4 compulsory courses x 12 ECTS (48 ECTS), 1 common core course (research) (12 ECTS), 1 elective course-specialisation (12 ECTS), 1 elective course- general content (12 ECTS) and 1 Seminar (6 ECTS) = Total 90 ECTS.

• Option B

4 compulsory courses x 12 ECTS (48 ECTS), 1 common core course (research) (12 ECTS), 1 Seminar (6 ECTSS) and Master’s Thesis I and II (24 ECTS) = Total 90 ECTS.

• Option A

<table>
<thead>
<tr>
<th>Specialisation Courses</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compulsory Courses</td>
<td>84</td>
</tr>
<tr>
<td>EDU 620 Introduction to Educational Administration*</td>
<td>12</td>
</tr>
<tr>
<td>EDU 623 Observation and Evaluation of Teaching and Personnel</td>
<td>12</td>
</tr>
<tr>
<td>EDU 631 School Effectiveness and School Improvement</td>
<td>12</td>
</tr>
<tr>
<td>EDU 645 Educational Policy</td>
<td>12</td>
</tr>
<tr>
<td>* Note: EDU 620 is prerequisite for all courses</td>
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</table>

<table>
<thead>
<tr>
<th>Elective Courses-Specialisation</th>
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</thead>
<tbody>
<tr>
<td>One from the following:</td>
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<tr>
<td>EDU 603 Comparative Education</td>
<td>12</td>
</tr>
<tr>
<td>EDU 617 Educational Government and the Management of Change</td>
<td>12</td>
</tr>
<tr>
<td>EDU 640 Principles and Processes of Curriculum Development and Evaluation</td>
<td>12</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Common Core Courses-General Content</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>One from the following:</td>
<td></td>
</tr>
<tr>
<td>EDU 533 Education for Life. Lifelong Education</td>
<td>12</td>
</tr>
<tr>
<td>EDU 550 Education and Social Exclusion</td>
<td>12</td>
</tr>
<tr>
<td>EDU 601 Philosophical Dimensions of Education</td>
<td>12</td>
</tr>
<tr>
<td>EDU 689 Independent Study</td>
<td>12</td>
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</table>

<table>
<thead>
<tr>
<th>Common Core Courses-Research</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>One from the following:</td>
<td></td>
</tr>
<tr>
<td>EDU 682 Qualitative Research in Education</td>
<td>12</td>
</tr>
<tr>
<td>EDU 683 Educational Statistics with Statistical Packages Applications</td>
<td>12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Seminar</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDU 681 Seminar in Educational Administration and Evaluation</td>
<td>6</td>
</tr>
</tbody>
</table>

Grand Total 90

• Option B

5 Courses X 12 ECTS (60 ECTS), 1 Seminar X 6 ECTS and Master’s Thesis (24 ECTS) = TOTAL 90 ECTS

Notes:

• Students can register for Master’s Thesis and be exempted from two elective area courses. They can register for Master Thesis I and II and then continue with the registration for Master Thesis Continuation (1 ECTS), until they complete their thesis and defend it to the three-member Committee.

• Students can register for EDU 689 Independent Study Course upon the academic advisor’s approval. The course substitutes an Elective Course and students will conduct the course with one of the programme’s coordinator.
Objectives of the Doctoral Programme

The Programme is designed to help develop researchers and scholars who can apply theoretical frameworks, methodological approaches, and analytical skills in order to improve quality and equity in education. More specifically, the Doctor of Philosophy (Ph.D.) in Educational Administration and Evaluation prepares individuals to develop expertise in educational research methods in the areas of educational administration, teacher and school evaluation, educational effectiveness and school improvement. Therefore, graduates of the Programme can work as academics in the field of Educational Administration and Evaluation. They can also work as research methodologists and hold corporate positions in research, evaluation, and testing agencies, or government positions as researchers, evaluators and administrators of research programmes in education.

Learning Outcomes

By the end of the Programme, students will have demonstrated:

- Ability in designing and conducting rigorous studies within the field of Educational Administration and Evaluation, which can contribute to the theoretical development of this field.
- Broad knowledge and systematic understanding of the research field of Educational Administration and Evaluation, as well as advanced and up-to-date specialised knowledge in a limited area of this field.
- Comprehensive understanding of research techniques and a thorough knowledge of the literature applicable to their specific domain, within the field of Educational Administration and Evaluation.
- Originality in the application of knowledge, together with a practical understanding of how research and enquiry are used to create and interpret knowledge in the field of Educational Administration and Evaluation.
- Ability in the critical evaluation of current research and research techniques and methodologies.
- Ability to present and discuss research findings within the academic community and society in general.
- Ability to make assessments of ethical aspects of their own research.
- Insight into the possibilities and limitations of their research, its role in society and the responsibility of the individual for its use.

Requirements for the Doctoral Programme

Note: Ph.D. students may register for Elective Courses of Master's degree programmes, relevant to their thesis proposal and after consultation with their academic advisor.

Comprehensive Examination (CE)

The main goal of the CE is to evaluate the abilities of Doctoral candidates to work in a holistic way on the basis of a theoretical context and offer solutions to real-world problems in Education. The CE consists of four distinct parts. Each part evaluates the ability of the candidate to synthesise knowledge in order to offer solutions. Students must pass all four parts.

For more information on the CE, please refer to the Admission and Attendance Regulations - Application Requirements or consult the Graduate School (Tel.: 22894021/44), or the Department Secretariat.
General Topics for the Examination

(1) Organisational and Administrative Theory
- Organisation and administration theories.
- Culture and climate in educational institutions.
- Leadership theories.
- Motivation theories.
- Job characteristics and job-redesign models.
- Group dynamics, group work and conflict in educational organisations.
- Individual decision-making models.
- Group decision-making models.
- Obstacles in decision-making.

(2) Evaluation and Effectiveness in Education (Personnel, Programmes, Schools)
- Personnel evaluation in educational institutions.
- Programme evaluation in educational and other organisations.
- Evaluation and school improvement.
- School effectiveness (theory practice).

(3) Planning and the Management of Change in Organisations
- Strategic planning in educational institutions.
- Management of change.

(4) Economic Aspects of Education
- Basic principles of economics of education.
- Human capital theory.
- Budgets and budgeting.
- School choice.

(5) Educational Policy
- Theoretical concepts and application.

CURRICULUM, TEACHING AND COMPARATIVE EDUCATION

Objectives of the Master’s Programme
The objectives of the Programme are the following:
- Research on issues of curriculum design, development and evaluation, analysis and evaluation of teaching, professional development of educators as researchers of education who are able to inquire scientifically and reflect upon matters of curriculum, teaching and comparative education in an increasingly globalised/internationalised world.
- Promote curriculum and teaching theory, as well as the study of the philosophical, sociological, historical and comparative epistemological assumptions and principles, which support scholarly dialogue in curriculum studies and comparative education.
- Promote and develop collaboration with universities and research centres in Europe and internationally on curriculum studies and comparative education.
- Upgrading areas of curriculum development and evaluation, teaching and teacher professional development as well as comparative education.
- Prepare leaders and researchers who will be internationally and locally renowned and comprehend the importance of context within education to work creatively and efficiently in Cyprus, Europe and beyond.
- Provide service to the academic community, the wider educational community and society.

In the context of these objectives, students will be given the freedom to develop their own programme of studies, tailored to their needs and interests.

Learning Outcomes
The Programme aims at the development of contemporary knowledge, methods, and basic principles of inquiry in the field of Education. It helps students to:
- Enrich their way of thinking and skills as educators and researchers, able to scientifically study, reflect upon and discuss issues of curriculum, teaching and comparative education.
- Become leading members and researchers who will be internationally and locally renowned and comprehend the context of education in diverse educational environments to work creatively and efficiently in Cyprus, Europe and beyond.

Master’s Programme Structure
The Programme consists of 90 ECTS, which are distributed as follows:
- Option A
  3 Compulsory Courses X 12 ECTS (36 ECTS) + 1 Common Core Course X 12 ECTS (12 ECTS) + 3 Elective Courses X 12 ECTS (36 ECTS) + 1 Seminar X 6 ECTS = Total of 90 ECTS
Objectives of the Doctoral Programme

The main purpose of the Programme is to create and enrich the education and research community on topics which fall within the fields of Curriculum and Teaching and Comparative Education, contributing to attendant academic and educational discussions in Cyprus and beyond.

More particularly it aims at:

- Cultivating research on issues of curriculum design, development and evaluation, as well as of analysis and evaluation of teaching and of the professional development of educators as researchers of education, able to inquire scientifically and reflect upon matters of curriculum, teaching and comparative education in an increasingly globalized and internationalized world.
- Promoting curriculum and teaching theory, as well as the study of the philosophical, sociological, historical and comparative epistemological assumptions and principles, which support scholarly dialogue in curriculum studies and comparative education.
- Promoting and developing collaboration with universities and research centres in Europe and internationally on curriculum studies and comparative education.
- Upgrading areas of curriculum development and evaluation, teaching and teacher professional development, as well as comparative education.
- Preparing leaders and researchers, who will be internationally and locally renowned and who will comprehend the importance of the context within education, so that they can work efficiently in Cyprus, Europe and beyond.
- Providing service to the academic community, the wider educational community and society.

Learning Outcomes

The Doctoral graduates are expected to:

- Become familiar with a wide range of epistemological and analytical tools which derive from “problematiques” of the fields of Curriculum and Teaching and Comparative Education, by drawing on relevant literature.
- Design appropriate methodology to inquire in a scientific/scholarly way, reflect upon and articulate/produce academic discourse around issues of curriculum, teaching and comparative education.
- Act constructively and in a transformational manner in academic and political matters of curriculum, teaching and comparative education in Cyprus, Europe and beyond.
- Discuss the historicity of contexts within which educational policy, curricula, schooling and diverse other educational environments, teacher professional identities, student/children/learner identities and

Requirements for the Master’s Programme

<table>
<thead>
<tr>
<th>Requirements for the Master’s Programme</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Compulsory Specialisation Courses</strong></td>
<td>36</td>
</tr>
<tr>
<td>EDU 603 Comparative Education</td>
<td>12</td>
</tr>
<tr>
<td>EDU 640 Principles and Processes of Curriculum Development and Evaluation</td>
<td>12</td>
</tr>
<tr>
<td>EDU 693 Contemporary Trends in the Study of Teaching</td>
<td>12</td>
</tr>
<tr>
<td><strong>Educational Research Methodology</strong></td>
<td>12</td>
</tr>
<tr>
<td>Choose one course:</td>
<td></td>
</tr>
<tr>
<td>EDU 520 Discourse Analysis</td>
<td>12</td>
</tr>
<tr>
<td>EDU 682 Qualitative Research in Education</td>
<td>12</td>
</tr>
<tr>
<td>EDU 683 Educational Statistics with Statistical Packages Applications</td>
<td>12</td>
</tr>
<tr>
<td><strong>Seminar</strong></td>
<td>6</td>
</tr>
<tr>
<td>EDU 687 Seminar “Curriculum, Teaching and Comparative Education”</td>
<td>6</td>
</tr>
<tr>
<td><strong>Option A: Three Elective Courses</strong></td>
<td>36</td>
</tr>
<tr>
<td><strong>Elective Course-Specialisation</strong></td>
<td>12</td>
</tr>
<tr>
<td>Choose one course:</td>
<td></td>
</tr>
<tr>
<td>EDU 597 Educational Governance and Development</td>
<td>12</td>
</tr>
<tr>
<td>EDU 607 Sociology of Curriculum</td>
<td>12</td>
</tr>
<tr>
<td>EDU 654 History of Education</td>
<td>12</td>
</tr>
<tr>
<td><strong>Elective Courses-General Content</strong></td>
<td>24</td>
</tr>
<tr>
<td>Choose two courses:</td>
<td></td>
</tr>
<tr>
<td>EDU 561 The Diverse Perspective of Play</td>
<td>12</td>
</tr>
<tr>
<td>EDU 583 Design and Development of Dynamic Digital Learning Environments</td>
<td>12</td>
</tr>
<tr>
<td>EDU 598 Postcolonial Theory and the Curriculum</td>
<td>12</td>
</tr>
<tr>
<td>EDU 620 Introduction to Educational Administration</td>
<td>12</td>
</tr>
<tr>
<td>EDU 641 Gender and Education</td>
<td>12</td>
</tr>
<tr>
<td>EDU 646 Globalisation, Cosmopolitanism and Education</td>
<td>12</td>
</tr>
<tr>
<td>EDU 689 Independent Study</td>
<td>12</td>
</tr>
<tr>
<td><strong>Option B: Master’s Thesis</strong></td>
<td>24*</td>
</tr>
<tr>
<td>EDU 798 Master’s Thesis I</td>
<td>12</td>
</tr>
<tr>
<td>EDU 799 Master’s Thesis II</td>
<td>12</td>
</tr>
</tbody>
</table>

*Note: Exemption from two elective courses, one elective-specialization course and one elective-general content course.

Grand Total 90
those of other involved agents and agencies emerge and are constituted.

- Be able to locate schooling, policy and curricula within contexts that transcend the narrow boundaries of Cyprus.
- Enrich their way of thinking and skills as educators and researchers, able to scientifically study, reflect upon and discuss issues of curriculum, teaching and comparative education.

Requirements for the Doctoral Programme

<table>
<thead>
<tr>
<th>Requirements for the Doctoral Programme</th>
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</thead>
<tbody>
<tr>
<td><strong>Comprehensive Examination (CE)</strong></td>
</tr>
<tr>
<td>The CE evaluates the ability of candidates to synthesise theories and assumptions in a theoretical framework, which enables them to work on problem solving situations and reflect creatively on curriculum issues under consideration.</td>
</tr>
<tr>
<td>For more information on the CE, please refer to the Admission and Attendance Regulations - Application Requirements or consult the Graduate School, or the Department Secretariat.</td>
</tr>
</tbody>
</table>

**General Topics for the Examination**

(1) **Principles and Procedures of Curriculum Development: Course Design**
- Models and paradigms of curriculum development.
- Curriculum development at the macro-level.
- Curriculum development at the micro-level.
- Structure and sequence of the curriculum.
- Hidden curriculum.

(2) **Curriculum Theory**
- Critical discourse on curriculum aims and objectives, content, evaluation and assessment, methods of implementation, curricular material, teaching and learning.
- Functionalism.
- Foucaultian discourse.
- Critical pedagogy.
- Critical theories.
- Curriculum development in context.
- Social discourse and controlling curricular forms.
- Philosophical and psychological foundations of the curriculum.
- Postcolonial theory and the curriculum.
- Gender theories and curriculum studies.

(3) **Learning and Instruction: Curriculum as Praxis**
- Constructivism, modern and postmodern.
- Teaching and learning as student and teacher conceptual change.
- Textbooks: writing and evaluation.
- Metacognitive development.
- Cooperative learning.
- Differentiation of teaching and learning in mixed ability classrooms.
- Teachers and students as biographies.
- Methods of teaching and learning in context
- Assessment and evaluation.
- Critical discourse on “effective teaching”.

<table>
<thead>
<tr>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Specialisation Courses (from the following)</td>
</tr>
<tr>
<td>EDU 597 Educational Governance and Development</td>
</tr>
<tr>
<td>EDU 603 Comparative Education</td>
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<tr>
<td>EDU 607 Sociology of Curriculum</td>
</tr>
<tr>
<td>EDU 640 Principles and Processes of Curriculum Development and Evaluation</td>
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<tr>
<td>EDU 654 History of Education</td>
</tr>
<tr>
<td>EDU 689 Independent Study</td>
</tr>
<tr>
<td>EDU 693 Contemporary Trends in the Study of Teaching</td>
</tr>
<tr>
<td>1 Common Core Course-Research Course (from the following)</td>
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<tr>
<td>EDU 520 Discourse Analysis</td>
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<tr>
<td>EDU 682 Qualitative Research in Education</td>
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<tr>
<td>EDU 683 Educational Statistics with Statistical Packages Applications</td>
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<tr>
<td>EDU 780 Using Basic and Advanced Multilevel Modelling in Educational Research</td>
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<td>EDU 788 Advanced Research Methods</td>
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<tr>
<td>Comprehensive Examination</td>
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<tr>
<td>Research Stages</td>
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<tr>
<td>Research Stages I (A and B)</td>
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<td>Research Stages II (A and B)</td>
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<td>Research Stages III (A and B)</td>
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<tr>
<td>Research Stages IV (A and B)</td>
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<tr>
<td>Dissertation Stages</td>
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<tr>
<td>Dissertation Stage I (A and B)</td>
</tr>
<tr>
<td>Dissertation Stage II (A and B)</td>
</tr>
<tr>
<td>EDU 750 Submission of Research Proposal</td>
</tr>
<tr>
<td>Grand Total</td>
</tr>
</tbody>
</table>

Notes:
- From Dissertation III onwards receives 0 ECTS.
- In cases where a candidate for the Ph.D. holds a Master’s degree from any department of the University of Cyprus or any recognised university, he/she is required to complete 3-5 courses (36-60 ECTS), the selection of which is conducted following the recommendation of the student’s academic advisor and the programme’s coordinator. For the courses exempted (up to two courses), the student submits a request for credit transfer.
(4) Teachers and Curriculum Studies
• Curriculum leadership.
• Teacher development in the context of critical pedagogy.
• Models and paradigms of teacher development: The instrumental-technical model vs. the critical-developmental paradigms.
• Teacher development in context.
• Action research and teacher development.
• Teacher development in the context of phenomenography, conceptual change, and postmodernity.
• Teachers’ theories and beliefs.

(5) Educational Policy and Curriculum Development
• Theories of educational change and consensus.
• Reforms in education.
• National standards and curriculum development.
• National and multicultural programmes and curricula.
• European educational policy.
• Accountability in education.

PEDAGOGICAL SCIENCES
Objectives of the Master’s Programme
This The main objective of the programme is to offer comprehensive education for teachers and researchers as regards to specialised knowledge, cognitive development, epistemology and learning in Pedagogical Sciences. The directions of the Pedagogical Sciences are the following:
• Sports Pedagogy
• Multiculturalism, Migration and Decolonial Education
• Early Childhood Education

Sports Pedagogy
The Programme aims to provide the participants with theoretical knowledge and develop their research skills in teaching Physical Education (PE).

Multiculturalism, Migration and Decolonial Education
The Programme is addressed to teachers (at all school levels), artists, agents in cultural actions, educational and social policy agents in both government and non-government organisations and agencies. It develops students’ critical thinking and conceptual, pedagogical and research skills in understanding and analysing issues such as ethics of hospitality, migrant and refugee reception and inclusion in educational and social milieux, addressing debates of difference vs. identity, addressing and combating of systemic and structural xenophobia and racism, faces functions-effects of intersecting axes of ethnicity, migration/refugee precarity status, gender and sexuality. The theoretical and methodological intersecting of studies on multiculturalism-migration-education with postcolonial and queer theory attempts the development of theory, research, pedagogy and policy frames that address both the negative impact of theoretical and cultural reification as well as the recovery of race rationalities in programmes that focus on risk control and sidestep human rights and the right to education.

Early Childhood Education
The development of Early Childhood Education as an independent programme is a response to a scientific, pedagogic and societal need. The field of Early Childhood Education, as the basis to children’s educational future, needs to be supported with contemporary research and theories on children, learning and development and support practitioners, researchers and policy makers to implement contemporary pedagogies. With the provision of a diverse range of courses, students will develop a well-rounded understanding of the field and children’s needs.
There is a need for teachers in early childhood education and all those involved in the education and development of young children in other contexts, to acquire up-to-date knowledge concerning the contemporary trends of early year’s education, as well as to acquire research skills. The programme aspires to foster the development of teachers-researchers-programme developers who are specialised in early childhood education and equip them with the necessary skills and knowledge of early years pedagogies (education, sociology, anthropology, psychology), and research methodology.

The general aim of the programme is to offer comprehensive education for teachers-researchers concerning early year’s epistemology. Participants will acquire skills in basic and applied research, designing and developing early year’s curricula, evaluating and reforming educational policy, critically analysing recent trends and findings related to early childhood education.

Learning Outcomes

Sports Pedagogy

It is expected that students will:

• Acquire the basic knowledge of the epistemological theories of PE.
• Develop their skills in reviewing and critically analysing the literature related to specific research questions in the field of PE.
• Be familiar with qualitative and quantitative research methods and apply these methods to the collection and analysis of data in the field of PE.
• Analyse and interpret the results of current studies in PE.
• Propose future research directions in the field of PE.

Multiculturalism, Migration and Decolonial Education

It is expected that students will:

• Enhance their knowledge base and theoretical foundations on migration studies, multicultural education paradigms and models, and decolonial education.
• Develop abilities and skills needed in order to map, diagnose and address multiple forms of marginalisation in schools and society.
• Transform programmes, settings and policies towards better inclusion and show respect towards other people and support human rights.
• Enhance their ability in understanding and addressing intersectionality both at the structural and policy level.

Early Childhood Education

It is expected that students will:

• Be acquainted with the basic literature in early childhood education, contemporary curricular approaches and pedagogies.
• Develop an understanding of the importance of early years for preparing the active citizens.
• Develop skills for designing and running research in early childhood education.
• Formulate research questions and choose the appropriate methodology for their study.
• Be acquainted with a range of quantitative and qualitative research methods and apply these methods to the collection and analysis of data and in promoting the study of basic and applied questions in early years pedagogy.
• Utilise available research evidence and develop detailed suggestions for changes in educational policy, taking into consideration existing needs and constraints of the educational system in an attempt to continuously optimise the effectiveness of the teaching-learning process during the early years.
• Apply research-based knowledge to develop new or enhance existing early childhood education programmes.

Master’s Programme Structure

Successful completion of 90 ECTS is required. Students must choose a direction. More specifically, this entails 7 Courses x 12 ECTS (84 ECTS) and 1 Seminar x 6 ECTS. The
• One course in Educational Research (12 ECTS).
• Courses from one of the following areas: Preschool Education; Physical Education; Cultural Dimensions of Education (36/48 ECTS)
• Three Core Courses (36 ECTS)
• One Seminar (6 ECTS).

Note: Students who choose to write a Dissertation (24 ECTS) will be exempted from two core courses.
Students must complete three/four courses from one of the following areas: Early Childhood Education, Sports Pedagogy, Multiculturalism, Migration and Decolonial Education.

### Early Childhood Education
- EDU 561 The Diverse Perspectives of Play 12
- EDU 5621 Mathematical Thinking in the Early Years: Theoretical and Empirical Approaches 12
- EDU 5631 Supporting Creativity in Early Childhood Education 12

### Sports Pedagogy
- EDU 570 Research and Theory of Sports Pedagogy 12
- EDU 571 Instructional and Curriculum Models in Physical Education 12
- EDU 623 Observation and Evaluation of Teachers and Personnel 12
- EDU 631 School Effectiveness and School Improvement 12

### Multiculturalism, Migration and Decolonial Education
- EDU 598 Postcolonial Theory and the Curriculum 12
- EDU 637 The Theory and Politics of Multicultural Education 12
- GRS 776 Queer Theory and the Study of Sexuality 12

### Elective Courses

#### Area - Early Childhood Education
Three from the following:
- EDU 529 Monolingual, Bilingual, Multilingual Education: Attitudes, Trends and Perspectives 12
- EDU 550 Education and Social Exclusion 12
- EDU 571 Instructional and Curriculum Models in Physical Education 12
- EDU 603 Comparative Education 12
- EDU 637 The Theory and Politics of Multicultural Education 12
- EDU 693 Advanced Methods of Teaching and Learning 12
- EDU 689 Independent Study 12

#### Area - Sports Pedagogy
Two from the following:
- EDU 533 Education for life. Lifelong Education 12
- EDU 561 The Diverse Perspective of Play 12
- EDU 572 Current Trends in Teaching Physical Education 12
- EDU 574 Analysis of Teaching in Physical Education 12
- EDU 603 Comparative Education 12
- EDU 637 The Theory and Politics of Multicultural Education 12
- EDU 689 Independent Study 12

### Area - Multiculturalism, Migration and Decolonial Education
Three from the following:
- EDU 556 Advanced Seminar in the Theory and Philosophy of Education 12
- EDU 597 Education Governance and Development 12
- EDU 607 Sociology of Curriculum 12
- EDU 521 Language, Discourse and Communication or EDU 522 Contemporary Approaches to Language Arts and Literacy Education or EDU 529 Monolingual, Bilingual, Multilingual Education: Attitudes, Trends and Perspectives 12
- EDU 646 Globalisation, Cosmopolitanism and Education or EDU 550 Education and Social Exclusion 12
- EDU 563 Supporting Creativity in Early Childhood Education 12
- EDU 570 Research and Theory of Sport Pedagogy 12
- EDU 689 Independent Study 12

### Educational Research
- One from the following:
  - EDU 682 Qualitative Research in Education 12
  - EDU 683 Educational Statistics with Statistical Package Applications 12

### Seminar
- One from the following:
  - EDU 691 Early Childhood Education Contemporary Issues 6

### Area - Sports Pedagogy

#### Area - Multiculturalism, Migration and Decolonial Education
- EDU 698 Seminar Multiculturalism, Migration and Decolonial Education 6

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**Objectives of the Doctoral Programme**

The general aim of the Programme is to offer comprehensive education for researchers in the field of Education and for participants to acquire skills in Pedagogical Sciences in the following areas:

- Sociology of Education
- Theory and Philosophy of Education
- Religious Education
- Sports Pedagogy
- Multiculturalism, Migration and Decolonial Education
- Early Childhood Education
Early Childhood Education
The aim of the Programme is to educate and prepare researchers in order to investigate educational issues through the lens of Sociology. The structure of the Programme allows students to focus on classic sociological topics and gain the necessary methodological tools in order to examine the ways in which education is a focal point for all these issues. Topics such as class, gender and cultural inequalities, the role of education in social exclusion and the role of globalisation in shaping the field of education are part of the basic themes that students will encounter. The Programme also aims at developing students' ability to theorise these issues at the macro level as well as understanding them at the micro level of everyday life.

Theory and Philosophy of Education
The Programme aims to cover research needs in Philosophy and Theory of Education of local and international range. Many researchers in Cyprus, in Greece and in various other countries, have expressed the desire to continue their studies at Ph.D. level and on topics which are drawn from a wide spectrum of political theory and philosophy in relation to educational practices and ideologies. Young scholars who have already registered in this programme or who aspire to join it, come from backgrounds of Educational Studies, Political Science and Philosophy. Therefore, they combine the diversity of perspective originating from their own backgrounds with the required knowledge that is cultivated or provided by the present program. This combination advances the heightening of scientific awareness of theoretical foundations and framings of education.

The Ph.D. programme generally sets as a goal the completion of a doctoral thesis on state- of-the art research and on issues of great topicality in Philosophy and Theory of Education. Its researchers will become familiarised and adapt to various theoretical modalities and methodologies of research in related fields. They will also explore their themes within scientific journals of high caliber and excel in the employment of interpretive material and dialogical tools for investigating educational goal-setting and relevant stakes.

Religious Education
The Program aims to train a number of researchers in this subject, who will creatively combine Theology, Pedagogy and Research. This will diffuse relevant knowledge in primary, secondary and higher school education. The general purpose of the Programme is for researchers to become aware of the necessity of Theology in Education, which implies students' acquaintance with the great existential issues of human life and the understanding of religion as a basic constituent of the world's history.

Sports Pedagogy
The Programme aims to provide participants with the necessary knowledge and develop their teaching skills in Physical Education (PE).

Multiculturalism, Migration and Decolonial Education
The Programme's goal is to cultivate the natality of educational thinking on the interrelated issues of multiculturalism, migration and decolonial education, to revive the political dimensions of these topics with regards to the ideals of justice and human rights, to reclaim the political from its assimilation into biopolitical and economic framings of multicultural education, and to promote the development of pedagogies, policy documents and research agendas critical to colonial nostalgia.

The theoretical and methodological combination of critical race theory, postcolonial and anticolonial critique, and queer theory contributes to the critical distancing from concepts of evolutionism and civilizing missions which have become less traceable due to theoretical sedimentation. Students review a broad range of bibliography, expand their theoretical and methodological thinking on disciplinary and interdisciplinary fields of inquiry, develop analytical and deconstructive skills of analysis and critique, formulate rigorous research questions, and write dissertations that lead to new kinds of theorisation and research.

Early Childhood Education
Pre-primary teachers and those interested in working and studying young children's learning and development need to acquire research skills. The Programme aspires to foster the development of researchers who are specialised in early years education, young children's learning and development as well as in early childhood teacher education and equip them with the necessary skills and knowledge of early years pedagogies (education, sociology, anthropology, psychology), and research methodology.

The general aim of the Programme is to offer comprehensive education for researchers in early years education. Participants will acquire skills in basic and applied research. They will also develop strategies for evaluating and reforming educational policy and acquire skills for critically analysing recent trends and findings related to early years education.
Learning Outcomes:

Sociology of Education
It is expected that students will:
• Become knowledgeable of the basic theoretical perspectives in Sociology and the ways they have influenced Sociology of Education.
• Gain a deep understanding of Sociological thinking and analyse current educational issues through a sociological lens.
• Develop skills in reviewing bibliography through a critical lens and connecting it with specific research questions.
• Be able to elaborate a comprehensive research project for an educational issue which will connect Sociological theory with research questions.
• Become familiar with the basic tenets of quantitative and qualitative research and acquire experience in applying these methods in collecting and analyzing data.

Overall, graduates will be competent researchers, not only in terms of skills in data collection and analysis but also in terms of connecting data to theoretical concepts. A basic premise for this is that students will develop their critical thinking, the ability to deconstruct phenomenal inequality in society and use various research methods to ameliorate inequalities.

Theory and Philosophy of Education
It is expected that students will:
• Be well-versed in the main body of scholarship in philosophy and theory of education, discuss significant critical depth contemporary educational orthodoxies and consolidated practices.
• Become adequately specialised in the philosophical and theoretical educational topics of their choice, on the condition they have the required background and versatility for revisiting educational developments of their times.
• Be familiar with a broad spectrum of rival theories that aspire to explain or to critique current tendencies in education. They will also be exposed, through participation in various international academic events, to scholarly experiences that sharpen their critical awareness of how such rival theories tackle major educational issues today.
• Be able to interrogate the ideologies, notions and insights that secure the hegemonic concordance of higher education and to complicate received and facile views on educational issues of a wide interest and of topical significance both locally and internationally.
• Able to intervene in the international scientific dialogue of the related fields (Philosophy, Educational Theory) and to contribute to the production of internationally valued academic research on the relevant topics.

Sports Pedagogy
It is expected that students will:
• Acquire the basic knowledge of the epistemological theories of PE.
• Develop skills for reviewing and critically analysing literature related to specific research questions in the field of PE.
• Be acquainted with qualitative and quantitative research methods, and will acquire experience in applying these methods to the collection and analysis of data in the field of PE.
• Analyse and interpret the results of current studies in PE.
• Be able to propose future research directions in the field of PE.

Multiculturalism, Migration and Decolonial Education
It is expected that students will:
• Produce journal articles and monographs and able to intervene as both experts and public intellectuals in debates, discussions, curriculum development, teacher training and policy development related to issues of ethics of hospitality, tensions between ethics of recognition and ethics of redistribution, politics of
difference and politics of identity, the postcolonial condition, the defence of humanities centred education against securitisation politics, cultural essentialism, hegemony, intersectionality.

Early Childhood Education

It is expected that students will:

- Be acquainted with the basic literature on early years epistemology, early years pedagogies, young children’s learning and development, and approaches to the creation and implementation of educational programmes for young children.

- Develop skills for reviewing and critically analysing the literature related to specific research questions that refer to early childhood education.

- Be acquainted with a range of qualitative and quantitative research methods and will gain experience in applying these methods to the collection and analysis of data.

Requirements for the Doctoral Programme

1. Applicants must hold a Master’s degree in a similar/same area as the Ph.D. programme. A Master in Science Education is also acceptable.

2. All courses selected for the Ph.D. programme must be approved by the student’s academic advisor, who will also be the coordinator to the specific programme that the student will choose.

Doctoral Programme Structure

Successful completion of 273 ECTS is required. This includes the following courses:

<table>
<thead>
<tr>
<th>Courses</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Courses x 12 ECTS</td>
<td>60</td>
</tr>
<tr>
<td>- 3 Compulsory Courses</td>
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<tr>
<td>- 1 Elective Course</td>
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<tr>
<td>- 1 Research Course</td>
<td></td>
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<tr>
<td>Comprehensive Examination (Examination in 5 courses)</td>
<td>33</td>
</tr>
<tr>
<td>Research Stage (8 courses x 15 ECTS)</td>
<td>120</td>
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<tr>
<td>Dissertation ta, b x 15 ECTS</td>
<td>30</td>
</tr>
<tr>
<td>Dissertation Ha, Mb x 15 ECTS</td>
<td>30</td>
</tr>
<tr>
<td>Grand Total</td>
<td>273</td>
</tr>
</tbody>
</table>

Note: All work beginning with Dissertation III and onwards, will be credited with 0 ECTS.
Contact Details

PROGRAMME COORDINATORS

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E-mail: edniki@ucy.ac.cy

ECTS

Research Courses 12
One from the following:
EDU 520 Discourse Analysis 12
EDU 682 Qualitative Research in Education 12
EDU 683 Educational Statistics with Statistical Package Applications 12

Religious Education (Area Courses) 36
Three from the following:
EDU 533 Education for Life. Lifelong Education 12
EDU 623 Observation and Evaluation of Teachers and Personnel 12
EDU 631 School Effectiveness and School Improvement 12
EDU 646 Globalisation, Cosmopolitanism and Education 12

Research Courses 12
One from the following:
EDU 682 Qualitative Research in Education 12
EDU 683 Educational Statistics with Statistical Package Applications 12
EDU 780 Using Basic and Advanced Multilevel Modelling 12
EDU 788 Advanced Research Methods 12

Academic Writing Courses 12
EDU 787 Academic Writing 12

Theory and Philosophy of Education (Area Courses) 48
Four from the following:
EDU 532 Issues of Ethics 12
EDU 550 Education and Social Exclusion 12
EDU 598 Postcolonial Theory and the Curriculum 12
EDU 601 Introduction to the Philosophical Dimensions of Education 12
EDU 646 Globalisation, Cosmopolitanism and Education 12

Research Course 12
EDU 682 Qualitative Research in Education 12

Sociology of Education Compulsory Courses 36
EDU 550 Education and Social Exclusion 12
EDU 641 Education and Gender 12
EDU 646 Globalisation, Cosmopolitanism and Education 12
EDU 637 The Theory and Politics of Multicultural Education 12

Research Courses
EDU 682 Qualitative Research in Education 12
EDU 683 Educational Statistics with Statistical Package Applications 12

Academic Writing Course 12
EDU 787 Academic Writing 12
**MATHEMATICS EDUCATION**

**Programme’s Objectives**

The Programme is designed for teachers of all levels who teach mathematics courses, or people who hold administrative or other positions and take decisions in the content and teaching of mathematics. The Programme provides students with the opportunity to pursue specialised studies in Education and particularly in Mathematics Education. It is a flexible programme aiming at developing students’ theoretical knowledge and understanding. It also aims at students’ professional specialisation in mathematics education and develops their research skills in mathematics teaching and learning. Students are given the opportunity to enrich their knowledge on key issues in mathematics education, discuss past practices, contemporary approaches, potential methodologies and policies that promote technology integration.

Through seminars, discussions, lectures and conference participations, students reflect on theoretical approaches and their implications for instruction. They also develop a critical understanding of the current state of mathematics education. Special attention is given to analysing current research and its implications for educational and curriculum programmes.

**Learning Outcomes**

It is expected that students will:

- Deepen their understanding of core mathematical concepts.
- Become acquainted with mathematics education literature and contemporary theories of Cognitive Development and Implementation of Educational Projects in Mathematics.
- Familiarise themselves with a range of qualitative or/and quantitative research methods in mathematics education.
- Enhance their ability to design and analyse research activities.
- Be able to implement research findings into teaching practice.
- Critically analyse mathematics education policies as well as practices being applied to school practice.
- Acquire skills of designing learning experiences.
- Be able to use technology to reinforce students’ understanding of mathematical concepts.
- Possess skills for establishing appropriate learning conditions that stimulate students’ interest and motivation for learning mathematics.

**Master’s Programme Structure**

Students must complete courses totalling 90 ECTS, as shown in options A and B. The courses are divided in three categories: a) Specialisation Courses, b) Educational Research Courses and c) Seminars.

- **Option A**
  (completion of 7 courses and 1 seminar)
  Students select five courses from the Specialisation Courses (60 ECTS), two courses from the Educational Research Courses (24 ECTS) and 1 Seminar (6 ECTS).

- **Option B**
  (completion of 5 courses, 1 Seminar and Dissertation)
  Students select four courses from the Specialisation Courses (48 ECTS), one course from the Educational Research Courses (12 ECTS), one Seminar (6 ECTS) and completes a Dissertation (24 ECTS).

<table>
<thead>
<tr>
<th>Specialisation Courses</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Compulsory Courses</strong></td>
<td>60</td>
</tr>
<tr>
<td>EDU 673</td>
<td>Curriculum Development for Mathematics and Educational Evaluation</td>
</tr>
<tr>
<td>EDU 674</td>
<td>Mathematical Problem Solving</td>
</tr>
<tr>
<td>EDU 676</td>
<td>Contemporary Technology in Mathematics Teaching</td>
</tr>
<tr>
<td>EDU 680</td>
<td>Theories of Mathematical Understanding</td>
</tr>
<tr>
<td><strong>Elective Courses</strong></td>
<td>12</td>
</tr>
<tr>
<td>One of the following:</td>
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<tr>
<td>EDU 562</td>
<td>Mathematical Thinking in the Early Years: Theoretical and Empirical Approaches</td>
</tr>
<tr>
<td>EDU 583</td>
<td>Design and Development of Dynamic Educational Systems</td>
</tr>
<tr>
<td>EDU 662</td>
<td>New Technologies and Learning in the Natural Sciences</td>
</tr>
<tr>
<td>EDU 667</td>
<td>Theory and Research in Geometry Learning and Teaching</td>
</tr>
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<td>EDU 670</td>
<td>Theory and Research in Algebra and Calculus Learning and Teaching</td>
</tr>
<tr>
<td><strong>Educational Research Courses</strong></td>
<td>24</td>
</tr>
<tr>
<td>Two of the following:</td>
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</tr>
<tr>
<td>EDU 675</td>
<td>Recent Trends in Mathematics Education</td>
</tr>
<tr>
<td>EDU 682</td>
<td>Qualitative Research in Education or</td>
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<tr>
<td>EDU 683</td>
<td>Educational Statistics with Statistical Packages Applications</td>
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<td>EDU 798M</td>
<td>Dissertation I</td>
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<td>EDU 799M</td>
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<td>Seminar in Mathematics Education</td>
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<td><strong>Grand Total</strong></td>
<td>90</td>
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</tbody>
</table>

Students who register for Master’s Thesis are exempted from 1 Elective Area Courses and 1 Research Course (EDU 682 or EDU 683).
Objectives of Doctoral Programme

The Ph.D. programme provides students with the opportunity to pursue specialised studies in Mathematics Education and engage in research on relevant issues. The Programme enhances students’ theoretical knowledge and understanding. It aims at students’ professional specialisation in mathematics education and places particular emphasis on improving their ability to conduct advanced research. Students will gain deeper insights into core theoretical and methodological issues in mathematics education. They will acquire essential skills and knowledge for undertaking original and important research. The Programme covers a broad spectrum of research methods, which are necessary for critically engaging with literature on specialised themes of mathematics education. These research methods allow students to expand their skills in designing and conducting research, analysing and interpreting their findings and in writing original research. Through seminars, discussions, lectures and conference participations, students reflect on theoretical approaches and their implications for instruction. They also develop a critical understanding of the current state of mathematics education. Special attention is given to analysing current research and its implications for educational and curriculum programmes. In addition, students can take part in externally funded research projects.

Learning Outcomes

It is expected that students will:

• Enhance their ability to design, interpret and analyse research activities.

• Be able to implement research findings in the field of Mathematics Education into educational policy issues.

• Critically analyse mathematics education policies as well as practices being applied to the educational system.

• Critically review and understand existing literature about the contemporary theories of Cognitive Development and Implementation of Educational Projects in Mathematics.

• Acquire skills for designing and carrying out original research (quantitative and/or qualitative).

• Be able to design, write and present research articles in conferences.

• Develop research and theoretical cooperation with researchers and academics of different fields of specialisation.

Requirements for the Ph.D. Programme

<table>
<thead>
<tr>
<th>Course</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Compulsory Courses</td>
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<td>Comprehensive Examination</td>
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<td>Research Stage I</td>
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<td>Research Stage II</td>
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<td>Dissertation Stage II</td>
<td>30</td>
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<tr>
<td>EDU 750 Submission of Research Proposal</td>
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</tr>
<tr>
<td>A total of 273 ECTS is required for its successful completion</td>
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</tr>
<tr>
<td>Specialisation Courses (choose three courses)</td>
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</table>

Contact Details

PROGRAMME COORDINATORS

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LEARNING IN NATURAL SCIENCES AND ENVIRONMENT

Programme’s Purpose and Objectives

A) Specialisation “Learning in Natural Sciences”

The development of Science Education as an autonomous scientific area has led to the need of improving teaching at all levels of education. A key factor in achieving this need, is the provision of appropriate education and teacher training programmes. There is a need for teachers in primary and secondary education to acquire up-to-date knowledge regarding the modern trends of the science education domain and to acquire research skills. The programme aspires to foster the development of teachers-researchers specialised in science learning, who will be well equipped in terms of knowledge from Natural Sciences, Cognitive Psychology, and Research Methodology and therefore, able to make a difference in school science education.

The general aim of the programme is to offer comprehensive education for teachers-researchers regarding cognitive development, epistemology and learning in science education. Participants will acquire skills in basic and applied research, designing and developing science curricula, evaluating and reforming educational policy, and acquiring skills for critically analysing recent trends and findings related to Science Education.

B) Specialisation “Environmental and Sustainability Education”

The Programme aims to give students the opportunity to develop knowledge and skills in the systematic study of Environmental and Sustainability Education (ESE) on a scientific basis. Furthermore, it aims to develop students’ ability to critically reflect upon sustainable development in an educational context and to strengthen their abilities to develop, design and evaluate educational initiatives that can contribute to sustainable development. Questions from various disciplinary and interdisciplinary starting points, in relation to both formal and informal educational contexts, are explored, and possibilities and challenges for the educational practice are discussed and problematised.

Beginners and experienced environmental educators, including teachers, non-formal educators, environmental or park managers, zoo or botanic garden educators will acquire skills in basic and applied research, designing and developing curricula, evaluating and reforming educational policy. They will also acquire skills in analysing recent trends and findings related to environmental and sustainability education. Lastly, the Programme also supports ongoing professional development of in-service teachers.

Learning Outcomes

A) Specialisation “Learning in Natural Sciences”

It is expected that students will:
- Be acquainted with the basic literature on science learning, the current theories of cognitive development, and approaches to the design, development, and implementation of science education curricula.
- Acquire knowledge on how science knowledge is constructed in relation with science related skills, scientific practices and the affective domain.
- Develop an understanding of the importance of teaching science for preparing the future citizens (Scientific literacy – Science for all).
- Acquire knowledge on utilizing technological tools for scaffolding science teaching and learning.
- Develop skills for designing and running research in the science education domain.
- Formulate research questions and choose the appropriate methodology for their study.
- Be acquainted with a range of quantitative and qualitative research methods and acquire experience in applying these methods to the collection and analysis of data and in promoting the study of basic and applied questions in science learning.
- Be able to utilise available research evidence and make suggestions and changes in educational policy, taking into consideration existing needs and constraints of the educational system to continuously optimise the effectiveness of the teaching-learning process in the natural sciences.

B) Specialisation “Environmental and Sustainability Education”

It is expected that students will:
- Learn about environmental and sustainability education foundations and approaches, and environmental action in schools and non-formal settings.
- Be able to critically review and analyse perspectives in Educational Science on complex phenomena and processes of change within sustainable development.
- Be able to apply a scientific approach in relation to theoretical, practical and policy-related aspects of Environmental and Sustainability Education.
- Be able to apply research-based knowledge to start new or enhance existing environmental education programmes.
- Develop skills for designing and running research in ESE.
- Acquainted with a range of quantitative and/or qualitative research methods, and acquire experience in applying these methods to the collection and analysis of data and in promoting the study of basic and applied questions in ESE.
- Be able to utilise available research evidence and make suggestions and changes in educational policy, taking into consideration existing needs and constraints of
the educational system to continuously optimise the effectiveness of the teaching-learning process.

**Master’s Programme Structure**

Students must successfully complete 90 ECTS, which are distributed as follows:

- **Option A**
  - 2 Core Courses (24 ECTS) + 1 Research Course (12 ECTS) + 4 Elective Specialisation Courses (48 ECTS) + 1 Seminar (6 ECTS).

- **Option B**
  - 2 Core Courses (24 ECTS), 1 Research Course (12 ECTS), 2 Elective Specialisation Courses (24 ECTS), 1 Seminar (6 ECTS), Master’s Thesis (24 ECTS).

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<td>EDU 660</td>
<td>Design, Development and Evaluation of Curricula in Science Education</td>
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<td>EDU 640</td>
<td>Principles and Processes of Curriculum Development and Evaluation</td>
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<td><strong>Methodology of Educational Research</strong></td>
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<td>EDU 682</td>
<td>Qualitative Research Education or</td>
<td>12</td>
</tr>
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<td>Educational Statistics with Statistical Packages Applications</td>
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<td>12</td>
<td>EDU 583 Design and Development of Dynamic Digital Learning Environments 12</td>
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<td>EDU 651 Nature of Science and Science Teaching 12</td>
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* For the completion of the Master’s thesis, students can be exempted from 2 elective specialisation courses.

**Note:** Students can register for EDU 689 upon the academic advisor’s approval. EDU 689 substitutes an Elective Area Course.

**Objectives of the Doctoral Programme**

The Programme aspires to foster the development of teachers-researchers specialised in Science Education, who will be well equipped in terms of knowledge from Natural Sciences, Cognitive Psychology, and Research Methodology and therefore, able to make a difference in school science education.

The general aim of the programme is to offer comprehensive education for researchers in Science Education. Participants will acquire skills in basic and applied research; they will develop strategies for evaluating and reforming educational policy as well as acquire critical skills in analysing recent trends and findings related to Science Education.

**Learning Outcomes**

It is expected that students will:

- Be acquainted with the basic literature on science learning, the current theories of cognitive development, and approaches to the design, development, and implementation of educational programmes in natural sciences.
• Develop skills for reviewing and critically analysing the literature related to specific research questions.
• Acquainted with a range of qualitative and quantitative research methods and will acquire experience in applying these methods to the collection and analysis of data and in promoting the study of basic and applied questions in Science Education.
• Able to formulate questions that could be investigated, specify the degree of constraint of these questions and select an appropriate methodology for providing answers.
• Able to utilise available research evidence and make suggestions in education and by taking into consideration existing needs and constraints of the educational system optimise the effectiveness of the teaching-learning process in the natural sciences.

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</table>

All work which begins with Dissertation Stage III and onwards is credited with 0 ECTS

| Grand Total | 273 |

### Contact Details

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E-mail: korfiati@ucy.ac.cy

### Compulsory Courses

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<td>EDU 788</td>
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| ECTS | 60 |

### Department of Education
SPECIAL AND INCLUSIVE EDUCATION

Objectives of the Master’s Programme

Theory and research in Special and Inclusive Education is extremely important for all teachers at all levels of education (pre-primary, primary, secondary, and higher education). The Programme is structured on the theorists’ and researchers’ work and seeks to develop teachers’ knowledge, attitudes, and skills in order to conduct further research in the area and contribute to the further development of Inclusive Education.

The general aim of the Programme is to offer comprehensive education regarding the development of Special and Inclusive Education ideologies and systems at international and local level and set the underpinnings of different theoretical and research approaches that explore different aspects of the topic. It also aims at promoting research which helps to understand how teaching, curricula, language, history, family, society and culture shape special and inclusive education policy and practice.

Learning Outcomes

It is expected that students will:

• Be acquainted with the basic literature on special and inclusive education.

• Be familiar with the approaches to the design, development, and implementation of special and inclusive education research.

• Develop skills for designing and running research in special and inclusive education.

• Acquainted with a range of qualitative and quantitative research methods and will acquire experience in applying these methods to the collection and analysis of data and in promoting the study of basic and applied questions in Science Education.

• Be able to employ theory and research in the development of policy and curricula.

Master’s Programme Structure (90 ECTS)

• Option A

7 Courses x 12 ECTS (84 ECTS) + 1 Seminar x 6 ECTS = 90 ECTS in total.

• Option B

5 Courses x 12 ECTS (60 ECTS) + 1 Seminars x 6 ECTS + Master’s Thesis (24 ECTS) = 90 ECTS in total.

Objectives of the Doctoral Programme

Theory and research in Special and Inclusive Education is extremely important for all teachers at all levels of education (pre-primary, primary, secondary, and higher education). The Programme is structured on the theorists’ and researchers’ work and seeks to develop teachers’ knowledge, attitudes, and skills in order to conduct further research in the area and contribute to the further development of Inclusive Education.

The general aim of the Programme is to offer comprehensive education regarding the development of Special and Inclusive Education ideologies and systems at international and local level and set the underpinnings of different theoretical and research approaches that explore different aspects of the topic. It also aims at
promoting research which helps to understand how teaching, curricula, language, history, family, society and culture shape special and inclusive education policy and practice.

**Learning Outcomes**

It is expected that students will:

- Be acquainted with the basic literature on special and inclusive education.
- Be familiar with the approaches to the design, development, and implementation of special and inclusive education research.
- Develop skills for designing and running research in special and inclusive education.

Acquainted with a range of qualitative and quantitative research methods and will acquire experience in applying these methods to the collection and analysis of data and in promoting the study of basic and applied questions in Science Education

To be awarded a Ph.D. in Special and Inclusive Education, students must have completed the following requirements:

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<td>EDU 545</td>
<td>Disability in the Society and at School</td>
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<td>EDU 546</td>
<td>Differentiated Instructions in the Inclusive Classroom</td>
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<td>EDU 639</td>
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Contact Details

**PROGRAMME COORDINATORS**

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**LANGUAGE, LITERACY AND EDUCATION**

**Objectives of the Master’s Programme**

The programme’s main objective is the in-depth study of language and language arts education, based on theoretical knowledge from the fields of Literacy Studies and Linguistics. The various sociological-anthropological, linguistic and philosophical trends that have contributed to the formation of different approaches in the study of language, literacy and language arts are examined. The Programme is especially designed for teachers and other professionals who are interested in language, discourse and texts in various epistemological fields, offering theoretical and research foundations on issues relating to language, literacy and education. Special emphasis is placed on the synchronic and diachronic influence of the sociocultural context on the formation of language policies, language values, language use and different types of literacies and on the way all these interact with language arts and language education in and out of school. Finally, the Programme focuses on various research approaches employed for the study of language and literacy in an out of school such as critical discourse analysis, linguistic ethnography, multimodal interaction analysis and cyber-ethnography.

**Learning Outcomes**

Upon the completion of the Programme, students are expected to:

- Critically analyse the concepts of language, text, discourse and communication and the various aspects of literacy in relation to contemporary sociocultural, sociolinguistic and socio-anthropological theories.
- Recognise those theoretical premises that are necessary for bridging the gap between a narrow understanding of literacy as a reading and writing skill, and a broader social understanding of literacy in society.
- Acquire theoretical expertise on various aspects of language arts, such as grammar teaching, reading and writing, communicating in different modes, digital literacy and bilingual/multilingual education.
- Be able to respond to the different challenges for language and literacy education in the contemporary era.
- Contribute to research in the domains of language, literacy and education.
Master’s Programme Structure

Completion of the Programme requires 90 ECTS. Students may take one from the following options:

- **Option A**
  7 Courses X 12 ECTS (84 ECTS) and 1 Seminar (6 ECTS).

- **Option B**
  5 Courses X 12 ECTS (60 ECTS), 1 Seminar (6 ECTS) and Master’s Thesis* (24 ECTS).

Requirements of the Master’s Programme

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**Compulsory Methodology of Educational Research**

(choose one course)

- EDU 682 Qualitative Research in Education or       | 12   |
- EDU 683 Educational Statistics with Statistical     | 12   |
- Packages Applications                                |      |

**Elective Specialization Courses**

2 Core/Content Courses

- EDU 524 Multiliteracies and Literacies in the Digital Age | 12   |
- EDU 527 Capitalizing on Language Variation in Education | 12   |
- EDU 529 Monolingual, Bilingual and Multilingual Education: Attitudes, Trends and Perspectives | 12   |

2 Elective Courses of the Master’s Programme

- EDU 563 Supporting Creativity in Early Childhood Education | 12   |
- EDU 583 Design and Development of Dynamic Digital Learning Environments | 12   |
- EDU 607 Sociology of Curriculum | 12   |
- EDU 637 Theory and Politics of Multicultural Education | 12   |
- EDU 689 Independent Study | 12   |
- or Master’s Thesis I | 12   |
- Master’s Thesis II | 12   |
  (If students choose a Master’s Thesis, they are exempted from the two elective courses).

Seminar

- EDU 686 Seminar in Language, Literacy and Education | 6    |

Grand Total | 90 |

**Notes:**

- Students can register to Master’s Thesis and be exempted from two Elective Area courses and then continue with the registration for Master Thesis Continuation (1 ECTS), until they complete their thesis and defend it to the third-member Committee.
- This course substitutes an Elective Area course and the Independent Study course will be supervised by one of the programme coordinators.

Objectives of the Doctoral Programme

The Programme aims to provide the basis for the in-depth theoretical and empirical study of language, literacy and education in and out of school, with special emphasis placed on language arts, literacy theory and pedagogy, and applied and social linguistics. It thus targets teachers and other professionals and sets as its main purpose to enhance their research development in language, literacy and education, and offer strong theoretical grounding in sociocultural approaches to literacy, multimodality, critical discourse studies, applied linguistics, and sociolinguistics. Special emphasis is placed on the synchronic and diachronic influence of various theoretical traditions that formed and influenced the study of language and literacy as objects of research and instruction across different, localised and historicised contexts. The Programme further aims to deepen students’ knowledge and expertise in research approaches employed for the study of language and literacy such as critical discourse analysis, policy analysis, linguistic ethnography, multimodal interaction analysis and cyber-ethnography.

Learning Outcomes

Upon the completion of the programme, students are expected to:

- Familiarise themselves with theoretical tenets and traditions for the study of language, literacy and education, including current sociocultural-anthropological approaches to literacy and literacy education, multimodal theories, and sociolinguistic theories on language, discourse and communication.
- Develop skills for reviewing and critically analysing the literature related to specific research questions.
- Formulate research questions and select the appropriate methodology for providing answers to these questions.
- Familiarise themselves with a broad range of educational research methods and methods in language and literacy research and accumulate experience in implementing these methods for the collection and analysis of data.
- Interpret research findings and consider the implications of their research in order to make suggestions for the development of language policies and for the design (at the levels of curriculum design, development of instructional materials, and identification of practices for the enactment in real classrooms) of literacy education, multilingual education, pedagogies of multiliteracies and multiple literacies in diverse educational settings.
- Participate in different academic activities and fora, at the local and international level, in order to promote theoretical and pedagogical knowledge for the study of key issues in language, literacy and education approaching those both as phenomena and domains of study.
Requirements for the Doctoral programme

1) A Master’s Degree in Language Pedagogy/Language Arts Education or in Applied Linguistics/Linguistics or in Educational Studies, or in international M.A. programmes relevant to the aims and context of the Ph.D. programme.

2) Successful completion of the following:

<table>
<thead>
<tr>
<th>ECTS</th>
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</thead>
<tbody>
<tr>
<td>5 Courses X 12 ECTS</td>
</tr>
<tr>
<td>- 1 Course in Educational Research</td>
</tr>
<tr>
<td>- 3 Content Areas/Specialisation Courses</td>
</tr>
<tr>
<td>- 1 Limited-Choice Course</td>
</tr>
<tr>
<td>Research (8 stages X 15 ECTS)</td>
</tr>
<tr>
<td>Comprehensive Examinations (exam in 5 courses)</td>
</tr>
<tr>
<td>Dissertation Stage Ia, Ib 1 X 15 ECTS</td>
</tr>
<tr>
<td>Dissertation Stage Iia, Iib 15 ECTS</td>
</tr>
<tr>
<td>Grand Total</td>
</tr>
</tbody>
</table>

Note: In cases where a candidate for the Ph.D. holds a Master’s degree from any Department of the University of Cyprus or any recognized university, he/she is required to complete 3-5 courses (36-60 ECTS), following recommendation of the academic advisor responsible for the postgraduate studies of the Programme. It is the student’s responsibility to request credit transfer.

Comprehensive Examination (CE)

The main goal of the CE is to evaluate the abilities of doctoral candidates to work in a holistic way on the framework of a theoretical context of Language and Literacy. The CE consists of three distinct parts: a theoretical account of different approaches in Literacy, a research-based perspective on issues concerning language and literacy and, finally, an applied section in which students will need to synthesise and apply knowledge in pedagogical contexts. To be successful, the student must pass all three parts.

Tentative Topics for the Examination

1) Theoretical Framework on Literacy and Language Arts
   - Language and literacy theories.
   - Sociocultural perspectives on literacy and literacy development (orality and literacy, literacy as a situated social practice, etc.).
   - Theoretical foundation of literacy and language arts education (e.g. sociocognitive approaches, functional perspectives, genre theory, critical literacy, etc.).
   - Multimodality and multiliteracies.
   - Sociolinguistics and literacy.

2) Research in Literacy and Language
   - Ethnographic approaches in language and literacy research.
   - Discourse and critical discourse analysis.
   - Textual analysis.

3) Applied Aspects of Literacy and Language
   - Language policy and language planning.
   - Multilingual/bilingual and bidialectal education.
   - Textbooks and curricula in literacy and language teaching.

Course Descriptions for Cycle B (Compulsory and Elective Courses)

The courses in this cycle aim to:

a. Offer the necessary linguistic training that will enable educators to comprehend the processes of children’s language development. Although in recent decades, research in language acquisition has been developing rapidly, the study of the structural features of the language of Greek-speaking children is still in its initial stages. The relevant courses offer a sound theoretical
understanding, that will lead to further research and production of scientific knowledge in this area.

b. Examine the notions of communicative competence and the various aspects of Literacy, in relation to contemporary sociolinguistic and anthropological approaches and the frameworks of Discourse Analysis and Text Linguistics. The aim of these courses is twofold: On the one hand to offer the necessary theoretical understanding in an area in which relevant research related to the Greek language is still emerging, and on the other hand to bridge the gap between the narrow concept of literacy offered by the current curricula and the multifaceted reality of literacy in contemporary societies, which ought to be promoted in pedagogical practice.

c. Study a wide variety of teaching practices and methodologies, ranging from teaching the structural elements of language to teaching literature. The aim of this group of courses is the critical positioning towards the existing approaches and methodologies from both a scientific and a practical perspective.

d. Cover the area of bilingual and multilingual education, with a twofold target: First, to offer a wider understanding of the related theoretical concepts (bilingualism, interlanguages, underlying linguistic competence); second, to provide educators with practical preparation and reinforcement to ensure both their understanding of the socio-cultural dimensions of bilingualism and their competence in deploying these effectively in a multilingual and multicultural classroom.

Contact Details
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Instructional Technology
Objectives of the Master’s Programme
The general aim of the Programme is to offer specialised courses in Instructional Technology to teachers and other professionals in the field of Education. In addition, the Programme prepares students for doctoral studies and academic careers. Students are given the opportunity to acquire specialised knowledge in the field of Instructional Technology. It provides students with background knowledge and develops their research skills in the field of Instructional Design through the use of digital technologies, the development of dynamic teaching and learning environments, the conduction of quantitative and qualitative research as well as the development of educational programmes with the use of digital technologies.

Learning outcomes:
After the successful completion of the Programme, it is expected that students will:
• Acquire knowledge on the basic methodological approaches of Instructional Technology.
• Develop skills for critical analysis of literature related to specific research questions in the field of Instructional Technology.
• Familiarise themselves with qualitative and quantitative methods of educational research and gain experience of applying these methods to collecting and analysing data.
• Analyse and interpret results from modern research in the field of Instructional Design by using digital technologies and from the development of dynamic teaching and learning environments.
• Analyse applications of new technologies in the development of educational programmes.
• Propose future research directions to the field of Instructional Technology.

Master’s Programme Structure
OPTION A

<table>
<thead>
<tr>
<th>Compulsory Core Courses</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDU 580 Theoretical Foundations of Instructional Technology: Problems and Prospects</td>
<td>12</td>
</tr>
<tr>
<td>EDU 581 Research Paradigms in Instructional Technology: Research Design and Data Analysis</td>
<td>12</td>
</tr>
<tr>
<td>EDU 583 Design and Development of Dynamic Digital Learning Environments</td>
<td>12</td>
</tr>
<tr>
<td>EDU 683 Educational Statistics with Statistical Package Applications</td>
<td>12</td>
</tr>
</tbody>
</table>
Elective Specialisations Courses 24
Δύο από τα πιο κάτω:
EDU 524 Multiliteracies and Literacies in the Digital Age 12
EDU 643 Application of New Technologies in Curriculum Development 12
EDU 662 New Technologies and Learning in the Natural Sciences 12
EDU 676 Contemporary Technology in Mathematics Teaching 12
EDU 689 Independent Study 12

Elective General Courses 12
Ενα από τα πιο κάτω:
EDU 601 Introduction to the Philosophical Dimensions of Education 12
EDU 631 School Effectiveness and School Improvement 12
EDU 640 Principles and processes of curriculum development and evaluation 12

Seminar 6
EDU 692 Seminar in Instructional Technology 6
Grand Total 90

OPTION B
5 courses X 12 ECTS=60 ECTS + Master's Thesis I and II (24 ECTS) + Seminar 6 ECTS=90 ECTS
For the completion of the Master's Thesis, students can be exempted from one General Course and one Specialisation Course.

Objectives of the Doctoral Programme
The general aim of the Programme is to educate and prepare researchers in studying educational phenomena in the light of digital technologies. The Programme focuses on issues related to the use of digital technologies in teaching and to acquire the necessary methodological tools to explore how education is the focal point for these issues. Additionally, other main topics of the Programme are related to educational design by using digital technology, the development of dynamic teaching and learning environments, the design and conduction of quantitative and qualitative research, as well as applications of new technologies in the design and development of educational programs.

Learning Outcomes
After successful completion of the Programme, it is expected that students will:

• Acquire skills and knowledge to expand the theoretical framework and research field of Instructional Technology.
• Develop skills for critical analysis of the bibliography which is related to specific research questions in the field of Instructional Technology.
• Analyse and interpret the results of modern research by using digital technologies.
• Identify research gaps in the research on the teaching of Instructional Technology, to submit appropriate research questions and to design and implement research to answer these questions.
• Familiarise themselves with qualitative and quantitative methods of educational research and gain experience of applying these methods to collect and analyse data.
• Propose future research directions in Instructional Technology.
• Improve, apply and teach theoretical knowledge and approaches in the field of Instructional Technology.
• Participate in public debates on issues related to educational policy and reform through Instructional Technology.

Doctoral Programme Structure

<table>
<thead>
<tr>
<th>Compulsory Core Courses</th>
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<tbody>
<tr>
<td>EDU 580 Theoretical Foundations of Instructional Technology: Problems and Prospects</td>
<td>12</td>
</tr>
<tr>
<td>EDI 581 Research Paradigms in Instructional Technology: Research Design and Data Analysis</td>
<td>12</td>
</tr>
<tr>
<td>EDU 582 Preparation of Research Proposals in Instructional Technology</td>
<td>12</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Elective Specialisations Courses</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDU 583 Design and Development of Dynamic Digital Learning Environments</td>
<td>12</td>
</tr>
<tr>
<td>EDU 643 Application of new Technologies in Curriculum Development</td>
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<table>
<thead>
<tr>
<th>Research Courses</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDU 682 Qualitative Research in Education</td>
<td>12</td>
</tr>
<tr>
<td>EDU 683 Educational Statistics with Statistical Package Applications</td>
<td>12</td>
</tr>
</tbody>
</table>

| Comprehensive Examination | 33 |
| Research Stages (8X15) | 120 |
| Dissertation Stages (4X15) | 60 |

Grand Total 273

Notes:
• All the courses are credited with 12 ECTS
• It is the student’s responsibility to request credit transfer 2-3 courses that he/she has completed in a Master’s degree.
• From the Dissertation Stage III and onwards, the student is credited with 0 ECTS.
• The Semester that Ph.D. student will present his/her research proposal, must register in the “Examination of Research Proposal”
INTER-DEPARTMENTAL AND INTER-DISCIPLINARY SELF-FINANCED PROGRAMME IN GENDER STUDIES

Objectives of the Master’s Programme

Inaugurated in 2012, in parallel with the Gender Studies Centre and the Unesco Chair in Gender Equality, the Programme is the only graduate programme in women’s studies in Cyprus. The goal of the Programme is to offer comprehensive academic knowledge in gender and sexuality studies and to contribute to the academic development of the relevant fields of inquiry. It interrogates and envisions alternatives to patriarchal social structures, institutions, ideologies and relationships. It also challenges perceptions of and reconceptualizes understandings and approaches to gender, sexuality, body, culture, materiality, discourse and the human-nonhuman distinction in traditional academic disciplines.

The curriculum is designed to meet the needs of students who strive to acquire scholarly foundations in gender, women’s and sexuality studies. These foundations enable our graduates to continue to Ph.D. studies and pursue academic careers or to effect social change in a society with persistent misogynist and homophobic attitudes, patriarchal structures and systemic gender inequality.

The interdepartmental composition of the faculty and the partnership, both at the level of instruction and research, with international scholars and networks, provides state of arts gender studies expertise with regards to education studies, history, classics, literature, cultural studies, animal studies, philosophy, human rights, management and organisation analysis, politics, and area studies such as postcolonial, critical race and globalisation studies.

Learning Outcomes

Courses integrate feminist theory, gender-focused research, and case-study experience. Our graduates are able to engage in reflective learning on theories concerning the social, historical and discursive constitution of gender, sexuality and the axis gender/sexuality; explain how systems of patriarchy, misogyny and heteronormativity interrelate and work together in defining kinship, sociality and social relations; analyse the rationalities of gender and its relation to power in transnational and multicultural contexts; apply gender and sexuality as categories of historical and social analysis; identify and analyse structural and political forms of intersectionality; engage in critical feminist and/or queer genealogies of disciplines, epistemic certainties, canons, archives and policy frames in order to address silenced exclusions, entrenched certainties; foreground more inclusive, just and vital forms of knowledge, social organisation and political solidarity.

The Programme plays a critical role in enriching other graduate programmes of the University with courses as well as enriching the University with feminist, queer and critical feminist race theories and epistemologies in various ways:

- Faculty members participate in Dissertation Supervision Committees across departmental and university wide disciplinary specialisations.
- Conferences, Visiting Scholar Seminars, Performances, Consciousness Raising and Outreach Events organized by the Gender Studies Programme are widely attended by the academic community and the public.
- The undergraduate course “LGBTQI, Youth and Education”, taught every summer term by Gender Studies M.A graduates, is widely attended by undergraduates from all university departments.

Master’s Programme Structure

- **Option A**
  3 compulsory Courses X 12 ECTS (36 ECTS) + 4 Elective Courses X 12 ECTS (48 ECTS) + 1 Seminar X 6 ECTS (6 ECTS) = 90 ECTS.

- **Option B**
  3 compulsory Courses X 12 ECTS (36 ECTS) + 2 Elective Courses X 12 ECTS (24 ECTS) + 1 Seminar X 6 ECTS (6 ECTS) + Dissertation (24 ECTS) = 90 ECTS

### List of Core/Mandatory Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRS 628</td>
<td>Qualitative Research in Education</td>
<td>24</td>
</tr>
<tr>
<td>GRS 629</td>
<td>Feminist Theory</td>
<td>12</td>
</tr>
<tr>
<td>GRS 630</td>
<td>Queer Theory and the Study of Sexuality</td>
<td>12</td>
</tr>
</tbody>
</table>

### Elective Courses

Elective courses include: a) Courses that are already offered by various departments from across the University and are also cross-listed for the Gender Studies Programme (Group A); b) Courses that are new and designed specifically for the Gender Studies Postgraduate Programme, by the participating University departments and schools (Group B).

Courses from another postgraduate programme/department may also be considered as an alternative elective course with the approval of the student’s supervisor.

- **EDU 556** Advanced Seminar in the Theory and Philosophy of Education
- **EDU 641** Gender and Education

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**ECTS**

- Qualitative Research in Education: 24
- Feminist Theory: 12
- Queer Theory and the Study of Sexuality: 12
- Academic Writing: 6
defining and regulating the gender/sexuality; investigation and interrogation in constitution of gender, sexuality and the axis and heteronormativity interrelate and work together in multiple fields of life of the ways patriarchy, misogyny theories concerning the social, historical and discursive experience; engagement in reflective learning on theory, gender-focused research, and case-study Sexuality studies. It aims to the integration of feminist structural and political forms of intersectionality; policy frames in order to address silenced exclusions, disciplines, epistemic certainties, canons, archives and engaging in critical feminist and/or queer genealogies of political figures in the fields biopolitics in transnational and multicultural contexts; at analysing from a gender perspective, both suppressing and productive forms of power and research approaches employed for the study of gender and sexuality such as philosophy and theory, literary analysis, critical discourse analysis, policy analysis, ethnography, genealogy. The interdepartmental composition of the faculty and the partnership, both at the level of instruction and research, with international scholars and networks, encourages and fosters feminist, queer and intersectional research in and across fields of studies such as: education studies, history, classics, literature, cultural studies, animal studies, philosophy, human rights, management and organisation analysis, politics, and area studies such as postcolonial, critical race and globalisation studies.

Learning Outcomes

- Intervene with feminist critique, gender framing expertise and epistemic insight in academic research and policy; public discourse; public spheres and counter publics.
- Formulate and pursue research questions that interrogate gender rationalities and patriarchal social structures, institutions, ideologies and relationships.
- Challenge, rework and expand the theorisations of feminism, intersectionality, sexuality, race, agency, subjectivity, time and space, body, power, discourse, materiality, humanity and the posthuman in traditional academic disciplines.
- Explore multiple and diverse idioms of academic writing.
- Produce state of the arts monographs the fields of gender, women’s and sexuality studies.

Objectives of the Doctoral Programme

Inaugurated in 2012, in parallel with the Gender Studies Centre and the Unesco Chair in Gender Equality, the Programme is the only Ph.D. programme in women’s studies in Cyprus. The goal of the Programme is to equip graduates with the necessary knowledge, mind attitudes and research frames and skills that would enable them to grow into academic scholars and leading policy and political figures in the fields of Gender, Women’s and Sexuality studies. It aims to the integration of feminist theory, gender-focused research, and case-study experience; engagement in reflective learning on theories concerning the social, historical and discursive constitution of gender, sexuality and the axis gender/sexuality; investigation and interrogation in multiple fields of life of the ways patriarchy, misogyny and heteronormativity interrelate and work together in defining and regulating the private/public binary, kinship, sociality and social relations. In addition, it aims at analysing from a gender perspective, both suppressing and productive forms of power and biopolitics in transnational and multicultural contexts; mapping and critically analysing the rationalities of gender and their operation in the construction and disciplinarity of knowledge; applying gender and sexuality as categories of historical and social analysis; theorising and applying in research and writing structural and political forms of intersectionality; engaging in critical feminist and/or queer genealogies of disciplines, epistemic certainties, canons, archives and policy frames in order to address silenced exclusions, entrenched certainties; foregrounding more inclusive, just and vital forms of knowledge, social organisation and political solidarity.

Furthermore, the Programme aims to deepen students’ knowledge and expertise in research approaches employed for the study of gender and sexuality such as philosophy and theory, literary analysis, critical discourse analysis, policy analysis, ethnography, genealogy. The interdepartmental composition of the faculty and the partnership, both at the level of instruction and research, with international scholars and networks, encourages and fosters feminist, queer and intersectional research in and across fields of studies such as: education studies, history, classics, literature, cultural studies, animal studies, philosophy, human rights, management and organisation analysis, politics, and area studies such as postcolonial, critical race and globalisation studies.

Learning Outcomes

- Intervene with feminist critique, gender framing expertise and epistemic insight in academic research and policy; public discourse; public spheres and counter publics.
- Formulate and pursue research questions that interrogate gender rationalities and patriarchal social structures, institutions, ideologies and relationships.
- Challenge, rework and expand the theorisations of feminism, intersectionality, sexuality, race, agency, subjectivity, time and space, body, power, discourse, materiality, humanity and the posthuman in traditional academic disciplines.
- Explore multiple and diverse idioms of academic writing.
- Produce state of the arts monographs the fields of gender, women’s and sexuality studies.

Doctoral Programme Structure

The candidate is required to hold a Master’s degree in the same or a related subject. Students must successfully complete either 240 or 258 ECTS, distributed as follows:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>ECTS</th>
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<tbody>
<tr>
<td>GRS 629</td>
<td>Feminist Theory</td>
<td>12</td>
</tr>
<tr>
<td>GRS 776</td>
<td>Queer Theory &amp; Sexuality Studies</td>
<td>12</td>
</tr>
<tr>
<td>Research Methodology</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>One from the following:</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>EDU 520</td>
<td>Discourse Analysis Methods</td>
<td>12</td>
</tr>
<tr>
<td>EDU 682</td>
<td>Qualitative Research</td>
<td>12</td>
</tr>
<tr>
<td>EDU 683</td>
<td>Educational Statistics with Statistics</td>
<td>12</td>
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</tbody>
</table>

Department of Education
Elective Courses  

Two from the following:

- **GRS 613** Gender and Film 12 ECTS
- **GRS 619** Gender Equality, Human Rights and the Legal Process 12 ECTS
- **GRS 626** Gender Identities and Work: The Sociological Approach 12 ECTS
- **GRS 631** The Culture of the Image in the Humanities, the Social Sciences and Gender 12 ECTS
- **GRS 632** Contemporary Trends and Problems in Gender Studies 12 ECTS
- **GRS 639** Gender and Language 12 ECTS
- **GRS 642** Race, Gender and Postcolonial Feminism 12 ECTS
- **GRS 689** Independent Study 12 ECTS
- **ENG 713** Gender, Sexuality, and Subjectivity in Early Modern Literature and Culture 10 ECTS
- **ENG 720** Seminar in Contemporary Feminist Theory: Debates on Aesthetics, Ethics, and Politics 10 ECTS
- **ENG 705** The Animal in Literature and Philosophy 10 ECTS
- **BNE 535** Byzantine Masculinities and Femininities 10 ECTS
- **FRE 772** Gender Roles in the European Space 10 ECTS
- **EDU 556** Advanced Reading and Writing Seminar in Theory and Philosophy 12 ECTS
- **EDU 641** Gender and Education 12 ECTS
- **HIST 558** Women in Cyprus Under Latin Rule (1191-1571) 10 ECTS

Seminars

- **GRS 820** Comprehensive Exams 33 ECTS
- **GRS 891** Research Ia, Ib X 15 ECTS 30 ECTS
- **GRS 892** Research IIa, IIb X 15 ECTS 30 ECTS
- **GRS 893** Research IIIa, IIIb X 15 ECTS 30 ECTS
- **GRS 894** Research IVa, IVb X 15 ECTS 30 ECTS
- **GRS 895** Dissertation Writing Ia, Ib X 15 ECTS 30 ECTS
- **GRS 896** Dissertation Writing IIa, IIb X 15 ECTS 30 ECTS

**Grand Total** 249 ECTS

**Note:** The Seminar is mandatory for students that only need extra credits to complete the ECTS.

### Course Descriptions

**GRS 613 Gender and Cinema (12 ECTS)**

Our aim is to explore the relationship between Gender (in all its manifold complexity) and Cinema through close readings and discussions of selected films from World Cinema. The Questions/Thematic Units that are of particular interest for us are: a) How does Cinema construct Gender as a negative value and how does Feminism intervene and challenge such constructions both in theory and practice? (through films themselves)? b) How do specific interpretive frameworks such as the affective, the intersectional and the historical-philosophical make manifest Cinema’s potential to dwell within a differential Cultural space and what may be the significance of films that are able to do so for Gender issues? c) How do some of the most important directors of World Cinema such as Chantal Akerman, Pedro Almodovar, Agnes Varda, Rainer Werner Fassbinder, Ingmar Bergman, Claire Denis, Deepa Mehta, Zhang Yimou, and Asghar Farhadi, among others, negotiate gender through their films? The approach taken in this course is interdisciplinary and uses readings from Philosophy, Feminist Theory, Cultural Studies and Film Theory, History and Criticism.

**GRS 619 Gender Equality, Human Rights, Gender Equality and the Law (12 ECTS)**

The course is structured around the concepts of gender, equality and non-discrimination from the perspective of human rights law. From this perspective, we examine critical and feminist approaches to (international) human right law, the question of cultural relativism, as well as the legal principles of equality and non-discrimination, with emphasis on gender equality at international, European and national level. With this frame in mind, we study a series of issues with reference to important international human rights conventions, focusing on the Convention for the Elimination of Discriminations Against Women (CEDAW), European Court of Human Rights Case Law, the relevant legislation of the Republic of Cyprus and the case law of the Supreme Court of Cyprus.

More specifically, we examine discrimination, crimes and violence against women, focusing on the Istanbul Convention (Council of Europe Convention on preventing and combating violence against women and domestic violence), trafficking (with reference to the relevant Council of Europe Convention), reproductive rights, such as the issues of abortion and medically assisted reproduction, parental rights and children rights, the issue of the (de)criminalisation of sex work, as well as recent developments with regards to LGBT rights.

**GRS 629 Feminist Theory (12 ECTS)**

Study of classical, modern and contemporary feminist texts of feminist theory from Mary Astell to Butler. Basic concepts of feminist theory.

Debates, continuities, discontinuities in feminist theory. Relations, interconnections and radical displacements between feminist theory and philosophy and social theory. Feminist interventions in theory, contesting theorisations of human nature, dualist and hierarchical systems of thinking (nature, body, culture, kinship, feeling, affect, home, polis, labour, matter), Feminist theory in politics and policy frames.

**GRS 626 Gender Identities and Work: The Sociological Approach (12 ECTS)**

The course discusses the role of education and mass media and uses various means to study the production of gender identities in the workplace. In addition, the course examines organisational issues: leadership, human recourses, negotiations,
communication and culture which are often mistakenly treated as “universal” but which are not, when a gender lens is applied.

GRS 631 The Culture of the Image in the Humanities, the Social Sciences and Gender (12 ECTS)

Our aim in this course is to examine the Image as Truth’s Other, the False, or that which appears to be True but is not. The interpretation, that is, views the Image as a negative value since it merely follows or comes after its Original, reflecting it and mirroring it faithfully. The dualism Reality/Image is to be thought of as one of the many guises assumed by the logic of exclusion which symbolizes Western thought.

Beginning with the Platonic distinction between the Metaphysical and the Physical world, and continuing with Sartre, Arbus, Jarman, Wittig, Sontag, Wilde, Aristophanes, Petzold, Heidegger, Baudrillard, Woolf, Lynch, Wolf and Mapplethorpe, amongst others, our aim is to rethink, from the perspective of the Image, the relationship between the real and its reflection (Image)—in the many ways this relationship manifests itself (Home/Foreign, Self/Other, Original/Copy etc. )—and delve deep into the mysterious and strange world that images are, heeding their self-reflexive utterings on their relationship to Truth and our differential world. What interests us, is the Image’s disruptive potential to destabilise the very grounds on which the original stands and inevitably the very logic of exclusion that keeps it bound. Through Philosophy, Literature, Cinema, Photography and Critical and Cultural Theory we shall attempt to approach images as images, in their radical otherness, at the point when they transform into something-other and begin to tell, in an enigmatic way, a strange story different than that of the “faithful companion.”

GRS 632 Contemporary Trends and Problems in Gender Studies (12 ECTS)

The course focuses mainly on social problems with different and differential impact on men and women, explores policy solutions at the international and national level, and evaluates if these policies meet their objectives in reality. The analysis of marginality and subjugation is based on intersectionality and the intersecting influences of race, class, gender and sexual orientation on policy concerns are reflected both in the readings and in the analytic approaches to course topics. The course allows graduate students to focus on specific policy domains: employment and unemployment; states, families and social welfare; work-family balance; gendered division of housework and care; LGBTIQ politics and policies; regulation and control of women’s bodies; gender-based violence and harassment; abortion and reproductive rights; marriage, adoption and intimate life.

GRS 639 Gender and Language (12 ECTS)

The following questions will be discussed: How does discourse create, reveal and perpetuate attitudes, beliefs and knowledge towards gender, sex, sexuality and identity? What role does discourse play in empowerment or marginalisation? Particular emphasis will be placed on the embedment of language in structures of power, authority, and social inequality. Social and cultural contexts will therefore be considered as pivotal in giving meaning to both linguistic practices and social categories. Critical discourse analysis will frame the course (Fairclough, Mills, Lazar, Baxter), Corpus linguistics (frequencies, collocates and concordances) and conversational analysis (Coates) will also be part of the possible methodologies. We shall consider how the same concepts are constructed reproduced or challenged in popular cultural artefacts such as advertisements, comic strips, songs, and diverse texts such as literary abstracts, textbooks, and social media comments. We will be working on specific examples to analyse how gender always interplay with ethnicity/ class and how their interplay is embedded in discourse structures.

GRS 642 Race, Gender and Post-Colonial Feminism (12 ECTS)


GRS 689 Independent Study (12 ECTS)

In a one-to-one personalised setting, students will read, reflect and write on a special/specialised topic which is not covered by offered courses. The study enhances students’ knowledge, theoretical and research methodology and research skills in the field and/or the development of a thesis proposal in gender studies. In addition, students develop their academic reading and writing skills.

GRS 774 Seminar in Gender and Sexuality Studies I (6 ECTS)

The seminar contributes to the internationalisation of the Programme as students are given the opportunity to study new (or new approaches to) theories, concepts and research methodologies, meet and interact with international scholars and learn about different teaching styles.

GRS 775 Seminar in Gender and Sexuality Studies II (6 ECTS)

The seminar contributes to the internationalisation of the Program as it offers to students the opportunity to study new (or new approaches to) theories, concepts and research methodologies, to meet and interact with international scholars, and to experience other teaching styles.

GRS 776 Queer Theory and the Study of Sexuality (12 ECTS)

The course’s goal is to introduce students to queer theory and to unpack queer theory’s impact on gender studies, subject theory, historiography, identity politics, liberation politics, epistemologies of marginality, urban studies, sex education, urbans studies, gender equality policies. Students are introduced to liminal texts in queer theory which address the discursive and cultural constitution of the body and sexuality with emphasis on the destabilisation of norms of cleanliness, ableness, heterosexuality, reproductive futurity, nuclear family, intimacy in public, identifications and disidentifications.

BNE 535 Byzantine Masculinities and Femininities (10 ECTS)

Learning outcomes:
• students will be able to read critically contemporary gender theory;
• students will know how to approach Byzantine literature through the lens of contemporary gender theory;
• students will be able to recognise Byzantine ideologies concerning gender;
• students will learn how to produce research and make presentations.

ENG 705 The Animal in Literature and Philosophy (10 ECTS)

This course rests on the hypothesis that far from being an occasional or marginal concern of the philosophical and literary tradition, the question of the animal is in fact vital to literary and philosophical history and can make this history legible and
understandable in radically new ways. Moving chronologically from classical Greece to early modern Europe, and from there to the 18th and the 20th centuries, we will see how the questions of the human-animal boundary and of its precarity or permeability, of animal reason or the lack thereof, and of animal habits and propensities have been foundational for virtually every aspect of human thought: the definition of what it means to be human, the conceptualisation of the origins and nature of human community and human politics, the function of religion and ritual, the questions of power, law and violence, the problem of reason and rationality, the exploration of sexuality and sexual abjection, the rise of biopolitics and political economy.

**ENG 713 Gender, Sexuality, and Subjectivity in Early Modern Literature and Culture (10 ECTS)**

This course examines issues related to gender, sexuality and subjectivity in the early modern period. Looking at the interplay between these categories of investigation, the course explores how various constructions of gender and sexuality operated in early modern literature and culture and how they have contributed to the production of subjectivity during this period. A wide range of primary texts are studied and brought into dialogue with a selection of critical and theoretical material, therefore inviting students to explore some of the broader theoretical questions that relate to the representation of gender and sexuality in early modern literature and culture. The construction of femininity and masculinity; homosocial and homoerotic desire; representations of the body; gender and sexuality in relation to notions of prostitution, madness and witchcraft; the intersections between gender, sexuality, race and class are examined.

**ENG 720 Seminar in Contemporary Feminist Theory: Debates on Aesthetics, Ethics, and Politics (10 ECTS)**

The course explores key issues in contemporary feminist theory, as these have been debated in different fields in the Humanities: i.e. continental philosophy, literary studies, political and cultural theory, queer theory, gender and race studies, psychoanalysis and film studies. For the past two years the following topic is explored: Ontologies, Technologies and Epistemologies of the Body.

Though “the body” has remained a major concern in feminism from its emergence as an emancipatory movement in the 18th century to the present, it was foregrounded as a powerful attractor of desires, affects, imaginaries and a site of theoretical reflection in feminist studies in the 1980s-1990s. The course introduces students to key feminist critiques of oppressive epistemologies and technologies of the body in a variety of contexts, i.e. from Ancient Greece and Enlightenment Europe to the slave-based economy in the British colonies and post-Independence U.S., 19th and early twentieth century colonial India, contemporary techno-capitalism and Hollywood cinema. In addition, the course traces the post-1980s development of feminist ontologies and counter-epistemologies of the (suffering, desiring, virtual, rejected, mutilated, unsexed, trans sexed) body, focusing on some central debates that open up new perspectives on the experience of embodiment and what Pheng Cheah calls “mattering”: a) the debate originating from the publication of Judith Butler’s Gender Trouble; b) the open question of sexual difference, as taken up by psychoanalytic and postmodern feminists; and c) the ambivalent responses to versions of posthuman feminism, transgender theory and cyberfeminism which seem to reproduce the western phobia of abject(ed) “meat”.

**GES 772 Gender Roles within the European Space (10 ECTS)**

Equal treatment for women and men is one of the European Union’s fundamental values. It goes back to 1957 when the Treaty of Rome laid down the principle of equal pay. Since then, the European Union (EU) has been trying to eliminate discrimination and achieve gender equality partly thanks to legislation. However equal treatment has also been the motivation of important grass roots movements, such as the suffragettes’ movement in the UK or the more recent FEMEN activism originally from Ukraine and now based in Paris. After a historical survey of these grass-root movements (Scott), and the EU positioning on the issue (Redding’ proposals for instance), we investigate how key concepts such as sex and gender (Butler, Delphy, Wittig) ‘gender roles’ (Goffman), ‘stereotype’ (Lippman) and ‘prejudice’ (Allport, Dovidio et al.) structure these gender equality movements. Cultural theories (Hall), Intersectionality theory (Cho et al, Crenshaw, McCall) and Language/gender theoretical interface (Cameron/ Kulick, Coates) also studied. We consider how the same concepts are constructed, reproduced or challenged in popular culture artefacts such as advertisements, comic strips, songs, political discourse, etc. within the European textual, visual and audio space. Methodologies include corpus linguistics and critical discourse analysis (Fairclough, Fillmore, Sinclair).

**GES 774 Hate speech in the European Space (10 ECTS)**

Research (Assimakopoulos et al. 2017, Vera 2017) shows that in Europe, hate speech is often not seen as a serious offence. Moreover, definitions of what constitutes hate speech differ from country to country. Yet these types of incidents, especially online, are increasing in most countries, and the use of hate speech against certain groups of people is no longer limited to extremist groups. Firstly, the importance and differences within legal definitions of this phenomenon amongst European countries is investigated. The concept of overt and covert hate speech (Jourová, 2017) and the conundrum hate speech vs. freedom of expression is discussed. Secondly, theoretical interpretations of hate speech through the focus on discursive strategies of Othering (Ahmed 2011, Van Dijk 1995 inter alia, Musolf, 2017) are introduced. By using methodological tools which investigate hate speech, students are given the opportunity to develop their research skills in distinguishing hate speech in relation to Gender (sexism), Sexuality (LGBTQ), Origins (racial and ethnic origins), targets of hate speech/hate crime such as migrants, Roma people (Roma), and gender (UK.). Finally, ways to counter, limit or prevent hate speech are investigated.

**HIST 584 Women in Cyprus Under Latin Rule (1191-1571) (10 ECTS)**

The chronological limits of this introduction to women's studies and, more generally, gender studies in medieval Cyprus cover both the Lusignan (1191/2-1489) and the Venetian periods (1489-1571). The geographical limits go beyond the insular kingdom as social institutions and cultural models of gender were formed in accordance with those in Western Europe and the Byzantine Empire. Our investigation of the role and status of medieval women takes into consideration the following parameters: the ideological and institutional framework (religion, Church, and law) and the formation of social prejudices, the biological identity of women as the factor defining their main role in society (marriage, family), the contribution of women to economy (in rural and urban areas), female monasticism, women of aristocratic and royal families and their role in politics, and, finally, women's artistic and literary production.
EDU 520 Discourse Analysis (12 ECTS)
- The notion of discourse. Theoretical approaches.
- Text as a unit of study. Texts, text types, genres.
- Connection of discourse to ideology.
- Discourse as performance and identity construction.
- Discourse analysis across epistemological domains. Approaches and methods of discourse analysis.
  - Critical Discourse Analysis.
  - Systemic Functional Linguistics.
  - Multimodal – multisemiotic analysis of discourse and communication.
  - Analysis of multimodal texts and genres (print, digital).
  - Conversation analysis and Linguistic Ethnography.
- Discourse analysis in education (pedagogical discourse, classroom discourse).
- Discourse analysis across domains.

EDU 521 Language, Discourse and Communication (12 ECTS)
- Discourse through sociolinguistic and anthropological theories.
- Language as a communication system and as semiosis.
- Language use, domains of language use, the model of SPEAKING by Hymes.
- Language as performance.
- Language and identity from an individual and a collective perspective.
- Language in social groups and in communities of practice.
- Orality and literacy.
- Language and institutions.
- Language and education.

EDU 522 Language, Discourse and Communication (12 ECTS)
- Unpacking the notion of literacy.
  - Comparison of different meanings/definitions.
  - Connections to notions of reading, text (oral and written discourse), meaning-making, children’s development as literate beings.
- Language and literacy as sociocultural and political practice.
  - Oral and written cultures.
  - Multiple literacies – school/academic literacies.
- Literacy studies.
  - The history of the field – phases/generations of literacy studies.
  - Contemporary approaches to theorizing literacy.
  - Implications of literacy education and pedagogy, in and out of school.
- The teaching of language and of language arts – genealogical and epistemological analysis.
  - Examination of the field as localised and historicised – changes over time and connections to broader epistemological trends.
  - Pedagogical approaches and epistemological premises for the teaching of language arts (e.g. structural, communicative, functional, genre-based, critical, post-critical approaches).
  - Education policy, official curricula and instructional materials for the teaching of language arts: contemporary views and changes over time.

EDU 524 Multiliteracies and Literacies in the Digital Age (12 ECTS)
- Key terminology: multiliteracies, multiple literacies, new literacies, digital literacy, literacies in the digital age.
- Texts and practices in the digital age.
  - Notions of text and textuality.
  - Connections to broader issues of identity, multiplicity, diversity and social equity.
- Theorizing language and literacy in the digital age.
  - Contrasting theorisations of “new literacies” – emergence and reconceptualisation of the term.
  - Comparison of the theoretical grounding of contemporary approaches like multimodality, social semiotics, sociocultural approaches, sociomaterial approaches, and post-humanism.
- Meaning-making and text production in digital spaces and with digital media – Theoretical constructs for the analysis of:
  - Digital, multimodal, and multimedia texts.
  - Digital spaces, social networking sites, and hybrid practices (e.g. on/off screen, on/off-line, augmented reality, artificial intelligence).
- Teaching models and pedagogical approaches.
  - Multiliteracies and New Learning.
  - Digital literacy approaches.
  - Media literacy.

EDU 527 Capitalizing on Language Variation in Education (12 ECTS)
- Theoretical grounding of language variation.
- Geographical language variation.
- Social groups, communities and language.
- Social groups, communities and language in Greek-speaking populations.
- Language contact, language change, language maintenance.
- Pedagogical dimensions of language variation I: translinguaging, bidialectalism, biliteracy, creole and ebonics in education.
- Pedagogical dimensions of language variation II: Geographical and social varieties of the Modern Greek Language.
- Pedagogical dimensions of language variation III: The context of Cyprus.
- Variation as a characteristic of literacy in society.
- Epistemological fields, discourse communities, genres across the content areas.
- Content area literacies: historical and epistemological grounding.
- Content area literacies: pedagogical and educational dimensions.

EDU 529 Monolingual, Bilingual and Multilingual Education: Attitudes, Trends and Perspectives (12 ECTS)
- Introduction to core concepts: Individual bilingualism. The psycholinguistic approach.
- Introduction to core concepts: Social bilingualism. The sociolinguistic approach.
- Identity, nation and cultural diversity. The construction of “national deity” in monolingual and multilingual contexts.
- Dealing with multilingualism: Educational policy.
• Models of bilingual/multilingual education I & II.
• Case studies in different countries: Multilingualism and educational policy (e.g. Canada, Belgium, Pakistan, Israel, Spain).
• Multilingualism in Greece.
• EU and Multilingualism.
• Multilingualism in Cyprus.

EDU 532 Issues of Ethics (12 ECTS)

EDU 533 Education for Life. Lifelong Education (12 ECTS)

EDU 542 Special and Inclusive Education in Cyprus (12 ECTS)
• Inclusive education: terms and definitions.
• Special education, integration, and inclusive education.
• Inclusive education and learners with disabilities.
• Policies for inclusive education.
• History of education in Cyprus: From segregation to integration and inclusion.
• Policy and practice in relation to the education of learners with disabilities in Cyprus.
• Barriers in thinking and practice that prevent inclusive education.
• Experiences of people with disabilities in different educational settings (segregating settings, integration settings, and inclusive settings).
• Implementing inclusive education.

EDU 545 Disability in the Society and at School (12 ECTS)
• Disability studies: models of disability and disability approaches.
• Critical Disability Studies.
• Cultural Disability Studies.
• The construction of the concept of disability: international literature and literature focusing on the Greek-Cypriot culture.
• Personal experiences of disability in the Greek-Cypriot culture.
• Disability activism.
• Disability arts.
• Disability studies in education.
• Anti-oppressive pedagogies.
• Key approaches in anti-oppressive curriculum development.

EDU 546 Differentiated Instruction in the Inclusive Classroom (12 ECTS)
• Definitions and understandings of differentiated instruction in the inclusive classroom.
• Critical issues in inclusive education that can be informed by differentiated instruction (e.g. achievement, assessment, curriculum).
• Planning for differentiation.
• Differentiation of the content.
• Differentiation of the process.
• Differentiation of the outcome.
• Differentiation of the final product.
• Differentiation according to learners’ learning styles.
• Differentiation according to learner’s readiness.
• Differentiation according to learners’ interests.
• Software and hardware for differentiated instruction and materials in the inclusive classroom.
• Universal Design for Learning and differentiated instruction: How they are linked.
• Practicing on the development of differentiated instruction skills.

EDU 550 Education and Social Exclusion (12 ECTS)
The course analyses the structural, systemic and psychological dimensions of social exclusion and attempts to indicate the role of education in the reproduction as well as overcoming of social exclusion. The course begins with basic definitions of social exclusion and social class. It then analyses how educational systems and the family/school dynamics play a role in school failure and school dropouts, especially through an ethnographic lens, and focuses on specific social groups and their vulnerability for social exclusion. The last part of the course discusses the role of globalisation in creating new local realities for social exclusion.

EDU 555 Postmodern Philosophers, Alterity and Education (12 ECTS)
The course offers a broad and in-depth study of the philosophical work of theorists such as Levinas, Lyotard, Kristeva, Derrida, Butler, and Spivak, among others. It explores a multiplicity (ethical, linguistic, psychoanalytic, etc.) of approaches to alterity and presents the relationship of education to alterity as one of a subjectivisation process, of developing a connection between the familiar and the uncanny. It also accounts for the relation of education to alterity in terms of polarisation between inwardsness and outwardsness as well as between reconstruction and deconstruction of meaning. By unravelling the many relations to alterity, the course broadens the various perspectives on educational topics such multiculturalism, cosmopolitanism, the construction of subjectivities and regimes of normality in educational settings, processes of racialisation, constructions and transformations of gendered boundaries and desires, the teaching of textuality, the rupture of borders, post-disaster memory and writing.

EDU 556 Advanced Seminar in the Theory and Philosophy of Education (12 ECTS)
Reading a large part of the theory or theorist at topic which covers the origins, developments, continuities, ruptures, polyphony, various applications/interpretations, intertextuality, comparison with other relevant theories. The seminar focuses on a different theorist or theory every time. Tentative list of proposed topics: Foucault (already taught), Derrida, Agamben, Butler, New Materialism, Animal Studies, Poststructuralism, Posthumanism, Critical Race Theory, Biopolitics.
EDU 560 Contemporary Principles in Early Childhood Education (12 ECTS)
The course enables students to study, explore and reconceptualise the current educational, theoretical, practical and research trends in the field of Early Childhood Education. Specific ideological principles and directions (e.g., postmodernism, feminism, deconstruction, reconceptualism, multiculturalism, ethics, etc.) help students reconceptualise current practices and ideologies are analysed. The multiple identities of the child through diverse perspectives are explored.

EDU 561 The Diverse Perspectives of Play (12 ECTS)
- Syllabus analysis.
- Adult play.
- Definition, theories and types of play.
- Play, literature review and research.
- Play, learning and development.
- The role of the adult/educator in children's play.
- Play and policies.
- Play, observation and research.
- Critically reviewing play and taking on a postmodern approach to play.

EDU 562 Mathematical Thinking in the Early Years: Theoretical and Empirical Approaches (12 ECTS)
The course examines various theoretical and empirical research approaches which are connected to mathematical thinking and its development with a focus on early childhood. Specifically, the course deals with the following subjects:
- Concept and importance of mathematical thinking in children's cognitive development; Historical overview of the learning of mathematics in early childhood;
- Stages-levels of development of mathematical thinking in different concepts and processes;
- Ability of development of problem solving strategies and children's intuitive rules in relation to mathematics in early childhood;
- Factors that influence the development of mathematical thinking; Semiotic perspectives in the development of mathematical concepts and structures in young children;
- Methods of investigation and assessment of mathematical thinking and its development in young children;
- Identification and discussion of research directions which need further investigation in the particular field.

EDU 563 Supporting Creativity in Early Childhood Education (12 ECTS)
- Syllabus analysis.
- Definition and characteristics of creativity.
- Literature review, research studies and creativity.
- Relationship of creativity, learning and development.
- The role of the educator/adult in enhancing creativity.
- The role of the environment and the materials in enhancing creativity.
- Humor and creative thinking.
- Visual and verbal humor and creative thinking.
- Music and creative expression-thinking.
- Arts and creative expression-thinking.
- Creativity, observation and research methods.

EDU 564 Ways of Studying and Observing Young Children's Development and Learning (12 ECTS)
This course examines various methods and approaches for investigating, observing, documenting and assessing children's development and learning in early childhood. Specifically, the course focuses on the following issues: How children think and express their thoughts; techniques for observation of individual children or children in groups; documentation of young children's learning. Students will critically explore and learn to use existing assessment tools of learning and development in early childhood and will then develop their own methods by taking into consideration the unique characteristics of young children.

EDU 565 The Semiotic Approach to Learning and Teaching Mathematics in Early Childhood (12 ECTS)
The course focuses on the following topics: The definition and importance of semiotic representations in learning and teaching mathematics; internal and external representations; classification of representations; discussion of various theories about mathematical representations and their development in relation to learning early mathematics; the role of multiple representations in young children's understanding of mathematical concepts and problem solving; pictorial representations in books and the development of mathematical thinking; the significance of children's and the teacher's use of gestures in learning and teaching early mathematics; research applications and methodological approaches used in the exploration of early childhood's development of representations.

EDU 566 Social Dimensions of the Child's Development (12 ECTS)
This course includes discussion of development issues through the prism of socio-cultural contexts in a child's life (e.g. family, childcare, school, friends, playground). Based on socio-epistemological principles in the field of Education as well as the reconceptualisation of existing theories, the basic elements that affect children's social identities and examine their impact on the child's development will be identified. Using current research in the field of Early Childhood, the variables that affect the provision of appropriate experiences and opportunities for the child within a hybrid society will be analysed.

EDU 567 Developing Research Proposals in the Field of Early Childhood Education (12 ECTS)
The course will focus on recent Early Childhood research studies and methodologies. It will highlight gaps in the field and guide students in thinking about the most appropriate ways of developing research proposals in the field of Early Childhood Education. Students will learn how to write literature reviews, develop research questions, collect and analyse data within the context of the international research agenda of the Early Childhood field.

EDU 570 Research and Theory of Sports Pedagogy (12 ECTS)
The course examines research, theory, and methods of physical education. The objectives of the course concern a critical approach in analysing the existing knowledge in sport pedagogy. It explores the historical and contemporary perspectives on the research and theory of teacher education in physical education.

EDU 571 Instructional and Curriculum Models in Physical Education (12 ECTS)
The course is designed to help students learn and comprehend various instructional and curriculum models of physical education. Emphasis is given to the critical analysis of the models as well as to the identification of future research directions.
EDU 572 Current Issues in Sports Pedagogy (12 ECTS)
The course examines and analyses current theoretical and practical trends of teaching in physical education. The purpose of the course is to help students acquire extensive knowledge about physical education and teacher education and develop a personal philosophy for physical education.

EDU 574 Analysis of Teaching in Physical Education (12 ECTS)
The main purpose of the course is to help students analyse various aspects that relate to the teaching of physical education. Particularly, this course analyses both teacher and student behaviours that occur in physical education lessons, while at the same time it also gives emphasis on other factors and variables (e.g. teacher content-knowledge, students' family socio-economic status), which affect teaching quality. In addition, this course encourages students to critically analyse and use certain observation systems to capture the quality of physical education teaching.

EDU 580 Theoretical Foundations of Instructional Technology: Problems and Prospects (12 ECTS)
The course introduces foundational theories critical for developing instructional technology expertise. The focus will be on learning theories, instructional design theories, cognitive load theory, design principles for multimedia design, and learners' cognitive differences. Students will interact with this content and engage in learning activities to synthesise and apply what they learn in meaningful and productive ways for their professional interests. The course also introduces students to various computer tools and supports their development of technology integration and teaching strategies that utilize these tools.

EDU 581 Research Paradigms in Instructional Technology: Research Design and Data Analysis (12 ECTS)
The course aims to help students learn disciplined inquiry in Instructional Technology through first-hand experiences, including designing and implementing a small-scale quantitative research study, evaluation of research and data analysis. The course’s main objective is to engage students in a critical dialogue about the different research paradigms used in the field of Instructional Technology, their differences related to the conditions each research methodology is used, the research questions each paradigm addresses, what data analysis as carried out within each paradigm, as well as issues of reliability and validity of the research. The course focuses on experimental research design and quantitative data analysis.

EDU 582 Preparation of Research Proposals in Instructional Technology (12 ECTS)
The course aims to prepare students to situate their research within the field of Instructional Technology and prepare a research proposal to address the research questions they seek to address. The course emphasises the preparation of the first three chapters of a research proposal. Within this context, students are guided to conduct a systematic literature review, frame research questions and hypotheses, select a theoretical framework to guide the research, design the study, and conduct a small-scale pilot study.

EDU 583 Design and Development of Dynamic Digital Learning Environments (12 ECTS)
The course aims to prepare students in the design and development of dynamic digital learning environments, such as modelling and simulations. Students are involved in advanced learning design activities to model complex systems and concepts, and then program a simulation system to visualise and allow learner interactions with the complex system or concept. The course emphasises the design thinking process and the development of students’ computational thinking skills during the development process.

EDU 597 Educational Governance and Development (12 ECTS)
In recent decades, the educational world has changed. Many new actors – global, regional, national and subnational – that are involved in the governance of education have emerged or are emerging. These include regional blocks such as the EU, Mercosur, NAFTA, ASEAN; international governmental organisations (IGOs) such as the World Bank, OECD, UNDP, the Council of Europe, and UNESCO; non-governmental organisations (NGOs); and private, for- and non-profit agencies and institutions such as business corporations, consultancy firms, professional communities of practice and individual scientific experts. Old and new actors conceptualise and promote growth and development across the world, often in the same direction – thus, while some define and are involved in actualising the ‘world-class university’, others advocate the ‘effective school’, the ‘professional teacher’, and the ‘lifelong learner.’ The course explores the overall shape and particular features and characteristics of the new landscape of educational governance, seeking to identify and map out what, how and where new imaginings of development are articulated, as well as the ways in which these are diffused in different parts of the world.

EDU 598 Postcolonial Theory and the Curriculum (12 ECTS)
The course analyses the history that made Europe the subject of history and the relational form of power/knowledge of orientalism. It examines the productive-positive form of power and the production of colonial subjects in relation to colonial and post-colonial education. Governance and racialisation. Interdisciplinary discussion of the discourses on culture, race, sex and sexuality, evolutionism, civilisation and learning are explored, and the political and epistemological relationship between educational institutions and narrations of analytical programmes and colonialism both in the metropolis as well as in the archaeological and archaeological (Foucault) and in the regions.

EDU 601 Philosophical Dimensions in Education (12 ECTS)
The course enhances students’ understanding of philosophy, philosophy’s relationship to education and the analysis of meta-theoretical justifications of educational practice. The relationship of philosophy and education is tackled chiefly through a thematic perspective. We explore and discuss the pedagogical significance of ideas related to reason, language, ethics, subjectivity and culture. Theory and practice, private and public sphere, knowledge and power, truth and deception are some of the binary oppositions that we study since these have determined many of the modern and postmodern framings of education.

EDU 603 Comparative Education (12 ECTS)
Comparative Education (CE) as educational relationships. The core themes of CE include system, transfer, space, time, state, context, culture, identity. Deconstructing entrenched ideas, such as CE compares countries and systems, looking for similarities and differences. Globalisation, internationalisation, Europeanisation, democratisation, colonialism, neo-imperialism and their educational coding. The role of international development agencies (e.g. UNESCO, World Bank, OECD) and non-governmental organisations in global and local education. The dialectic of the global and the local. European education policy and national translation. New
trends in international education (school autonomy, parental choice, accountability, benchmarking, educational markets, and so on). The ‘Finnish model’, the Prussian and Soviet models: the promises and perils of comparison. The use and abuse of CE. The relationship of CE to education policy and reform. The importance of CE for a small state like Cyprus. Cyprus education as educational transfer.

EDU 607 Sociology of Curriculum (12 ECTS)
- Sociology of education; the sociology of curriculum within the curriculum studies field; conceptualisations of curriculum (formal, informal, hidden, null, etc) and their sociological study. Curriculum as political and ideological text and social agents/actors.
- Functionalism, Reproductive theories, Resistance theories and radical intervention theories; critical theories; the turn towards matters of political and pedagogical practice, (micro) interpretative approaches and symbolic interactionism, Combining approaches in the sociology of curriculum.
- Curriculum and Cultural Studies: issues of representation, hegemony, ideology and identity.
- The ‘new sociology of education’, curricula and school knowledge; Genealogies of school subjects, Social and Critical Realism.
- Post-structural approaches and critiques of the sociology of curriculum: the ‘problem’ of agency and the constitution of subjects, identity as embodiment.
- Sociology of the teaching profession and conceptualisations of curriculum: issues of autonomy and heteronomy, biography and autobiography, identity as narrated self, personal and professional identities.
- Political sociology of curriculum: theories of curriculum reform, change and review.
- Constitutional and legal dimensions in the study of curriculum.
- A thematic approach in the study of curriculum: gender and sexuality, social class and educational background, racism, ethnocultural identity and diversity, globalisation and migration, human rights etc.
- Analytical-theoretical and empirical research in the sociology of curriculum.

EDU 617 Educational Government and the Management of Change (12 ECTS)
The meaning of change and the different types of changes in education. The main dimensions/aspects of change are mainly in relation to the way teachers deal with change. The fear of change, resistance to change and how to deal effectively with change. The role of the organisation, the leader and other factors in the process of accepting and implementing change in education. Characteristics of the leader which are related to acceptance and dealing effectively with change in organisations. Examination of educational change and reform issues in the national and international context.

EDU 620 Introduction to Educational Administration (12 ECTS)
The educational system and the knowledge base for educational theory and practice. Concepts and theories related to leadership, motivation, decision making, communication etc. Educational administration topics in the Cyprus context. The structural characteristics of the Cyprus educational system and the main problems related to it. Contemporary trends and research in educational administration and their effect on educational policy.

EDU 623 Observation and Evaluation of Teaching and Personnel (12 ECTS)
The course consists of four major units. The first unit focuses on educational evaluation in general (summative and formative) and on educational evaluation in the Cypriot educational context, in particular. The second unit considers studies that empirically validate the critical role that teachers have in promoting student learning and discusses the notions of good and effective teaching. The third section explores different approaches employed to evaluate teaching and teachers, including value-added models. Classroom observations have a central role in this unit; discussed among other topics are issues such as, observation foci and approaches for studying instruction, different models and rubrics (generic and content-specific) for observing and evaluating instruction, reliability and validity of observation estimates, and adapting different observation rubrics for use in the Cypriot educational context. The last unit focuses on how classroom observation and evaluation can create an arena for improving instruction; issues of meta-evaluation are also considered.

EDU 631 School Effectiveness and School Improvement (12 ECTS)
The course focuses on two main units. The first unit examines the major findings of international research in the field of school effectiveness, and general effectiveness-enhancing factors are analysed. The following three disciplinary backgrounds to educational effectiveness modelling are discussed: a) the economic approach, focused on “education production functions”; b) the educational psychological approach to effective instruction and learning conditions, and c) the generalist-educationalist approach to integrated, multilevel school effectiveness modelling. Major issues of school effectiveness research such as the size, stability, consistency and scope of school effects are discussed. Theories on school, organisational, and instructional effectiveness are examined and implications for the development of school effectiveness research are drawn. The second unit is an attempt to draw on what is known about managing change and school effectiveness and to apply this knowledge to practical development activities in schools. Thus, the contribution of school effectiveness research to school improvement is examined and the strengths and weaknesses of both fields of educational research are identified. Special emphasis is given to the development of research projects attempting to use insights from effectiveness and improvement research to managing the process of ongoing development.

EDU 637 Theory and Politics of Multicultural Education (12 ECTS)
Multicultural education is addressed as a pedagogical field of aporia and possibilities related to the movement of peoples, ideas, cultures and power in the contemporary globalised setting, as social action but, also, as a field of crisis production and crisis containment.
The class opens the discussion by posing the claim of recognition of cultural difference as anchor of collective identity in multicultural states. The class historicises the definitions and political articulation of terms such as civilisation and race throughout fields of discourse that produced legitimisation tools for politics of conquest, assimilation and segregation. This includes a political genealogy of whiteness in connection to migration policies, a postcolonial genealogy of the terms culture and Civilisation in various disciplines, and a critical analysis of how colonial conceptualisation of multiculturalism have been inherited by dominant discourses and debates about multicultural education and its prospects.
The course covers issues such as: classroom approaches to cultural, ethnic and national diversity; minorities, minoritisation, and minority education; cultural mobility, multilingualism, hybridity and displacement in contexts of migration, globalisation, diaspora, postcoloniality; the veil affair in France and its redeployment in Europe; racism and critical race theory; faces and frames of multicultural education in Cyprus.

EDU 639 Inclusive Education: The New Face of Special Education? (12 ECTS)
- The dualistic thinking in special and inclusive education: Controversies and projections.
- The rhetoric of special and inclusive education: Similarities and differences.
- Learners with disabilities: Experiences in the mainstream and special school, academic and social achievement in relation to placement in different settings.
- Parents of children with disabilities: Their role and experience in special education and in mainstream schools, their positions on inclusive education.
- Segregating practices in mainstream schools: The need to change the roles of all the stakeholders involved.
- Mainstream class teachers: views on inclusive education, role, challenges.
- Special education teachers: views on inclusive education, role, challenges.
- The peers' role in inclusive education.
- Teaching assistants in the mainstream school.
- The 'place' of special education in inclusive education systems: Myths, realities, and prospects.

EDU 640 Principles and Processes of Curriculum Development and Evaluation (12 ECTS)
- The field of Curriculum Studies: genealogy, spectrum, focus.
- Epistemological and methodological issues in the study of curriculum.
- Basic terminology, types and conceptualisations of curriculum.
- Curricula as social, historical, political, cultural constructs and under negotiation amongst social actors: The case of the history of Cyprus curriculum.
- Curriculum as supranational and trans-national text: Examples of influences and localization in Cyprus.
- Philosophical orientations-foundations, aims and objectives of curricula.
- Curriculum development models: Premodern, modern, child-centred, scientific-positivist, practical, critical, poststructural.
- Curriculum as product and as praxis: Teacher role and that of other social actors, action research as a process of curriculum development and reflective practice.
- Approaches of selection and organisation of content in curriculum development: Horizontal and vertical structuring of content, academic, interdisciplinary and integrated/cross-curricular programmes, the project method, the case of the current official curriculum: Success and efficiency indicators & framework of purpose development.
- Selection and sequencing of learning activities in curriculum development, approaches, types, strategies and techniques of teaching, examples of activities and practices.
- The process of needs assessment and situational analysis, child/learner evaluation before, during and after curriculum implementation.
- Paradigms of curriculum evaluation: Functional-positivist-technical, naturalistic, transactional-constructive, critical, postmodernism- poststructuralism and programme evaluation.
- Sectors/foci of evaluation: Product, process, politics, staff and goals.
- Types of programme evaluation e.g. proactive, clarificative, interactive, monitoring, impact.
- Evaluation models, e.g. Goals-oriented-Tyler, Goals-Free Evaluation-Scriven, Judicial/Adversary, Connoisseurship model-Eisner, Kirkpatrick’s model, Situated evaluation, CIPP model (Context, Input, Processes, Products).
- Theories of change and implementation of curricula, cases of reform in Cyprus and elsewhere.
- The hidden/latent curriculum, paraprogramme, the null curriculum.
- Interpretation, writing, evaluation criteria and analysis of school textbooks and educational materials.

EDU 641 Gender and Education (12 ECTS)
- The role of feminist thought in education. Gender, Education and social reproduction. The role of feminist theory in educational research.
- Women's access to the teaching profession. Historical arguments for opening the profession to women. The model of ideal teacher as ideal mother. Gender and the work force. Feminisation of the teaching profession. Gender and reproduction of the educational work force.
- Care as a form of work and care as women's work. Women in charge of offering care (physical and emotional). Care as ethic. Contradictory positions on the ethics of care in feminist thought.
- Film Kramer vs Kramer.
- The study of masculinity, historically and culturally. The concept of Hegemonic Masculinity. Multiple Masculinities. The role of school. The "crisis" of masculinity and debates on boys' educational failure.
- Femininity and beauty. The concept of beauty in feminist thought. Beauty as a form of oppression and beauty as a victim of feminism.
- The concept of gender as identity. The role of parents in creating gendered environments at home. Gender variance. Differentiating boys' and girls' behaviour.
- Sexuality and modernity. Sexual orientation and the LGBTI community.
- Feminisation of the teaching profession. Gender and social reproduction. The role of feminist theory in educational research.
- The role of feminist thought in education. Gender, Education and social reproduction. The role of feminist theory in educational research.
- Women's access to the teaching profession. Historical arguments for opening the profession to women. The model of ideal teacher as ideal mother. Gender and the work force. Feminisation of the teaching profession. Gender and reproduction of the educational work force.
- Care as a form of work and care as women's work. Women in charge of offering care (physical and emotional). Care as ethic. Contradictory positions on the ethics of care in feminist thought.
- Film Kramer vs Kramer.
- The study of masculinity, historically and culturally. The concept of Hegemonic Masculinity. Multiple Masculinities. The role of school. The "crisis" of masculinity and debates on boys' educational failure.
- Femininity and beauty. The concept of beauty in feminist thought. Beauty as a form of oppression and beauty as a victim of feminism.
- The concept of gender as identity. The role of parents in creating gendered environments at home. Gender variance. Differentiating boys' and girls' behaviour.
- Sexuality and modernity. Sexual orientation and the LGBTI community.
- Feminisation of the teaching profession. Gender and social reproduction. The role of feminist theory in educational research.
- The role of feminist thought in education. Gender, Education and social reproduction. The role of feminist theory in educational research.
primary or secondary school curriculum of any subject area they prefer.

EDU 645 Educational Policy (12 ECTS)
- The concept of educational policy and the knowledge base for decision making and policy making in this area.
- Factors influencing educational policy both at the macro-level of state policy and the micro-level of the school unit.
- The use of research in the formulation of educational policy. Trends in contemporary educational policy.
- Important issues in educational policy as they relate to the aims and priorities of developed and developing countries.
- Educational policy issues in the Cyprus context.
- Recent trends in education and their effect on educational policy.

EDU 646 Globalisation, Cosmopolitanism and Education (12 ECTS)
Discussion of globalisation, nationalism, patriotism and cosmopolitanism with an eye to philosophical-educational sources and political-philosophical springboards, past and present. From the Cynics and the Stoics to Rousseau and Kant and then down to Nussbaum we will cover a broad spectrum of ideas relevant to political and citizenship education.

EDU 651 Nature of Science and Science Teaching (12 ECTS)
The main topic of this course relates to the nature of scientific theories and deals with issues such as the role of observation and experimentation, processes of scientific inquiry, the role of models, the sociology of scientific research, and the main attributes differentiating a scientific theory from other thought processes. Other major topics of the course are: the main characteristics of scientific knowledge (tentativeness, multi-modal, social, non-objective, human endeavor); difference between theories, laws and hypotheses; the pluralistic view on the nature of science and the scientific method; teaching NoS; science and pseudo-science; nature of science in school’s science curriculum.

EDU 652 Constructivism and Inquiry Learning (12 ECTS)
The course explores the process of inquiry as it relates to scientific conceptualisations and consequent explanation of natural phenomena. Within this framework, the logical relationship between the scientific concepts embedded in a hypothesis and the design of a valid experiment are exemplified. Emphasis is placed on the formulation of appropriate questions and the design and implementation of investigations. We recognise the role of empirical data and the importance of critical evaluation of the data sources, the data collection process as well as the validity of data processing and analysis. Issues related to scientific reasoning and argumentation, the integration of procedural and conceptual knowledge, and the contribution of mathematics and technology in promoting the process of inquiry are also examined.

EDU 653 Cognitive Constraints in Learning Natural Sciences (12 ECTS)
Student responses to questions relating to issues of natural sciences reveal problems in their understanding, for example, preconceptions, naive conceptions, alternative frameworks, inert knowledge, context-dependent knowledge, contradictions. The course exemplifies ways of identifying these problems and examines theoretical propositions regarding their interpretation. Within these theoretical orientations, the course examines the role of different factors such as pre-existing knowledge, conceptual reasoning or epistemological difficulties, and instructional approaches and addresses the issues pertaining to the design of more effective teaching interventions. All the mainstream, up-to-date theories on knowledge construction and conceptual change are examined.

EDU 654 History of Education (12 ECTS)

EDU 655 Fundamentals of Environment and Sustainability Education (12 ECTS)

EDU 656 Teaching and Learning in Environmental and Sustainability Education (12 ECTS)

EDU 657 Design and Implementation of Environmental and Sustainability Education Curricula and Projects (12 ECTS)
Principles of effective curriculum design. Curriculum design literature. Advantages and disadvantages of different kinds of ESE curricula and projects. Inclusion of race, ethics, science gender in ESE curricula. Evaluate and critique different EE programmes and curricula from different theoretical stances. National and international curricula resources. Instructional methods associated with ESE. Incorporating technology and social media in ESE curricula and projects.
EDU 658 Formal and Non-formal Learning Environments (12 ECTS)
Place-based education, pedagogies of place. Nature-based, residential and adventure programmes. Community ESE. Comparison of Formal ESE, Informal ESE and Interpretation. Education for sustainable living and learning activities for both formal (i.e. school and university based) and non-formal (i.e. community-based) education settings. Garden-based Learning. Urban Environmental Education.

EDU 659 Research in Environmental and Sustainability Education (12 ECTS)
• Trends in ESE research.
• Insights from research on environmental and sustainability learning.
• Review of research orientations that relate to ESE – tensions between different research orientations.
• Practical examples from multiple contexts.
• Quantitative and Qualitative Traditions in ESE research.
• Research ethics.

EDU 660 Design, Development and Evaluation of Curricula in Science Education (12 ECTS)
• Theories on curriculum design, development and assessment.
• Principles for conceptual hierarchies in curriculum activities.
• Principles for design activities and material in curriculum.
• Difficulties which arise when designing curricula and exceeded practices.
• Epistemological analysis of content in science curricula.
• The role of facilitator questions to integrated development of conceptual understanding and reasoning skills.
• Methods for validating curriculum materials.
• Develop of conceptual understanding and the development of reasoning and investigative skills.

EDU 662 New Technologies and Learning in the Natural Sciences (12 ECTS)
Γνωστικά εργαλεία για διδασκαλία και μάθηση. Μηχανισμοί ενσωμάτωσης και αξιοποίησης των πληροφορικών εργαλείων στην ανάπτυξη διδακτικού υλικού στις φυσικές επιστήμες. Εργαλεία μοντέλοποσιάς, προσαρμογής, επικοινωνίας, οργάνωσης και επεξεργασίας των πληροφοριών, ελέγχου μηχανισμών και μετρητών. Η μοντέλοποσιά των διδακτικών και διδακτικά μέθοδων και διδακτικά μέθοδων και διδακτικά μέθοδων.

EDU 663 Modern Trends in Teaching Natural Sciences (12 ECTS)
Intended learning outcomes (dissemination of information, cognitive and procedural skills, construction of concepts) and teaching approaches. Teaching methods and teaching interventions. Cooperative learning in natural sciences. Problem solving approaches. Teaching as a process of scientific investigation and as a process of promoting conceptual development. Development of attitudes and skills. The contribution of natural sciences in promoting social and cultural change.

EDU 664 Integrated Curricula in Natural Sciences (12 ECTS)
• Principles of design, develop and evaluate curriculum and teaching materials which are aiming at integrating physics, chemistry, biology, engineering and technology all together.
• Principles of interdisciplinary and domain integration.
• The big ideas of science and engineering.
• Scientific practices.

• Physical and chemical systems and mechanisms.
• Modelling of phenomena and other approaches of integration.
• STEM.
• Reasoning abilities and scientific thinking.
• The development of conceptual understanding through integrated curricula (physics, chemistry, biology, and technology).

EDU 667 Theory and Research in Geometry Learning and Teaching (12 ECTS)
The course studies research data and its connection with teaching practice for the development of the required knowledge for the teaching of geometry and measurement in secondary education. The course discusses the role of geometry in mathematics curriculum, as well as issues related to the teaching of these topics. Through the study and discussion of research papers, issues related to the development of geometrical thinking, the role of geometric shapes and intuition in geometry, problem solving, understanding of definitions, proving and the use of technology in geometry and measurement teaching are outlined.

EDU 668 Critical Environmental Literacy: Identities, Places and Frames in Environmental and Sustainability Education (12 ECTS)
• Critical Theory and Pedagogy.
• Eco-Justice. Cultural knowledge, decolonisation and ESE. Ecofeminism.
• Past & current ESE criticisms. Theories of Identity.
• Critical theories of Place.
• Examinations of values & ethics in EE.
• Environmental action and social change. Activism and participatory ESE.
• Critical engagement in environmental and sustainability action.
• Engagement with multiple cultural perspectives.
• Framing the debate around approaches to ESE (neoliberal, critical and transformative approaches to ESE).
• Collaborative learning environments.
• Transformative learning environments.
• The pluralistic perspective of ESE.

EDU 670 Theory and Research in Algebra and Calculus Learning and Teaching (12 ECTS)
The course aims to develop prospective teachers’ knowledge for teaching algebra and calculus in high school by utilizing research findings and their connection with teaching practice. Through the study of research papers and discussions based on hypothetical teaching scenarios, students will get a further insight of the mathematical knowledge, pedagogical issues, conceptual difficulties, and teaching approaches for calculus concepts and proofs.

EDU 671 Cognitive Analysis of Mathematics Learning (12 ECTS)
The course uses a cognitive approach to examine how mathematics is understood and learnt. Methodologies and concepts from mathematics psychology are used to examine how mathematics knowledge develops. The course covers the following themes: Intelligence theories, cognitive styles, mathematical creativity, students gifted in mathematics and critical thinking in mathematics.
EDU 672 Topics in the Philosophy and History of Mathematics (12 ECTS)
This course investigates the fundamental problems of the epistemology of mathematics such as what mathematics is and how it is created, what does it mean for a person to learn, how does learning take place, etc. The three main positions on the foundations of mathematics are discussed: Logicism, Formalism, and Intuitionism, as well as some recent views on quasi-empiricism (Lakatos, Putnam). Specific topics are discussed: the concept of mathematical truth and the concept of proof. Philosophical topics are presented in the context of their historical development and emphasis is placed on methods and approaches that make use of history in the teaching of mathematics.

EDU 673 Curriculum Development for Mathematics and Educational Evaluation (12 ECTS)
This course is divided into two parts. The first part analyses fundamental aspects of curricula with emphasis on the organisation and structure of mathematics curricula. A philosophical analysis of programmes developed in the last few years both in Greece and internationally is provided. The parameters influencing the development of curricula are investigated. Special emphasis is given to the content and the pedagogical aspect of mathematics curricula, and several models of developing curricula are examined. Specifically, the curricula used in the United States, United Kingdom, and Greece are examined and compared to those used in Cyprus. In the second part of the course, emphasis is placed on the importance of assessment in the effort to modernise the curriculum. Methods of curricular assessment in mathematics are presented and contemporary student evaluation procedures are examined. Finally, international literature is examined for methods of specifying standards and the basic approaches to their assessment.

EDU 674 Mathematical Problem Solving (12 ECTS)
Concepts and strategies related to mathematical problem solving, problem posing and assessment are examined. The classical heuristics strategies proposed by Polya and more contemporary interpretations and their applications to the process of problem posing, the teaching process and assessment of problem-solving capability are discussed. Introducing open problem activities in instruction is an integral part of the course. The course also attempts to offer a comprehensive assessment of the recent findings of the extensive research activity on the subject.

EDU 675 Recent Trends in Mathematics Education (12 ECTS)
The aim of the course is to introduce students to the main concepts and methods used in contemporary research on Mathematics Education. The course has three main dimensions:
- First Dimension: Concepts and methods in mathematics teaching. Several concepts and methods associated with Mathematics Teaching are presented, such as the didactic contract, didactic transformation, the concept of the obstacle, didactic situations, and framework games. These concepts and methods are applied to mathematical concepts of primary and secondary education.
- Second Dimension: Language and learning in mathematics. This involves the reading of mathematical texts; characteristics of mathematical texts; comprehension tests; types of legibility; completion tests.
- Third Dimension: Representation of problems in the teaching and learning of mathematics. This dimension presents evidence on the role of representations and translations in the learning of mathematics and the solution of problems. It examines applications associated with mathematical concepts used in primary and secondary education.

EDU 676 Contemporary Technology in Mathematics Teaching (12 ECTS)
The course examines current findings in relation to the incorporation of technology with the subject of mathematics. Special emphasis is given to contemporary theories of psychology, which constitute the basis for the introduction of new learning processes. The course discusses ways of incorporating computers and software packages (Logo, Mathematica, Cabri, Spreadsheets, Sketchpad, etc.) in the teaching of mathematical concepts, with emphasis on the use of the Internet. It analyses methods of introducing and using computer graphics in the teaching of algebra and calculus. Finally, it presents projects developed abroad concerning the introduction of technology in the teaching of mathematics.

EDU 679 Theories of Mathematical Understanding (12 ECTS)
The aim of the course is to draw together contemporary views on the growth of mathematical knowledge and relate these to theories developed within Mathematics Education Research. The main themes of the course are:
- Different forms of mathematical understanding.
- Cognitive growth in mathematics.
- Notions of abstraction and their influence on the development of mathematical concepts.
- Intuitive rules and mathematical understanding.

EDU 680 Theories of Mathematical Understanding (12 ECTS)
The aim of the course is to draw together contemporary views on the growth of mathematical knowledge and relate these to theories developed within Mathematics Education Research. The main themes of the course are:
- Different forms of mathematical understanding.
- Cognitive growth in mathematics.
- Notions of abstraction and their influence on the development of mathematical concepts.
- Intuitive rules and mathematical understanding.

EDU 681 Seminar: Educational Administration and Evaluation (6 ECTS)
Structure of a scientific article. Purpose of the literature review. Difference between descriptive, critical and systematic literature review. The main steps of a qualitative synthesis of literature review. Conducting quantitative syntheses of research findings (meta-analyses): Main steps and examples of meta-analyses in the field of educational administration and evaluation. Organisation of a master's thesis (emphasis on the structure of a thesis and what each part contains). Presentation and exemplary implementation of writing techniques. Preparation of a thesis presentation.

EDU 682 Qualitative Research in Education (12 ECTS)
The course consists of four major units. The first unit, which is introductory, defines educational research and discusses the philosophical/conceptual underpinnings of qualitative research as opposed to those of quantitative research; it also considers basic strategies of qualitative research (ethnography, phenomenology, case studies, participatory/action research, and critical theory). Focusing on issues of research design, the second unit presents the "emergent design model," and discusses the role of theory, conceptual maps, and autobiographical notes in qualitative research; it also considers issues related to sampling, entrance to the field, rapport, and reciprocity, and ethics in conducting qualitative studies. The third unit focuses on data collection (interviews, observations, texts and pictures) and data analysis methods (constant comparative, analytic induction, grounded theory, and content analysis). The last section familiarises students with Atlas.ti for analysing qualitative data and discusses issues of writing and evaluating qualitative research using a set of criteria.

EDU 683 Educational Statistics with Applications of Statistical Packages (12 ECTS)
The course focuses on two main units. The first unit, which is introductory, familiarises students with fundamental concepts
in conducting (quantitative) research; basic types of research designs (experimental studies, correlational studies, surveys, ethnography, case studies, etc.); the four basic stages in conducting a research study (defining and elaborating upon a research problem; considering issues of sampling, instrumentatation, validity/reliability; analysing data and presenting findings; and interpreting findings); the five basic chapters of a research report (problem definition, literature review, methodology, results, conclusions); and ethics in conducting educational research. The second unit, which occupies the greatest portion of the course, first introduces students to data manipulation (e.g. data recording/computing). It then immerses students to basic and more advanced statistical analyses (descriptive, correlational, and inferential analyses, non-parametric criteria, one and two-way ANOVA, exploratory factor analyses, reliability analyses, and multiple linear regression analyses), while also discussing issues of variable normality/ transformation, and effect sizes.

EDU 684 Seminar in Learning in Natural Sciences and Environment (6 ECTS)

EDU 685 Seminar in Mathematics Education (6 ECTS)
Customised to the topic of each seminar.

EDU 687 Seminar in Curriculum, Teaching and Comparative Education (6 ECTS)
Customized to the topic of each seminar.

EDU 688 Seminar in Current Trends in Special and Inclusive Education (6 ECTS)
The content will vary, depending on the current trends in the field of Special and Inclusive Education. Examples of possible topics for seminars:
- Policy reforms in special and inclusive education.
- The power of the special education discourse.
- Examples of good practice in inclusive education.

EDU 689 Independent Study (12 ECTS)
Students conduct an Independent Study, which resembles the process of writing an empirical or a theoretical Master’s thesis. The topic selected is of students’ own interest, as long as it falls within the fields of their programme of study.

EDU 691 Seminar in Early Childhood Education Contemporary Issues (6 ECTS)
This seminar enables students to explore and reconceptualise current educational, theoretical, practical and research trends in the field of Early Childhood Education. We will analyse specific ideological principles and directions to help students reconceptualise current practices and ideologies (e.g. curricular changes, policy development, assessment and evaluation plans, educational standards). The goal is to have students reconceptualise their understanding of the field through research and theory.

EDU 693 Contemporary Trends in the Study of Teaching (12 ECTS)
The purpose of the course is to conceptualise teaching as a social practice between social actors, by connecting it with the micro-, meso- and macro- institutional sites/layers of education, but also broader political, social, economic and cultural contexts within which it is enacted, so as to support students to delve into and enrich their methodological repertoires with different perspectives and approaches to teaching, their assumptions as well as their methodological manifestations during planning, enacting and reflecting upon teaching. Particular attention is paid to the theory and praxis of contemporary trends, approaches and methodologies in teaching and learning. Students are expected to learn and be able to apply and evaluate learning processes within a theoretical framework of contemporary theories of constructivism, differentiation of teaching and lifelong learning, with the aim of achieving good and effective teaching.

EDU 751 Design of Research Proposals (12 ECTS)
Identification of real problems that are amenable to productive investigation. Formulation of research questions or hypotheses that are open to investigation based on evidence. Projects as part of wider programmes of research. Literature review. Identifying and labelling variables, constructing operational definitions. Research design. Reliability and validity. Approaches to data collection and analysis. The implementation of research findings in practice. The theoretical and educational implications of research.

EDU 752 Analysis and Implementation of Research Evidence (12 ECTS)
Multiple interpretations of research data. The complementarity of qualitative and quantitative approaches to data analysis. The selection of appropriate analytical techniques in relation to specific research objectives and data constraints. Validity and reliability of research findings. Critical analysis of research reports. Generalisation of research findings to wider populations. Open questions for research and current research trends. Complementarity in different research approaches.

EDU 753 Models of Teaching and Didactical Recontextualisation of the Content of Natural Sciences (12 ECTS)

EDU 780 Using Basic and Advanced Multilevel Modelling in Educational Research (12 ECTS)
Multilevel theories, Multi-stage sampling and Multi-level models; The Random intercept model; The hierarchical linear models; Testing and model specification; Assumptions of the hierarchical linear models; Designing Multilevel studies; Crossed random coefficients; Multivariate multilevel models; Non-linear multilevel models; Binary response models; Multilevel logistic regression; Random slope multilevel logistic regression models; Multilevel Factor Analysis and Multilevel structural equation models.

EDU 787 Academic Writing (12 ECTS)
The course unfolds in five units. The first unit, which serves as the introduction to this course, focuses on familiarising students with the structure and the basic characteristics of academic writing (as opposed to other types of writing). Students will also work on developing and
sharpening/shaping a compelling research question, which comprises the building block for effective research work. The second unit revolves around reviewing and critically synthesising existing studies. In the context of this unit, students will first be familiarised with the steps involved in writing effective literature reviews (searching the literature, critically reviewing, and synthesising the literature). They will also use this work to revise their research question(s). The third unit focuses on writing the methods and the results sections in ways that are informative and easy to follow for different types of audiences. The fourth section focuses on writing compelling discussion sections that draw upon and are informed by the study findings as well as on writing effective and concise abstracts and introductions. The fifth section discusses more general issues including differences among various types of academic writing (thesis, journal paper, conference paper), APA writing conventions and tips/strategies for effective academic writing (e.g. issues of the frequency of writing and finding a balance between writing and reading).

EDU 788 Advanced Research Methods (12 ECTS)
RESEARCH INTERESTS OF THE ACADEMIC STAFF

Panayiotis Antoniou, Assistant Professor

Charalambos Charalambous, Associate Professor
Research focuses on: Assessing/measuring the quality of teaching with emphasis on high-leverage teaching practices and the cognitive level of the tasks implemented during instruction; factors contributing to educational effectiveness, including teacher knowledge and curriculum materials and their use; quantitative and qualitative research in exploring the quality of teaching; quality of teaching and student learning.

Miranda Christou, Associate Professor
The role of educational systems in shaping questions of history and collective memory, pedagogical role of media representa-tions of human pain and suffering, education and globalisation, gender and education.

Constantinos Constantinou, Professor
The physics curriculum in secondary and tertiary education, the content of the science curriculum at the elementary level, educational technology with particular emphasis on the use of the computer as a cognitive tool and an educational medium, curriculum integration and creativity in the domain of science education.

Iliada Elia, Associate Professor
Mathematical problem solving, understanding of geometrical figures, the semiotic approach to learning mathematics especially in primary education, picture books and development of mathematical concepts, the role of gestures in the understanding of mathematical concepts by young children.

Stavros S. Fotiou, Professor
Christian education, christian ethics, sociology of christianity, methodology of teaching, attitudes toward christian education.

Zelia Gregoriou, Associate Professor
Philosophy of education (in particular, post-structuralist analysis of pedagogical discourses and educational practices; negotiation of cultural identities in educational contexts with regard to phenomena of diaspora, globalisation and multiculturalism; postcolonial theory and education; theory and politics of multicultural education; performativity; mourning and/as memorialisation.

Elena Ioannidou, Associate Professor
Language pedagogy, language education policy, bidialectalism and education, developing multicompetence through language teaching, interrelations of language and identity, multilingualism and multiculturalism in education.

Eleftherios Klerides, Associate Professor
Global governance and international development, European education policy and reform, international relations and educational transfer, colonialism and neo-colonialism, the discursive construction of identities and subjectivities, education in the Mediterranean and Southeast Europe, textbook theory and research, History of education in colonial Cyprus.

Stavroula Kontouvrki, Associate Professor
Research interests include: Literacy and language arts education, use of socio-cultural and post-structural theoretical approaches and qualitative research methodology for the examination of literacy development and literacy practices, the performance of literate identities in and out of school, multimodality (textual and embodied), and the realisation of literacy curricula in elementary classrooms.

Konstantinos Korfiatis, Professor
Methodology of environmental education projects, conceptual difficulties in ecology, evaluation of learning material, conceptual change and worldview theories, history and philosophy of science with an emphasis in biological sciences.

Leonidas Kyriakides, Professor
School effectiveness and school improvement, baseline and value-added assessment, school self-evaluation, integrating formative and summative functions of educational evaluation, strategies for investigating construct validity.

Eleni Loizou, Professor
Research interests include: Young children’s humor and its impact on learning; involvement and empowerment of young children, teachers and parents in educational processes; language and early literacy; early childhood curriculum; infant, toddler development and practice, and teacher education.

Maria Eliophotou-Menon, Professor
The use of rates of return in educational management, the influence of economic and sociological factors on the demand for higher education, factors influencing educational policy, and pre-service teachers’ expectations with respect to school organisation and management.

Demetra Pitta-Pantazi, Professor
Understanding the structure of mathematical thinking, Cognitive development of mathematical concepts, Integration of new technologies in mathematics teaching and learning, Mathematical creativity, Identification and nurturing of mathematically gifted students, Cognitive styles and mathematical abilities, Mathematics teacher education.

Marios Pittalis, Lecturer
Young student’s functional thinking, early algebraic thinking, number sense development, digital tools in mathematics teaching and learning, embodied instrumentation with digital tools, curriculum development, mathematics textbooks and digital resources design, 3d-geometry thinking and spatial ability, problem solving and posing, mathematical modelling.
Marianna Papastephanou, Professor
The modernism vs. postmodernism debate in philosophy of education, knowledge interests and learning. Theories of subjectivity, language and culture and their application to education, social and critical theory of the Frankfurt School.

Stavroula Philippou, Associate Professor
Research interests include: Curriculum development; Theory and methodology of teaching; Theory, history and sociology of curriculum; Teacher professional identity and official curricula; Action research; Curriculum studies; European education policy and curriculum; National and European identity/citizenship in education; Social studies education; Citizenship education.

Helen Phtiaka, Professor
Educational legislation, policy and practice, the notion of difference in education, disability, inclusive education, globalisation.

Simoni Symeonidou, Associate Professor
History, policy and practice of inclusive education in Cyprus and in other countries, Inclusive education and the curriculum, Inclusive education pedagogy, Teacher education for inclusion, Disability studies in education, disability studies.

Niki Tsangaridou, Professor
Reflective teaching, Teachers' knowledge, Teachers' beliefs, Effective teaching, Instructional and curriculum models in physical education.

Charoula Angeli-Valanides, Professor
The utilisation of educational technologies in K-12, the design of computer-enhanced curricula, educational software design, teacher training, teaching methodology, online learning, and the design of learning environments for the development of thinking skills.

Zacharias Zacharia, Professor
The use of computer-based simulations and inquiry-based experimentation as cognitive tools in science teaching and learning, the development of computer-enhanced curriculum in science, and their promotion.

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Introduction

The Department of Law was founded in 2006. The study of Law in the Department encourages critical legal thinking, through a combination of theory, specialist knowledge and practical spirit. The Department also promotes research. It has strong presence in international, European and domestic research activities – especially in the fields of Criminal Sciences and Criminal Law, Business Law and Company Law, International Law, European Law, Human Rights Law, International and European Private Law, Competition Law and Banking Law, Intellectual Property Law, Internet Law, Environmental Law.

Postgraduate Studies in Law

The first postgraduate programmes in Law focus on International and European Law. European integration is impacting every aspect of Member State law, highlighting the need to study the various legal systems and to understand their relevance to Cypriot law. These programmes also build on the research expertise of the Department’s faculty members to the fields mentioned above.

The goals of the programmes, inter alia, are:

- To provide advanced legal studies to the legal world of Cyprus and the surrounding area.
- To offer specialised study of the international legal system and European integration, including their impact on the transformation of Cyprus Law, and other legal systems.
- To optimise the Department’s contribution to the development of Cyprus Law.

Course Descriptions

LAW 511 Criminal Law and Human Rights (15 ECTS)

The course focuses on the defendant’s –broadly approached– “participation” in criminal trial and the way in which the latter radically influences the nature of modern criminal procedure. Being the “protagonist” of the criminal process, the defendant is provided with the right to a “fair trial”, a useful abbreviation to describe various, distinct rights, privileges and immunities recognized to him as suspect and/or accused person, during the pre-trial and the trial stage of the criminal process. The presumption of innocence, the right of non-discrimination, the right to remain silent, the right to information, translation and interpretation in criminal proceedings, the right to access a lawyer and to be given ordinary legal aid, the right to appeal as well as the corresponding legal and moral duties, arising on the side of the prosecuting State shall be discussed in a detailed manner, with reference to the relevant national and international normative sources (Cap. 155, Constitution, EU Directives 2010/64, 2012/13, 2016/343, ECHR). Emphasis will be placed on the possible “rights” to be recognised on the side of the Prosecuting Authorities, because of the adversarial nature of the common-law criminal procedural model. Last, but not least, criminal evidence issues having an impact on procedural rights as well as issues of legal burden of proof and reverse onus issues will also constitute part of the material to be discussed in the course.

LAW 512 Law of the European Convention on Human Rights (15 ECTS)

The European Convention on Human Rights (ECHR), basic “constitutional instrument in the European public order”, is one of the most successful regimes for protection of human rights in the world today, and at the same time its judicial body the European Court of Human Rights (ECHR) has also established itself as the most effective human rights mechanism in Europe and, arguably, in the world. The main purpose of the course is to provide an overview of the protection of human rights and fundamental freedoms guaranteed by the ECHR. Students will be taught the background and context of the Convention, its status in Europe and the world, the Convention’s relationship to other international instruments, as well as its substance, procedure, and application in practice. Special emphasis will be placed on the achievements and challenges of the system as well as the problems that it currently faces. Within the framework of this course, students will have a thorough understanding of the law of the Convention and will familiarise themselves with the practical application of the basic procedural and substantive articles and Protocols of the Convention.
The course focuses on the concepts of gender, equality, and non-discrimination under (international) human rights law. It examines the critical and feminist approaches to human rights law, the issue of cultural relativism as well as the legal principles of equality and non-discrimination, focusing on gender equality at international, European, comparative and domestic levels. The course also examines various issues by reference to the most important human rights treaties such as the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), the case law of the European Court of Human Rights, the relevant legislation of Cyprus and case law of the Supreme Court of Cyprus. More specifically, the course examines issues of discrimination, crimes and violence against women, focusing on the Istanbul Convention on preventing and combating violence against women and domestic violence, human trafficking, reproductive rights such as abortion and medically assisted procreation, parental rights and children rights, (de)criminalisation of sexual work as well as recent developments relating to the rights of LGBTI persons.

The basic aim of the course is to acquire adequate applied knowledge concerning the aetiology of and how best to prevent such serious crimes as robbery, rape, murder, mass murder, crimes against the environment and economic crime. Another basic aim of the course is to impart sufficient knowledge about Forensic Criminology, namely its development and contribution to criminal investigation, focusing on modern methods (including offender profiling and crime mapping). Finally, the role of Forensic Criminology and the expert forensic criminologist today in a court of law will also be addressed.

The legal treatment of modern commercial transactions provides the best example of both the influence and the limits of the so-called globalisation. Especially in some subjects of international commercial law, the basic sources are international - deriving from either intergovernmental or nongovernmental international organisations. In the case of Cyprus law, this international character also informs "domestic" commercial law, which is built upon English commercial law.

The course consists of three parts. The first part is an introduction to international business law with an emphasis on concepts, subjects and sources of the field as well as its distinct methodology and disciplinary identity. The second part addresses the substantive law of international commercial transactions (international sale and carriage of goods; financing and secured transactions). The third and largest part addresses the resolution of international commercial disputes, placing emphasis on international commercial litigation and arbitration.

The module analyses the basic rules and principles of European intellectual property law. The course consists of five parts. The first part is dedicated to the basic principles that make up the common body of regulation of all the categories of intangible property (justification of protection, protection of intellectual property under the European Convention of Human Rights, free movement of intangible goods in the internal market, intellectual property law and competition law, common features of intangible goods, presentation of the basic categories of intangible goods). In the second, third and fourth parts the analysis focuses respectively to the protection of the three main categories of intangible goods: copyright protected works, trademarks and patents. In the fifth part, basic principles of protection of other forms of intellectual property are examined and in particular the legal protection of the geographical indications and industrial designs. All the parts are analysed in the light of the balancing of intellectual property protection with other rights and interests (restrictions or exceptions, freedom of expression etc.), while emphasizing the challenges brought by the new technologies and the judicial protection mechanisms (enforcement of intellectual property rights).

The course analyses the foundations of European Company Law. In the first part, corporate mobility in the EU is analysed. More specifically, emphasis is placed on corporate mobility and on the freedom of establishment of companies in the context of the internal market. Seat transfers, the freedom of establishment of companies and the relevant case law of the CJEU would be scrutinized. Additionally, cross-border mergers and acquisitions would be examined in detail within this framework. The second part analyses the Company Law Directives and their impact on national laws, as well as the status of the European Company (Societas Europaea). Moreover, perspectives on further harmonisation are being discussed.

The course analyses the provisions on the protection of consumers as recipients of financial products and services. Emphasis is placed on both special EU legislation on banking contracts (e.g. Directive 2014/17/EU on mortgage credit, Directive 2008/48/EC on consumer credit, Directive 2002/65/EC on distant selling of financial products) and on special cases of horizontal pieces of EU legislation (e.g. Directive 93/13/EEC on unfair contractual terms, Directive 2005/29/EC on unfair commercial practices etc.). At the same time, the fundamentals of the banking system in general and banking contracts in particular (such as the legal nature and consequences of the
bank-client relationship, basic categories of bank accounts, categories of loan rates etc.), as well as the notion and characteristics of 'consumer' are mentioned. There are also lectures dedicated to dispute resolution, both judicial and alternative. During the lectures, case law and problem cases are discussed, with special emphasis on current affairs.

**LAW 531 European Public Law (15 ECTS)**

The course focuses on the autonomous study of European Public Law (EPL) and examines the nature, implementation and constraints of its operation as a supranational legal phenomenon. In particular, the teaching method focuses on the theoretical ontological approach and examines whether the existence of the EPL is fictitious and/or legally substantive. It also examines the characteristics of the EPL system as derived from the two-way influence relationship between the EU, the ECHR and the national constitutional legal orders. The analysis focuses on the role of judicial authorities in relation to the evolution of the EPL. In addition, the applications of and constraints on EPL in various areas (Proportionality, Natural Justice, duty to give reasons, human rights protection, national constitutional law and European integration, judicial control and public law) are analysed.

**LAW 532 Environmental Law (15 ECTS)**

Over the years, the European Union (EU) has engaged in extensive environmental policy action and developed considerable legislation that significantly influences both the policies of its member states, as well as legal developments in third countries and international organisations. The course aims to provide a thorough understanding of EU Environmental Law including the foundations of EU environmental law (such as EU competences in this field, environmental principles and public participation in environmental matters) and key legislation adopted in substantive policy areas (such as pollution control of waste and water and the regulation of climate change). Throughout the course, different kinds of regulation to environmental problems, including economic incentive instruments such as emissions trading, and more traditional command and control regulation are examined. In making these regulatory choices, we will see how environmental principles guide decision-making and are often reflected in legislation. Furthermore, in studying EU environmental law, we will start identifying the multi-level governance involved in environmental law both within and outside the EU, with division of powers being shared between the EU and member states, and EU environmental law coexisting and dynamically interacting with international environmental law.
Michael Chatzipanagiotis, Assistant Professor  
Consumer protection, Intellectual property rights, Legal aspects of artificial intelligence, Air and space law, Banking law, Insurance Law, Torts, alternative dispute resolution.

Aristoteles Constantinides, Associate Professor  

Nikitas Hatzimihail, Professor  
Private international law, International civil litigation and commercial arbitration; International business and trade law. Comparative law and intellectual legal history (with emphasis on the western legal tradition, mixed legal systems, the law of the United States). General principles of private law, Contract law, European private law; Theory and comparative history of private law.

Ioanna Hadjiyianni, Assistant Professor  

Charalambos Papacharalambous, Associate Professor  

Thomas Papadopoulos, Assistant Professor  
Commercial law, Company law and corporate governance, Financial law, Capital markets law-securities regulation, Competition law, Insolvency law, Banking law, EU law, Internal market law and European economic law.

Costas Paraskeva, Associate Professor  
International protection of human rights, Cypriot constitutional law, Cypriot administrative law, European convention of human rights.

Tatiana-Eleni Synodinou, Professor  
Private law, Intellectual property law, Media law, Computer Law/Internet law, Commercial law, Company law, Land law.

Kostantinos Tsinas, Lecturer  
Criminal law, Criminal procedure & evidence, Legal reasoning, Statutory interpretation, Logic - argumentation and the law.
Admission Requirements
For information on the application procedure and admission requirements, please refer to the Admission and Attendance Regulations – Application Requirements or consult the Graduate School, or the Department’s Secretariat.
In addition to the general requirements, candidates are requested to submit any certificates and/or other documentation that prove fluency in the English language and any other documentation that will further support their application for admission, such as articles, research reports, academic distinctions, and any other relevant information.

APPLIED PROGRAMME IN SCHOOL PSYCHOLOGY
Introduction
The Master in School Psychology is a three-year programme, credited with 180 ECTS and includes supervised clinical training (60 ECTS or 1500 hours). The Programme was designed based on the current professional demands and trends in education and clinical training of professional psychologists and school psychologists. Furthermore, the Programme ensures that graduates are eligible to become licensed in Cyprus in accordance with the Cyprus Law for Professional Psychologists, and, in Europe, according to the published European Directive. The Programme also allow students to continue their studies on a Doctorate level. The Programme is primarily based on the professional psychologist’s model of education. Consequently, it develops professional skills for the practice of psychology, while offering to students a wider theoretical and research background. During the first year, the Programme seeks to provide the student with the necessary theoretical and methodological background of psychological knowledge on which to build, during the second year, the specialised skills of psychological assessment and intervention. Also, during the first two years, the Programme offers the student further research knowledge and skills through the completion of a postgraduate thesis, which provide the required basis for conducting research either as a professional School Psychologist in a professional structure or in later doctoral level. During the third year, the student must follow clinical practice, combined with clinical seminars.
Students can register to the Cyprus Psychologist’s Association if they meet the required qualifications (academic and clinical). Specifically, the Programme requires the acquisition of specialised skills and knowledge, which allow the evaluation, prevention, and intervention of psychological problems of children and adolescents and learning difficulties. In addition, in the context of an applied programme, students will acquire methodological knowledge and research skills, which will allow the student to evaluate prevention and intervention programmes, in the context of his/her professional employment. Finally, an integral part of the school psychologist’s training is the gradual development of professional skills through supervised clinical practice, which is why the student must complete at least 1500 hours of supervised clinical practice in appropriate professional settings, before his/her graduation.
Programme Structure

The Programme consists of 12 compulsory courses and 1 Free Elective course (97.5 ECTS, all of 7.5 ECTS), a compulsory Master’s thesis (22.5 PM), Clinical Practice together with 3 clinical seminars (60 ECTS) and the final Comprehensive Examination of professional knowledge (0 ECTS).

<table>
<thead>
<tr>
<th>Compulsory Courses</th>
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<tbody>
<tr>
<td>PSY 621 Research Methods in School Psychology</td>
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<tr>
<td>PSY 604 Multivariate Statistics for the Behavioural Sciences</td>
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<tr>
<td>PSY 614 Psychological Interventions in the Schools I</td>
<td>7.5</td>
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<tr>
<td>PSY 615 Early Diagnosis and Interventions for Reading Disabilities</td>
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<tr>
<td>PSY 617 Counselling Psychology</td>
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<tr>
<td>PSY 619 Intelligence: Development and Evaluation</td>
<td>7.5</td>
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<tr>
<td>PSY 642 Child and Adolescent Psychopathology</td>
<td>7.5</td>
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<tr>
<td>PSY 701 Psychology of Teaching</td>
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<tr>
<td>PSY 705 Diagnostic Intellectual Assessment of Children and Adolescents</td>
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<tr>
<td>PSY 708 Analysis and Behavior Modification</td>
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<tr>
<td>PSY 714 Psychological Interventions in the Schools II</td>
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<tr>
<td>PSY 746 Social Development Psychology of Intercultural Education</td>
<td>7.5</td>
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<tr>
<td>PSY 698 Clinical Practicum Seminar I</td>
<td>5</td>
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<tr>
<td>PSY 699 Clinical Practicum Seminar II</td>
<td>27.5</td>
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<tr>
<td>PSY 700 Clinical Practicum Seminar III</td>
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<tr>
<td>PSY 688 Professional Comprehensive Examination in School Psychology</td>
<td>0</td>
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<tr>
<td>PSY 603 Child and Adolescent Psychopharmacology</td>
<td>7.5</td>
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<tr>
<td>PSY 711 Psychopharmacology</td>
<td>7.5</td>
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<tr>
<td>PSY 730 Neuropsychological Assessment</td>
<td>7.5</td>
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<tr>
<td>PSY 715 Language Development and Language Disorders</td>
<td>7.5</td>
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<tr>
<td>PSY 610 Psychology of Education</td>
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Supervised Clinical Practicum

The practicum programme is integrated into the detailed curriculum and by extension serves the goals and mission of the Master’s Programme in School Psychology (MSPS) which is “to train professional psychologists with a specialty in School Psychology who will serve the profession and the consumer by offering high-level psychological services based on psychological theory, high ethical and legal awareness, and scientifically validated methods”. The aim of the internship is to help trainees develop professional skills that enable them to provide high-quality psychological services to children, adolescents, families, and educators and to support the school system, learning, and educational process. The internship programme is based on the educational model of psychologists “professional specialist psychologist”. It aims to help students gradually develop professional skills as School Psychologists and adopt multiple professional roles at entry level. It is expected that after obtaining a license to practice in the School Psychology specialty, graduates of the Programme will continue to develop their professional skills through continuing professional education.

The structure, duration, and content of the internship programme were designed in such a way to develop those professional skills consistent with the educational criteria of the International School Psychology Association (ISPA). The internship programme promotes the synthesis of practice with theory and research. The practice requirements of the current legislation on Professional Psychologists in Cyprus were also taken into consideration so that graduates of the Programme can successfully apply for a professional license. At the same time, the European criteria for practice of the European Federation of Psychologists Association/EFPA was taken into account so that graduates of the Programme would successfully claim the EuroPsy European Certificate in Psychology.

Master’s Thesis

The preparation of a comprehensive and extensive postgraduate thesis is mandatory for all students of the Programme. The appointed supervisor must be a faculty member (D.E.P). It is conducted in three semesters during the first two years of study as follows: PSY 750 Master’s Thesis I (7.5 PM), PSY 751 Master’s Thesis II (7.5 PM), and PSY 752 Master’s Thesis III (7.5 PM). In case of an uncompleted thesis in the three semesters, the course PSY 745 Continuation of Master’s Thesis (optional) is offered. The course PSY 750 is a prerequisite for PSY 751 and PSY 751 is a prerequisite for PSY 752.

Progress Monitoring

In the middle of the School Psychology Programme and before the student starts his/her internship at the sponsoring institution (beginning of the Spring semester of the 2nd year of study), the members of the School Psychology Committee, together with the Clinical
Practicum Coordinator, comprehensively evaluate the progress of each second-year student of the Programme in the following areas:

- Course performance
- Research progress and performance/Master’s Thesis
- Performance in the Clinical Practicum (School Experience)
- Ethical and Professional Conduct
- Personal development

**Portfolio**

Each student keeps an internship file that includes the following:

1. Curriculum vitae
2. Intermediate assessment of progress by the Department
3. Samples of the student’s work from the three Internship Seminars (e.g., Psychological Reports)
4. Clocks, Summary Table of Hours
5. Goal and progress assessment forms for each internship stage

**PSY 688 Professional Comprehensive Examination in School Psychology**

Students must successfully pass the professional comprehensive examination which they may take when:

1) they have adequately completed their portfolio; 2) they have provided evidence that they have completed at least 1500 hours of supervised clinical practicum; and 3) they have fulfilled the goals of the clinical practicum as these are described in specific materials provided by the Department’s Clinical Practicum Coordinator.

The examination will be given orally and on an individual basis before a three-member Committee of professional psychologists. Specifically, the Committee will consist of the clinical practicum coordinator, a member of the Department’s faculty and an invited member. The examination aims to evaluate the students professional knowledge in case management and, consequently, their readiness to practice as psychologists in an ethical, legal and professional manner. The examination will be evaluated as Pass/Fail and the grade will appear on the student’s transcript. In case of failure, the Department may ask the student to engage in further academic activities and/or additional supervised clinical practicum, if deemed necessary. The student will be allowed to retake the examination up to two more times in corresponding exam periods.

**Fees:** €55.125

**Fee for supervised practicum:** €1,000*

**Total cost of Programme:** €6,125

* In addition to the standard fees for the Applied Programme in School Psychology, a fee of €1,000 is added for the supervised clinical practicum which is utilised for acquiring supervision services from registered professional psychologists.

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**Analytical Programme of Studies**

<table>
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<tr>
<th>First Year</th>
<th>ECTS</th>
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<tr>
<td><strong>Fall Semester</strong></td>
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<tr>
<td>PSY 617 Counselling Psychology</td>
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<tr>
<td>PSY 619 Intelligence: Development and Education</td>
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<tr>
<td>PSY 621 Research Methods in School Psychology</td>
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<tr>
<td>PSY 746 Social Developmental Psychology of Intercultural Education</td>
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<tr>
<td><strong>Spring Semester</strong></td>
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<tr>
<td>PSY 604 Multivariate Statistics for the Behavioural Sciences</td>
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<tr>
<td>PSY 750 Master’s Thesis I</td>
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<tr>
<td><strong>Elective Courses (one from the following)</strong></td>
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<tr>
<td>PSY 603 Child and Adolescent Psychopharmacology</td>
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<tr>
<td>PSY 610 Psychology of Education</td>
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<td><strong>Total</strong></td>
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<td><strong>Summer Semester</strong></td>
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<tr>
<td>PSY 751 Master’s Thesis II</td>
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<tbody>
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<td><strong>Fall Semester</strong></td>
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<tr>
<td>PSY 614 Psychological Interventions in the Schools I</td>
<td>7.5</td>
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<tr>
<td>PSY 615 Early Diagnosis and Interventions for Reading Disabilities</td>
<td>7.5</td>
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<tr>
<td>PSY 701 Psychology of Teaching</td>
<td>7.5</td>
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<tr>
<td><strong>Elective Courses (one from the following)</strong></td>
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<tr>
<td>PSY 705 Diagnostic Intellectual Assessment of Children and Adolescents</td>
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<tr>
<td><strong>School experience - Practical Exercise I</strong></td>
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<td><strong>Total</strong></td>
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<tr>
<td><strong>Spring Semester</strong></td>
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<tr>
<td>PSY 708 Analysis and Behaviour Modification</td>
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<tr>
<td>PSY 714 Psychological Interventions in the Schools II</td>
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<tr>
<td>PSY 698 Clinical Practicum Seminar I</td>
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<td>PSY 752 Master’s Thesis III</td>
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<tr>
<td><strong>Practical Exercise II</strong></td>
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<tr>
<td><strong>Summer Semester</strong></td>
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<tr>
<td><strong>Continuation of Practical Exercise II</strong></td>
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<tr>
<td>PSY 745 Continuation of master’s Thesis (Optional)</td>
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<tr>
<td><strong>Total</strong></td>
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</table>
Courses Description

All courses are credited with 7.5 ECTS.

PSY 603 Child and Adolescent Psychopharmacology (7.5 ECTS)

Basic psychopharmacology with special emphasis on the medications that are most often prescribed to children and adolescents, the effect on them and their consequences. Review of the neurological basis of functions such as memory, attention, and emotion with emphasis on the neurochemistry of the above functions and psychological dysfunction. Presentation of topics such as organic basis of attention difficulties, aggression, depression, eating disorders, etc., and current research on the effectiveness of psychological drugs.

PSY 604 Multivariate Statistics for the Behavioural Sciences (7.5 ECTS)

The course is designed to provide an integrated, in-depth, applied approach to multivariate data analysis and linear statistical models in psychological research. The focus will be on practical issues such as selecting the appropriate measures of analysis, preparing data for analysis, performing the analysis with SPSS, interpreting output and presenting research results. The course will provide an overview of some of the most common multivariate methods, namely: exploratory factor analysis, analysis of variance and covariance, multivariate analysis of variance and covariance, multiple regression, mediation and moderation. The course will strongly emphasise the applications of multivariate methods, rather than their theoretical derivation. All multivariate procedures will be discussed with reference to research designs and interpreted in a practical manner.

PSY 610 Psychology of Education (7.5 ECTS)

The course presents the contribution that psychological research can make to educational practice and discusses relevant issues that concern classroom educators. It critically examines contemporary theories of human development and learning, in order to apply this knowledge in educational settings and situations. Additionally, it examines topics such as individual differences, home/school relations and cooperation among educational psychologists, teachers, and parents.

PSY 614 Psychological Interventions in the Schools I (7.5 ECTS)

The course will focus on contemporary, empirically validated treatments for children and families and on classroom-based interventions in collaboration with the teacher. Interventions will include psycho-educational approaches, counselling, cognitive-behavioural and other scientifically based methods, with specific applications in the school context.

PSY 615 Early Diagnosis and Intervention of Reading Disabilities (7.5 ECTS)

The course is offered to both Master’s and Doctoral students who have a strong background in learning disabilities. It addresses a number of issues including review of recent research and literature in the field of learning disabilities; examination of research and theory as they relate to current practices; overview of psychological processes in learning to read; relationships among language processes, intellectual processes, and reading processes in beginning and skilled readers; common causes of reading disabilities and the biological or psychological etiologies associated with them; advanced research-based diagnostic assessment; and individual and group interventions for learners with such disabilities (including practice in diagnosis and treatment of case studies). Students a) learn to assess and identify specific reading disabilities and their implications for development and learning in the first years of life, b) conduct assessment batteries, c) interpret assessment findings and develop intervention plans, d) provide remedial services for specific learning domains and practical recommendations and e) acquire skills in composing professional psychometric reports.

PSY 617 Counselling Psychology (7.5 ECTS)

This course presents the major counselling theories and the corresponding methods and techniques. More specifically, the following theories are critically discussed: Psychoanalytic (Freud), neo Freudian/egopsychological (Erikson, Adler), rational-emotive (Ellis), transactional (Burns), Behavioural (Wolpe, Dollard & Miller), person-centred (Rogers), existentialist (May, Frankl) and Gestalt (Perls). Special emphasis is placed on the process of the psychological interview.

PSY 619 Intelligence: Development and Evaluation (7.5 ECTS)

The course informs students of the current research and theory in cognitive development. Theories and models of cognitive change are taught, as well as methods for determining conceptual change. Students are required to study the relevant bibliography and present reports on relevant topics of the bibliography, both orally and in written form. For practical experience, students are asked to participate in small-scale experiments with the models taught.

PSY 621 Research Methods in School Psychology (7.5 ECTS)

The goal of the course is to provide students with knowledge about different research methodologies in School Psychology and the design of research studies using quantitative, qualitative, and mixed methods approaches, so that they can design and implement new research by asking appropriate research questions and using the relevant methodology.

PSY 642 Child and Adolescent Psychopathology (7.5 ECTS)

The course will review the most common disorders of childhood and adolescence with an emphasis on diagnostic criteria, developmental course, possible etiologies and the role of the environment that plays in the development and maintenance of problem behaviours. Scientifically based treatments for these disorders will also be discussed.
PSY 701 Psychology of Instruction (7.5 ECTS)

This course is designed for postgraduate students in Educational Psychology, who are interested in applied research and/or practice and aims to support and improve the instruction and the learning that takes place in schools. Learning is examined as a function of instructional practices in specific educational contexts and contents, and in relation to factors that have been found to influence it. Specific topics are organised into the following themes: a) nature and conditions of classroom learning; b) models of instruction, domain-specific instructional approaches, instructional effectiveness; c) aptitude – treatment/ method interactions; d) alternative instructional and assessment approaches; e) teacher knowledge and beliefs, expertise in teaching; f) evaluation and intervention at the level of the school, the classroom, and the teacher. The course is supported by a selection of empirical articles in applied research and case studies on evaluation and intervention.

PSY 705 Diagnostic Intellectual Assessment of Children and Adolescents (7.5 ECTS)

The course examines the administration, scoring, interpretation, and research foundations of the major individual tests of intelligence and other objective assessments of cognitive function and behaviour, including observation. It emphasizes the Wechsler scales and the measurement of child and adolescent intelligence. Each student will be required to administer a certain number of complete assessments. The course also develops report–writing skills.

PSY 708 Analysis and Modification Behaviour (7.5 ECTS)

Learning theories and their application in behaviour analysis as an assessment tool for children and adolescents. Protocols of observing and documenting behaviour will be taught and emphasis will be placed on methods of behaviour modification based on current research and theory. The following methods will be presented: positive and negative reinforcement, schematisation, emotional control, negative thought documenting and modification.

PSY 711 Psychopharmacology (7.5 ECTS)

Introduction to the benefit and action of various psychotropics as they are used in the treatment of various clinical syndromes in children, teenagers, adults and the elderly. The course will develop students’ skills in assessing the need for psychoactive medications as well as their ability and side effects.

PSY 714 Psychological Interventions in the Schools II (7.5 ECTS)

The course will focus on contemporary, empirically validated treatments for children and families and on classroom-based interventions in collaboration with the teacher. Interventions will include psycho-educational approaches, counselling, cognitive-behavioural and other scientifically based methods, with their specific application in the school context.

PSY 715 Language Development and Language Disorders (7.5 ECTS)

Human language is a dynamic and complex function. The course aims to discuss the theoretical and scientific bases for language acquisition and development, and the language disorders caused by developmental, organic, and neurological etiologies. The spectrum of ages beginning with infancy and concluding with the aging process will be covered. Disorders like aphasia, specific language impairment, language learning disabilities, as well as language impairments resulting from brain injuries and dementia and the relationship between language, cognition, and other psychological functions will be presented. Assessment techniques and intervention strategies based on contemporary theoretical, research, and clinical models will be included.

PSY 730 Neuropsychological Assessment (7.5 ECTS)

Course prerequisites: PSY 200, PSY 706

Clinical neuropsychology focuses on the interaction between brain functioning and human behaviour. The aim of the course is to discuss neuropsychological assessment and to help students differentiate between functional versus organic disorders. In addition, the impact of individual differences related to intelligence, quality of education, and issues pertaining to test sensitivity and specificity will be integrated into the lectures. Neuropathologies such as Alzheimer’s disease, traumatic brain injury, cerebral vascular accidents, neoplastic lesions and neuropsychiatric syndromes as they pertain to dementia, aphasia, apraxia, agnosia, amnesia, and personality disorders will be discussed. The effects of neuropathology on neuropsychological function and current clinical assessment measures used to evaluate memory, attention-concentration, language, perception, visual-spatial skills, verbal learning, and psychosocial functioning will be examined.

PSY 746 Social Developmental Psychology of Intercultural Education (7.5 ECTS)

Students will learn the main theories on the generation and reduction of prejudice, stereotypes and discrimination, as well as their application in educational settings. There will be discussions on the phenomenon of immigration, looking at the issue from the perspectives of the minority and the majority. The course will also discuss the topic of national conflicts, as well as the role that the educational system may play in peace consolidation through the application of the discussed theories. Intervention programmes relating to integration will also be discussed in detail.
**MASTER IN SOCIAL AND DEVELOPMENTAL PSYCHOLOGY**

**Introduction**

Humans are social beings who develop throughout the course of their life. Psychologists are interested in the study of human development and the interplay between nature and development. Social processes typically studied in Social Psychology (intergroup relationships, interpersonal relationships, social influence, social representations, attributions of causality, cooperation and competition) have a developmental background and in order to understand these processes, the formulation of ontogenetic questions is required. According to Moscovici, “The fact that both of these approaches have a common beginning and are inspired by common interests is impressive. Through their different traditions and methodologies, a deep similarity that ties them together is generated. It is as if Social Psychology and Developmental Psychology are interested in the same subject, Social Psychology for the space, through the outer environment and Developmental Psychology for the time, through the inside environment. Thus, they constitute two views of the same science, where one tries to resolve, on a group level, the same question the other one tries to resolve on an individual level” (Moscovici, 1990).

Most contemporary Psychology departments incorporate courses in Social and Developmental Psychology because they are two of the four basic Psychology fields. Social and Developmental Psychology can make significant contributions in countries where socio-cultural needs and problems arise. A typical example, and one that is close to the Cypriot reality, is the significant growth of social and developmental psychology in North Ireland and Israel during the past decades, as these are divided communities with past and present national conflicts, therefore they face issues such as national identity, increase and decrease of prejudice. Therefore, the need for local research on social developmental psychology in Cyprus is immediate, especially concerning intergroup relationships and examination of the socio-psychological parameters of inter-community relationships through a developmental perspective.

Moreover, the recent economic growth and the emphasis on information access have created organisational and educational needs where applied Social and Developmental Psychology may contribute significantly. Lastly, the application of Social and Developmental Psychology in education is very important, since it focuses on the study of psychological changes (cognitive, emotional, social) taking place from birth to elderly years. By observing the individual, psychologists acquire knowledge that allows them to describe changes in human thought and intelligence, personality, emotional world that are shaped through the educational system.

Social and Developmental Psychology are currently considered “bridges” to other areas of psychology. Other main areas (i.e. Cognitive and Clinical) derive significant theoretical and methodological examples from Social and Developmental Psychology via the understanding of dynamic processes that shape human development and social interaction.

**Programme Structure**

All courses, compulsory and elective, are credited with 7.5 ECTS each. The courses include attending three hours of teaching per week, studying for exams, and bibliographic, research, and/or application work, depending on the topic and learning objectives of each course.

The duration of the Programme is two years and consists of 120 ECTS. The completion of a master’s thesis is mandatory, and the courses are allocated as follows: in courses depending on the area of interest (75 ECTS) and in the thesis (PSY 742, PSY 743 and PSY 744 (45 ECTS). The Programme allows continuation of studies at doctoral level. However, admission to the Doctoral programme takes place after selection, based on the existing procedure (new application and interview).

**Objectives of the Programme**

To provide theoretical and methodological training in designing, conducting and analysing sociopsychological and developmental research.

- To enhance students’ understanding of quantitative and qualitative methodological approaches.
- To facilitate the connection of theoretical and empirical questions with social and developmental problems.

Successful completion of the Programme may lead to Doctoral studies in Social and Developmental Psychology, provided that students follow the University’s procedure (new application and interview). It may also lead to job placements in marketing research companies.

**Research Fields**

Students in the Programme can participate in the following research programmes:

- Social representations of national identity.
- Social representations of gender.
- Greek-Cypriot and Turkish-Cypriot contact and trust development.
- Inter-group relationships and teaching history.
- Social construction of knowledge and cooperative learning.
- Social representations of HIV/AIDS and development of prevention programmes.
- Ecological consciousness and behaviour.
• Driving behaviour and development of driving violence prevention programmes.
• Consumer behaviour and consumer attitudes.
• The psychology of minority social influence.
• Parental involvement and child development.
• School aggression in preschool and school-age children.
• Parent, child, teacher and attribution theories.
• Parental style and developmental difficulties in childhood and adolescence.
• Adolescence, antisocial behaviour, and substance use.
• Developmental psychopathology and developmental disorders.
• Emotional divergence and relevant disorders.
• A systemic approach to problem resolution in school.

**Laboratory Equipment**

The Laboratory of Social and Developmental Psychology (LSDP) is aligned with the objectives of the Master’s programme. The objectives of the Laboratory are the following:

• The analysis of mechanisms of social knowledge development and change through various levels of analysis of the socio-psychological reality (intra-individual, inter-individual, intergroup and representational ideological level).
• The study of small group dynamics, cooperation and competition in educational settings.
• The study of the microgenesis, ontogenesis and socio-genesis of social representations.
• The study of learning and cognitive development as a socio-psychological process.
• The study of parents–children relationships and interactions.
• The study of pre-social and antisocial behaviour between children.
• The study of individual differences using neuro-psychological and developmental research methodology.
• The analysis of mechanisms involved in typical and non-typical development.

**Programme Structure**

**PROGRAMME WITH A DISSERTATION**

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>ECTS</th>
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<tbody>
<tr>
<td>PSY 604 Multivariate Statistics for the Behavioural Sciences</td>
<td>7.5</td>
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<tr>
<td>PSY 630 Contemporary Theories of Human Development</td>
<td>7.5</td>
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<tr>
<td>PSY 637 Social Development in Social Context</td>
<td>7.5</td>
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<tr>
<td>PSY 640 Social Influence and Social Settings</td>
<td>7.5</td>
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<tr>
<td>PSY 641 Epistemology of the Social Sciences and Research Design</td>
<td>7.5</td>
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<tr>
<th>Thesis</th>
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<tbody>
<tr>
<td>PSY 742 Master’s Thesis I</td>
<td>15</td>
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<tr>
<td>PSY 743 Master’s Thesis IIA</td>
<td>15</td>
</tr>
<tr>
<td>PSY 744 Master’s Thesis IIB</td>
<td>15</td>
</tr>
<tr>
<td>PSY 745 Continuation of Master’s Thesis - Optional</td>
<td>(1)</td>
</tr>
</tbody>
</table>

| Total                                                                 | 45   |

**Elective Courses**

Students will select five courses** (a total of 37.5 ECTS) from the list below:

- PSY 602 Graduate Seminar: Advanced Issues in Psychology
- PSY 610 Psychology of Education
- PSY 619 Intelligence: Development and Evaluation
- PSY 625 Graduate Research Study IV
- PSY 632 Adolescence
- PSY 642 Child and Adolescence Psychopathology
- PSY 677 Human Aggression and Antisocial Behaviour
- PSY 689 Independent Study
- PSY 702 Discourse, Communication and Social Psychology
- PSY 707 Family and Child Development
- PSY 715 Language Development and Language Disorders
- PSY 722 Social and psychological dimensions of migration
- PSY 731 Cognitive Neuroscience: Understanding the Biology of the Mind
- PSY 741 Intergroup Relations in Divided Societies
- PSY 746 Social Psychology of Education
- PSY 749 Qualitative Methods of Research in Psychology
- PSY 788 Advanced Research Methods II
Course Descriptions

All courses are credited with 7.5 ECTS.

PSY 602 Graduate Seminar: Advanced Issues in Psychology (7.5 ECTS)
The course has the form of a seminar and aims to deepen the theoretical, applied and research topics in Educational and Cognitive Psychology. The seminar will be taught by a distinguished visitor or a specialist scientist that cooperates with the Department of Psychology.

PSY 604 Multivariate Statistics for the Behavioural Sciences (7.5 ECTS)
See course description on previous pages.

PSY 610 Psychology of Education (7.5 ECTS)
See course description on previous pages.

PSY 619 Intelligence: Development and Evaluation (7.5 ECTS)
See course description on previous pages.

PSY 630 Contemporary Theories of Human Development (7.5 ECTS)
The main theories of human development, from conception to the end of life, will be critically presented and discussed. Intrapersonal and inter-personal influences on biological, cognitive, emotional and social development will also be discussed.

PSY 632 Adolescence (7.5 ECTS)
The course will cover the main theories and research on cognitive, physiological, socio-emotional, moral, and personality development during adolescence. Furthermore, the various problems faced by adolescents and the factors which contribute to the development of problematic behaviour, including emotional, social and academic problems will be discussed. The importance of discussing various psychological and other problems faced by adolescents lies in the fact that they are connected to extreme behaviours, such as suicide, criminal and aggressive behaviour.

PSY 637 Social Development in Social Settings (7.5 ECTS)
The course introduces students to classic and contemporary theories of human development, which consider development to be a socio-psychological process. Theories that form the theoretical bases of the contemporary socio-genetic approach to human development such as the classic theories of Mead, Baldwin, Piaget and Vygotsky will be reviewed. Recent meta-Piagetian theories of the Geneva social school, and about meta-Vygotskian theories such as those of Bruner, Rogoff, Wertsch and Valsiner will be discussed in-depth.

PSY 640 Social Influence and Social Representations (7.5 ECTS)
The course will offer in-depth discussions concerning two of the most significant areas of Social Psychology: social influence and social representations. The functional and the genetic model of social influence, contemporary advancements in the areas of social influence and social representations, the development of social representations of gender and national identity will be discussed. The applications of social influence and social representation theories to the fields of prevention, health psychology, advertising, communication and trade will also be discussed.

PSY 641 Epistemology of the Social Sciences and Research Design (7.5 ECTS)
The course initially focuses on the basic issues of epistemology by introducing the relevant field. This first section concludes with a critical consideration of epistemology and psychology. The second section focuses on key issues of methodology and experimental design, clinical trials, descriptive and qualitative research. Finally, it focuses on the writing and presentation of research proposals and articles.

PSY 642 Child and Adolescent Psychopathology (7.5 ECTS)
See course description on previous pages.

PSY 677 Human Aggression and Antisocial Behaviour (7.5 ECTS)
The phenomenon of aggressiveness, by presenting the various theories that attempt to explain it as well as the empirical research that aims to locate its parameters will be examined. Terms such as pre-active and counteractive aggressiveness, emotional toughness and its relationship to psychopathology; family as a trigger for the development of aggressive behaviour and the development of an aggressive personality will be analysed. Special reference to bullying and profiles of children involved in it (bullies, victims, aggressive victims). Antisocial behaviour such as substance abuse, youth violation of rules and youth criminality will also be discussed.

PSY 702 Discourse, Communication and Social Psychology (7.5 ECTS)
The course examines the ways that social psychology can facilitate in the understanding of discourse as a social and communicative practice. It will examine the ways in which discourse, both written and spoken constructs, create different social realities and how its structure achieves specific communicative ends. Reference will be made to research that critically analyses everyday communicative discourse as well as institutional discourse (media, political). Special reference will be made to representations in the media discourse that relate to specific social and psychological issues, such as psychopathology, gender, disability, sexuality, racism and nationalism.

PSY 707 Family and Child Development (7.5 ECTS)
The course examines how structural and functional features of the family microsystem influence its members, especially the young members of the family. The main theories of family development and function will be presented, with emphasis on the systemic approach. There will also be presentations and discussions on recent research targeting the interaction of intra-personal and interpersonal variables on the child's cognitive, psycho-social and personality development.

PSY 715 Language Development and Language Disorders (7.5 ECTS)
See course description on previous pages.

PSY 722 Social and psychological dimensions of migration (7.5 ECTS)
The course identifies the need for a social psychological approach to the study of phenomena related to cross-cultural contact and communication. Students will use different theoretical paradigms and empirical evidence coming from intercultural contact zones worldwide to understand issues related to the psychological aspects of migration and movement. The course will first explain and discuss the theoretical paradigms and empirical evidence coming from intercultural contact zones worldwide to understand issues related to the psychological aspects of migration and movement. It will then identify the challenges that people face in new environments, by examining processes of acculturation and focusing on issues of identity and stigma negotiation. We will discuss the challenges that societies face with migration, by referring to issues of acculturation, identity and prejudice. Finally, we will discuss intergroup relations issues in multicultural societies.
PSY 731 Cognitive Neuroscience: Understanding the Biology of the Mind (7.5 ECTS)

Cognitive neuroscience is the study of the biological underpinnings of the mind. This unit covers the main research areas and methods used in investigating brain structure and function. The unit will provide students with sound knowledge on the brain's structure and function, at both macro and micro level (from cellular to brain networks), as well as with knowledge on the relationship between brain structure and function and various mental processes. Students will be introduced to basic principles and mechanisms of brain recovery and plasticity, as well as to methods in neuroscience, in particular, imaging methods (EEG, fMRI, etc.), case studies, and applied clinical neuroscience (e.g. neurofeedback, TMS, tDCS, etc.).

PSY 741 Intergroup Relations in Divided Societies (7.5 ECTS)

The course offers in-depth discussions on classic and contemporary theories of intergroup relationships. The concepts of stereotypes, prejudices and discrimination, empirical findings, applications of these theories on the mixed education institution and on the resolution of intergroup conflicts in North Ireland, South Africa, Israel, Palestine and other places will be discussed. The course also focuses on the theories of frustration-agression, authoritarian personality, realistic conflict, social identity, contact hypothesis, as well as recent developments of these theories, such as the theory of orientation towards social reign, the theory of threats, and theories combining the contact theory with the social identity theory.

PSY 746 Development of Intercultural Education (7.5 ECTS)

See course description on previous pages.

PSY 749 Qualitative Methods of Research in Psychology (7.5 ECTS)

The aim of the course is to introduce and familiarise students with qualitative methodology in psychology through theoretical review and research applications. Students will learn about issues of epistemology, data collection and analysis, and principles of assessing the quality of the data.

PSY 788 Advanced Research Methods II (7.5 ECTS)

The aim of the course is to familiarise and teach the main principles of the latent variable’s models, namely: models of confirmatory analysis of factors, models of structural equations, models from modern measurement theories (Rasch and IRT). During the course, students will learn practices for analysing data using confirmatory analysis techniques and structural equation models via the corresponding software. They will be able to evaluate and critically present published analyses of the above techniques and will acquire skills to analyse and write the related results with models of latent variables.

MASTER PROGRAMME IN SCHOOL COUNSELLING AND GUIDANCE

The Programme is offered by the Department of Psychology at the University of Cyprus in collaboration with the National and Kapodistrian University of Athens, leading to a specialised postgraduate diploma (Master of Arts) in School Counseling and Guidance.

Aim of the Programme

The Programme offers postgraduate education and training in school counselling and guidance, so that graduates of the Programme will be able to professionally counsel students on issues related to their personal and family life, education, and job/career options.

Fees

Programme fees: €5,125

Programme Duration

The duration of the Programme is two academic years, completed within a minimum of three academic semesters and a maximum of eight semesters.

Language of Instruction

The language of instruction and the language required for all classroom participation and written assignments is Greek.

Eligibility

The Programme is open to university graduates (B.A., B.Sc. minimum) with a degree in Psychology or with a degree in any of the Education Sciences, or any subject that qualifies the holder as a secondary education teacher. All degrees must have been obtained at an accredited or recognised university.

Job Prospects

The Cyprus Ministry of Education, Sport and Youth and the Educational Services Committee recognise Programme graduates' eligibility for appointment as counselling and vocational guidance teachers, provided they also hold the additional qualifications required for the position. Graduates are also qualified to work in private/non-state schools and educational organisations or continue their studies in doctoral programmes (academic career).

Programme Structure

The Programme requires completion of 140 ECTS and 12 courses (6 required courses and 6 electives), each of which corresponds to 7.5 ECTS, as well as a compulsory practicum totaling 500 hours in public or private schools which is completed over two consecutive semesters and corresponds to 20 ECTS. Finally, students are required to undertake a research project (Master's thesis), which corresponds to 30 ECTS. Participation in lectures is mandatory. All courses take place in Cyprus. Part of the programme of study (up to 20% or a maximum of two electives, excluding the practicum) may be offered as distance learning via teleconference.
<table>
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<tr>
<th>Course Description</th>
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<tbody>
<tr>
<td><strong>Compulsory Courses</strong></td>
</tr>
<tr>
<td>COU 601 Ethics in School Counselling and Guidance (7.5 ECTS)</td>
</tr>
<tr>
<td>COU 602 Introduction to School Counselling and Guidance (7.5 ECTS)</td>
</tr>
<tr>
<td>COU 604 Research Methods in Education (or an equivalent course offered by the collaborating departments) (7.5 ECTS)</td>
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<tr>
<td>COU 605 Vocational Guidance and Counseling I (7.5 ECTS)</td>
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<tr>
<td>COU 650 Innovation and Creativity in Education (7.5 ECTS)</td>
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<tr>
<td>COU 660 Educators as Professionals (7.5 ECTS)</td>
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<tr>
<td>COU 661 Minority Groups, Social Exclusion and Life-long Learning (7.5 ECTS)</td>
</tr>
<tr>
<td>COU 700 Master's Thesis I (15 ECTS)</td>
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<tr>
<td>COU 701 Master's Thesis II (15 ECTS)</td>
</tr>
<tr>
<td>COU 789 Practicum I (in Public Schools) or Practicum I (in Private Schools and other sites) (10 ECTS)</td>
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<tr>
<td>COU 790 Practicum I (in Private Schools and other sites) (10 ECTS)</td>
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<tr>
<td>COU 792 Practicum II (in Private Schools and other sites) (10 ECTS)</td>
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<tr>
<td><strong>Elective Courses (7.5 ECTS each)</strong></td>
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<tr>
<td>Education Courses (selection of 2 courses)</td>
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<tr>
<td>COU 609 Adult Education</td>
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<tr>
<td>COU 651 Theory and Practice of Educational Science</td>
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<td>COU 652 Skills Development at School</td>
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<td>COU 653 Technologies of Information and Communication in Education</td>
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<td>COU 654 Human Resource Management in Education</td>
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<td>COU 655 Social Education</td>
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<td>COU 656 Curriculum Development and Micro-teaching</td>
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<td>COU 657 Current Issues in Education</td>
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<td>COU 658 School Pedagogy</td>
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<td>COU 659 Sociology of Education</td>
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<tr>
<td>Psychology and Counselling Courses (selection of 2 courses)</td>
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<tr>
<td>COU 610 Psychology of Education</td>
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<td>COU 611 Counselling Psychology</td>
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<td>COU 612 Contemporary Theories of Human Development</td>
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<td>COU 615 Family and Child Development</td>
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<td>COU 606 Learning Difficulties</td>
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<td>COU 607 Prevention and Treatment of Crises in the School</td>
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<tr>
<td>COU 608 Intercultural Counselling and Minority Counselling</td>
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<tr>
<td>COU 609 Assistive Role of the Professional School Counsellor (7.5 ECTS)</td>
</tr>
<tr>
<td>COU 603 Methods and Tools for Assessment and Evaluation in Counselling</td>
</tr>
<tr>
<td>COU 616 Vocational Guidance and Counselling II (7.5 ECTS)</td>
</tr>
<tr>
<td><strong>Elective Courses (7.5 ECTS each)</strong></td>
</tr>
<tr>
<td>Two postgraduate courses (7.5 ECTS each) from a wide selection of courses offered by the collaborating departments. These may vary depending on the student's interests, and require the approval of the academic advisor and the consent of the instructor.</td>
</tr>
<tr>
<td>Grand Total</td>
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</table>
educator to ensure a safe and effective school environment for students.

**COU 700 Master’s Thesis I (15 ECTS)**
**COU 701 Master’s Thesis II (15 ECTS)**

The thesis is the student’s individual project, which is to be completed in two to three semesters. Students select their topic in accordance with their own area of interest.

**COU 789 Practicum I (in Public Schools) (10 ECTS) or**
**COU 791 Practicum I (in Private Schools and other sites) (10 ECTS) and**
**COU 790 Practicum II (in Public Schools) (10 ECTS) or**
**COU 792 Practicum II (in Private Schools and other sites) (10 ECTS)**

The course brings the student in direct contact with the workplace and places him/her in the school unit. In addition, it provides students with the opportunity to synthesise and integrate the knowledge and skills they have acquired during the programme and implement them in the school environment. Therefore, the course acts as a medium for the professional development of the school counsellor.

**ELECTIVE**

**Psychology and Counselling Courses**

**COU 603 Assessment and Evaluation in Counselling (7.5 ECTS)**

The course introduces the educational and psychological methods of assessment that are most useful to school counsellors. It covers the selection, administration, scoring and interpretation of a variety of tools and techniques for assessment, including standardised measures, control measures, structured interviews and systematic observation. There is a special emphasis on a specific model of problem analysis used to understand and address students’ educational and behavioural difficulties and needs. By using the model, students/prospective counsellors can examine educational and behavioural problems within the school context and interpret the underlying reasons. The model also offers a variety of problem-solving strategies.

**COU 606 Learning Difficulties (7.5 ECTS)**

Students with learning difficulties tend to present deficits in five basic areas: working memory, attention, applying strategies, basic vocabulary and speech coding. Weaknesses in these areas influence learning in many ways and in many areas of the school curriculum. Students with learning difficulties need special attention and guidance in these areas, which require that student performance levels must be defined in terms of yearly goals and monitored continuously with the aim of each student’s individual development. In the course, school counsellors will learn about the characteristics of students with learning difficulties and the methods of teaching and intervention as well as specific strategies used to enhance student performance at both an individual and the group level.

**COU 607 Prevention and Treatment of Crises in the School (7.5 ECTS)**

This course focuses on the design, implementation and assessment of prevention and treatment programs related to crises in the schools. Emphasis is placed on the prevention and treatment of personal, interpersonal, and social problems through programmes/processes that involve the entire school system—the parents, educators, and students. The course teaches students how to identify the school system’s needs, ways to minimize crises, and how to design programmes to successfully intervene. Finally, they will learn how to empirically evaluate the effectiveness of their interventions.

**COU 608 Intercultural Counselling and Minority Counselling (7.5 ECTS)**

The course develops students’ skills and attitudes necessary for the most effective counselling and guidance. A successful counsellor must understand and support all types of people from different cultures and regardless of race, gender, sexual orientations, religious preferences as well as those with special learning difficulties and developmental disorders. The course focuses on developing students’ awareness and alertness to the values and beliefs of various individuals in the context of a diverse society. It teaches students how to conceptualise the way that diverse values, beliefs and traditions, forms of interaction, social circumstances and trends are related to cultural and ethnic differences. These are factors that are highly important to successful guidance and counselling.

**COU 610 Psychology of Education (7.5 ECTS)**

The course presents the important psychology research related to counselling and educational practice, and critically examines contemporary theories of human development (cognitive, ethical, social and emotional development), as well as current learning theories. The course also examines topics such as individual differences, which may occur in the above scenarios. Finally, it evaluates the relationship between family and school, and possible cooperations among teachers, parents, and the school board.

**COU 611 Counselling Psychology (7.5 ECTS)**

The course presents to students the major theories of Counselling Psychology and familiarises them with the corresponding counselling techniques. More specifically, the following theories and methods of counselling are critically discussed: Psychoanalytic theory (Freud), neo Freudian/ego-psychological theories (Erikson, Adler), rational-emotive (Ellis), transactional (Burns), behavioral (Wolpe, Dollard & Miller), person-centered (Rogers), existentialist (May, Frankl) and Gestalt (Perls). Special emphasis is placed on the process, theoretical and practical, of the psychological interview.

**COU 612 Contemporary Theories of Human Development (7.5 ECTS)**

The main theories of human development from conception to the end of life will be critically presented and discussed. Intrapersonal and inter-personal influences on biological, cognitive, emotional, and social development will also be discussed.

**COU 613 Child and Adolescent Psychopathology (7.5 ECTS)**

The most common disorders of childhood and adolescence, with an emphasis on diagnostic criteria, the developmental course/progression, possible etiologies and the role of environmental factors in the presentation and persistence of the problem will be reviewed. Scientifically based treatments for these disorders will also be discussed.

**COU 614 Psychology of Instruction (7.5 ECTS)**

The course is designed for graduate students in the School Counselling and Guidance programme who are interested in applied research and/or practice, that aims to support and improve the effectiveness of instruction and the learning that takes place in schools. Teaching of students and guidance of teachers is examined in specific educational contexts and contents, and in relation to factors that have been found to influence it. Specific topics are organised into the following themes: a) nature and conditions of classroom learning; b)
models of instruction, domain-specific instructional approaches, instructional effectiveness; c) aptitude–treatment/method inter-actions; d) alternative instructional and assessment approaches; e) teacher knowledge and beliefs, expertise in teaching; f) evaluation and intervention at the level of the school, the classroom, and the teacher.

**COU 615 Family and Child Development (7.5 ECTS)**

The course examines the influence of structural and functional characteristics of the family microsystem on child development. The broader theories of development and function of the family are discussed, with particular emphasis on the systemic perspective. Current research on the interaction between intra and inter-individual variables that are related to the child's cognitive, psycho-social and personality development are also presented.

**COU 616 Vocational Guidance and Counselling II (7.5 ECTS)**

The objective of this course is to educate students on matters of vocational education and career development, through the study of contemporary sources which are useful tools widely used by career counsellors. Students will be able to create their personal database through presentations from internal or external partners of the University community. Emphasis is placed on the learning of classroom management skills and innovation - entrepreneurship skills and on their application in the educational system. This is the continuation course of COU 605 Vocational Guidance and Counselling I.

### Education Courses

**COU 609 Adult Education (7.5 ECTS)**


**COU 651 Theory and Practice of Educational Science (7.5 ECTS)**

The course addresses the following topics: Concept and areas of Educational Science; Fields of Education; The pedagogic relationship: Features and conditions; Research methods in Educational Science; The evolution of Educational Science; Psychological development of the child and the educational process; Goals and means of teaching; Factors of teaching (family, preschool, and secondary education); Free time and education; Play; Discipline; The pedagogical role of the educator.

**COU 652 Skills Development at School (7.5 ECTS)**


**COU 653 Technologies of Information and Communication in Education (7.5 ECTS)**


**COU 654 Human Resource Management in Education (7.5 ECTS)**

In today’s post-modern world, the investment in human resources in education (both private and public) is of immense importance. The following themes are examined: selection of appropriate staff, training and education, motives, increase of production, evaluation of results and current methods of stimulation for better results in education units.

**COU 655 Social Education (7.5 ECTS)**

The course will examine the socio-psychological bases of the educational process and discuss the most important theories related to the development and reducing prejudice, stereotypes and discrimination and how these apply in an educational context. The following topics will be discussed: the phenomena of immigration as well as that of national conflict, the role of the educational system, in establishing peace with the implementation of theories, the role of counsellors in the educational system and special education legislation, the relationship between ideology and education policy, and the development intervention programmes in relation to intercultural education.

**COU 656 Curriculum Development and Micro-teaching (7.5 ECTS)**

The course covers the design, evaluation, and revision of curriculum plans, as well as how micro-teaching (i.e. mini lessons) can be used as a vehicle to improve teachers' skills. During the design of the lesson plan, the educator is expected to rely on the knowledge gained in micro-teaching. Students attending the course will practice the techniques of micro-teaching and design micro-lessons.

**COU 657 Current Issues in Education (7.5 ECTS)**


**COU 658 School Pedagogy (7.5 ECTS)**

School Pedagogy encompasses two fundamental areas and studies the school as a social institution and the socialisation of the student as its basic function. In particular, the course is based on three thematic sections: a) socialisation of the child and adolescent, b) classroom life, and c) leisure time pedagogy. The first thematic section first deals with the concept of socialisation and its importance in the context of life cycle, while the agents and stages of individual’s socialisation are identified based on psychosocial theories and models. The smooth integration of the individual into society is achieved through socialisation, which is, inter alia, supported by inclusive education, an essential component of the course. The second thematic section examines at both theoretical and research level classroom life and the influence of the key areas that co-form classroom climate on students’ cognitive, social and emotional development. In addition, the key factors that contribute to creating a positive school climate are studied. Emphasis is placed on teacher-student and student-student relationships, as well as on their impact on student’s learning.
and socialisation. Finally, the third thematic section focuses on leisure time pedagogy, which is analysed on two levels, school and family, highlighting the role of adults in promoting the individual and social development of children and adolescents.

**COU 659 Sociology of Education (7.5 ECTS)**

The course examines education as a multifaceted social institution for transferring knowledge and reforming existing social, economic, and cultural structures. By examining the basic theories, it explores the development of the educational institution which explains the structure and, most importantly, the functions of education, as well as its relation to the broader changes in educational systems on an international level. The course also looks at the school class as a social subset and investigates the main factors involved and the relationships between these factors in the context of school action.

**COU 661 Minority groups, Social Exclusion and Life-long Learning (7.5 ECTS)**

The aim of this course is to help students develop methods for supporting minority students and families (immigrants, refugees, single parents, individuals with socially problematic behaviour, individuals with disabilities, individuals with issues such as substance abuse, released ex-prisoners, etc.), and generally, groups that are socially excluded and have difficulties in adjustment. Other goals of this course have to do with the development of educational approaches that promote the communication and cooperation with the above groups and the elimination of social stereotypes against them.

**MASTER IN COGNITIVE SYSTEMS**

*(Join M.Sc. Programme with the Open University of Cyprus)*

The Programme is offered by the Departments of Psychology and Computer Science of the University of Cyprus in collaboration with the Open University of Cyprus. It is an interdisciplinary, distance-learning Programme, that brings together two areas of studies: Cognitive Psychology and Artificial Intelligence in Computer Science. More information on the Programme is available at: [http://cogsys.ouc.ac.cy](http://cogsys.ouc.ac.cy).

**Ph.D. IN CLINICAL PSYCHOLOGY**

**Programme Structure**

The Doctoral Programme leads to a Doctor of Philosophy (Ph.D.) Degree in Clinical Psychology and the total duration of the programme is five years.

The Programme is an innovative training programme for professional clinical psychologists, combining both theoretical and practical teaching, clinical practice of at least 1500 hours, and doctoral dissertation. It consists of three components: a) academic coursework, b) clinical practicum and c) the completion of a Doctoral dissertation. The duration of the Programme is five years, with a total of 345 ECTS. Graduates of the Programme will be able to pursue careers in research and academia or clinical practice.

Graduates of the Programme meet the criteria for registration in the Register of Licensed Psychologists in the specialty of Clinical Psychology. They also meet the criteria for registration in other European registers of clinical psychologists, for professional activity in other countries of the European Union or other continents.

**Number of Entrants and Entry Process**

The Department admits about seven doctoral students each year. The positions are announced at least six months before the beginning of each academic year, according to the formal procedures of the Academic Affairs and Student Welfare Service. Applications are examined by the Post-graduate Programme Committee of the Department, which submits a proposal to the Departmental Board. The decisions of the Department are implemented upon the University’s Postgraduate Committee approval.

**Entry Criteria**

1. A Degree and a Master’s Degree in Psychology from accredited universities. It is preferred but not required that the Master’s degree is in an applied field of Psychology.
2. Student’s academic performance as indicated on the student’s university transcripts.
3. Minimum of three letters of recommendation (see Departmental Recommendation Form); at least two of the letters must be from former professors.
4. Distinctions and special awards.
5. Research participation and scientific publications.
6. Personal interview.
7. English Language Competency.

**Key Learning Outcomes**

The expected learning outcomes fall under two axes:

- **Research development and excellence**
  Students are engaged in research from the beginning until the end of the Programme. Upon completion of the courses and the Comprehensive Examination, students are required to present the Doctoral Proposal and then proceed to the preparation of the dissertation. The dissertation is completed according to the University’s regulations and the thesis defence.

- **Professional/Clinical Competence**
  i. The Programme aims to help students acquire specialised knowledge and skills in order to take on roles related to the practice of the profession of Clinical Psychologist in accordance with international training standards (e.g. EuroPsy, Boulder Model).
  ii. The specialized psychotherapy seminars and internship Seminars, and their experience in research related to clinical issues helps students to develop their professional skills and their competence in clinical issues. Students enter supervised practice with pre-practicum prior to the
main internship as an integral part of all applied courses that students must attend in Years 1 and 2 (e.g. Basic Clinical Skills courses, assessment and psychopathology courses, Cognitive-Behavioural Therapy I & II, etc.). The Department has concluded specific agreements/ memoranda with organisations in Cyprus to provide access to specialised populations (e.g. children). The first stage of internship is offered during the 3rd year of study (5th semester) and it’s part-time (up to 10 hours per week) at the Mental Health Centre of the University of Cyprus under the supervision of either internal or collaborating licensed psychologists. After the successful completion of the first stage of internship, students enter the second and third full-time internship stages (Year 4 and 5 respectively), where they are placed in external internship structures. At this stage, the internship structures offer professional training under the supervision of licensed psychologists in accordance with the Cyprus legislation. During the supervised stages of internships, internal secondary supervision is provided by the Supervised Internship Seminars or specialised psychotherapy courses in which students enroll.

iii. In total, students undertake supervised internships of at least 1500 hours (i.e. 500+ more than the minimum requirement of Cyprus law) in related structures under the supervision of licensed psychologists in accordance with the Cyprus Law for Professional Psychologists. The duration of the clinical supervised exercise is in alignment with the best international practices for the training of Clinical Psychologists and is based on the training model Scientists-Professional Psychologists. Students may attend clinical supervised training or structures, usually during Erasmus placement visits or other international visits. These are calculated in addition to the 1500 required hours of the Programme. Students who are enrolled and are already holding a license to practice as Psychologists in Cyprus in a relevant discipline (e.g. with a Master’s Degree in School Psychology) or with a Master’s Degree in Clinical Orientation that includes relevant clinical practice, may be credited up to a maximum of 500 hours, upon the Departmental Council’s approval.

iv. By the end of the internship, students are expected to have acquired professional competence in the following areas: professional behavior, ethics and legal issues, interculturalism/multiculturalism, theories and methods of psychological diagnosis and evaluation, theories and methods of effective psychotherapeutic/clinical interventions, application of scientific knowledge and research in clinical practice, and professional collaborative counseling. Proficiency is assessed by the Final Clinical Knowledge and Skills Examination, where students must succeed by answering a set of questions related to all the aforementioned areas.

Study Terms and Conditions

Clinical Practicum

Students must maintain a Grade Point Average (G.P.A.) of seven out of ten or higher, otherwise he/she will be placed on academic probation. If a student’s grade remains below seven for a second semester, the Departmental Board will review the case and the Board might decide to dismiss the student. All Doctoral students are required to complete at least 1500 hours of clinical practicum, according to the current legislation and the standards set by the proposed European training model for Psychologists–EuroPsy. Students, who have already completed a part of the supervised clinical practicum (that fulfils the criteria of the Department) during their Master’s Degree in Psychology as well as students who are licensed psychologists, may be credited with up to 900 hours of clinical practice.

The clinical practicum will be supervised by the Department or by external, based on quality standards set by the scientific literature, international practice guidelines, and faculty’s knowledge and expertise.

Fees: €8.000
Fee for supervised practicum: €1.000*
Total cost of the Programme: €4.200

* In addition to the standard fees for the applied Ph.D. programme in Clinical Psychology, a fee of €1.000 is added for the supervised clinical practicum, which is utilised for acquiring supervision services from registered professional psychologists.

Doctoral Dissertation

The procedures for conducting the Doctoral dissertation can be found at the Department’s website. The student can begin the dissertation after the successful completion of the Comprehensive Examination. The dissertation is supervised by a faculty member of the Department.
# Analytical Programme

**Cohort 1 (odd year admission)**

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Cohort 2 (even year admission)

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**Second Semester - Spring Semester**

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<td>Neuropsychological Rehabilitation</td>
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<tr>
<td>PSY 735.A</td>
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<td>7.5</td>
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<tr>
<td>PSY 756.G</td>
<td>Clinical Research Seminar</td>
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<tr>
<td>PSY 877</td>
<td>Research Stage 9</td>
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**Eighth Semester - Spring Semester**

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<th>Course Code</th>
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<tbody>
<tr>
<td>PSY 721</td>
<td>Group Psychotherapy</td>
<td>7.5</td>
</tr>
<tr>
<td>PSY 735.B</td>
<td>Seminar of Supervised Clinical Employment II</td>
<td>7.5</td>
</tr>
<tr>
<td>PSY 756.H</td>
<td>Clinical Research Seminar</td>
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<tr>
<td>PSY 878</td>
<td>Research Stage 10</td>
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**Summer Semester**

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<tr>
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<tr>
<td>PSY 879</td>
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**Ninth Semester - Fall Semester**

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<tr>
<td>PSY 736.A</td>
<td>Seminar of Supervised Clinical Employment III</td>
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<tr>
<td>PSY 756.I</td>
<td>Clinical Research Seminar</td>
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<td>PSY 888</td>
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**Tenth Semester - Spring Semester**

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<tr>
<td>PSY 756.J</td>
<td>Clinical Research Seminar</td>
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<td>PSY 889</td>
<td>Writing Stage II - Writing a Doctoral Thesis</td>
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</tr>
<tr>
<td>PSY 373</td>
<td>Final Examination of Clinical Knowledge and Skills</td>
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**Grand Total**

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>ECTS</th>
</tr>
</thead>
</table>

345

305Department of Psychology
Course Descriptions

PSY 705 Diagnostic Intellectual Assessment (7.5 ECTS)
The course examines the administration, scoring, interpretation, and research foundations of the major individual tests of intelligence and other objective assessments of cognitive function and behaviour, including observation. It Emphasises the Wechsler scales and the measurement of child and adolescent intelligence. Each student is required to complete assessments. The course also aims at developing students' report-writing skills.

PSY 714 Psychological Interventions with children and adolescents (7.5 ECTS)
The course will focus on contemporary, empirically validated treatments for children and families, and classroom-based interventions in collaboration with the teacher. Interventions will include psycho-educational approaches, counselling, cognitive-behavioural and other scientifically based methods, with emphasis on their specific application in the school context.

PSY 716 Basic Clinical Skills (7.5 ECTS)
The course focuses on clinical thinking and the clinical methods necessary for assessment and psychotherapy. The course reviews the theory and research that will enable students to develop clinical skills needed for interviewing, managing difficult and sensitive topics, and managing clients' emotional reactions. The course will also help students with self-management and how to define the problem. The course covers the issues and problems involved in clinical practice and presents the process of clinical practice. Specific clinical skills will be taught, discussed and practiced throughout the semester.

PSY 717 Adult Psychopathology (7.5 ECTS)
This course will review the most common disorders of adulthood, with emphasis on diagnosis and the clinical picture; the developmental process; possible etiologies; the role of biological, hereditary, environmental. Scientifically based treatments for these disorders, and the clinical diagnostic classifications and the criteria that separate abnormal from normal behaviour will be discussed.

PSY 720 Advanced Seminar in Psychotherapy with Couples and Families (7.5 ECTS)
The seminar focuses on the particularities of working with families and couples. Students will become familiar with behavioural, cognitive and systemic approaches and techniques to assess and treat these groups. Students will learn to anticipate and deal with the problems that arise from the associations between the different family members, and will be taught the role of the therapist in this system. Relevant clinical skills and related ethical issues will be discussed and practiced through simulations and clinical cases.

PSY 721 Seminar in Group Psychotherapy (7.5 ECTS)
The course introduces students to Group Psychotherapy. Several theoretical approaches to the development of a therapy group will be considered (e.g. behavioural, rational-emotive, person-centred, psychoanalytic). Specifically, students will acquire knowledge pertaining to issues of forming, developing, and leading different groups. Students will acquire the skills necessary for group leadership through experiential exercises and/or group experiences.

PSY 725 Psychological Therapies in Health and Digital Interventions (7.5 ECTS)
Review of the different brief therapy models. Definition of the clinical problem and solution focused interventions for individual mental health problems and couple distress. Development of skills for brief psychotherapy treatment will be achieved by discussions, experiential learning, case studies, and role playing. The course aims to further develop students’ knowledge and skills in basic psychotherapy.

PSY 730 Neuropsychological Assessment (7.5 ECTS)
Course prerequisites: PSY 200, PSY 706.
Clinical neuropsychology focuses on the interaction between brain functioning and human behaviour. The course examines neuropsychological assessment and helps the student differentiate between functional versus organic disorders. In addition, the impact of individual differences related to intelligence, quality of education, and issues pertaining to test sensitivity and specificity will be integrated into the lectures. Neuropathologies such as Alzheimer’s disease, traumatic brain injury, cerebral vascular accidents, neoplastic lesions and neuropsychiatric disorders will be discussed as they pertain to dementia, aphasia, apraxias, agnosias, amnesias, and
PSY 733 Theories and Systems in Psychotherapy (Compulsory) (7.5 ECTS)

The course serves as an introduction to the various theoretical orientations that inform psychotherapy. Psychodynamic, cognitive, behavioural and other models will be discussed. Discussions will focus on how each model conceptualises the etiology of psychopathology, how each model proceeds to diagnosis and the basic methods each model uses in treatment. Students will have access to a wide range of therapy tools that they can utilise in their clinical practice. They will also be able to select the theoretical approach that best suits them and study this approach in greater depth during their clinical internship.

Various clinical topics are covered. Clinical cases will be assigned to students through practicum sites. Professional issues in clinical psychology and students’ professional development will be discussed. Enrollment is required for 4 semesters during practicum training at the community and the University of Cyprus’ premises.

PSY 749 Qualitative Research Methods in Psychology (7.5 ECTS)

The course aims to develop students’ knowledge in the methods used to assess personality and in the use of diagnostic tests and symptom-specific instruments. Emphasis will be placed on the administration and interpretation of widely used tests like the MMPI and NEO-FFI. Students will also acquire experience in the use of structured and semi-structured clinical interviews for purposes of diagnosis and in the use of symptom-specific tests to identify dysfunction in emotional and behavioural processes.

PSY 748 Neuropsychological Rehabilitation (7.5 ECTS)

Course prerequisites: PSY 730, PSY 706.

The course is sequential to the course on neuropsychological assessment (PSY 730). Students will learn how to interpret assessment findings in order to develop a neuropsychological profile and set therapeutic goals for neuropsychological rehabilitation. The course will discuss prominent theories of neuropsychological rehabilitation and evidence-based therapeutic methods and treatment techniques for the rehabilitation of neuropsychological disorders including memory, attention-concentration, perception, organisation and categorisation, language, and psychosocial disorders.

PSY 789 Applied Data Analysis II (7.5 ECTS)

The course is designed to provide an integrated, in-depth approach to data analysis in psychological science research. An emphasis is placed on applied data analysis and accurate conceptualisation, rather than statistical theory. Readings and in-class discussions will focus on theoretical and practical issues involved in the conception, implementation, and evaluation of empirical research in psychology. The course revolves around two themes: research methodology and applied statistics. The following topics are covered: experimentation, quasi-experimentation, participant observation, case studies, surveys, interviews, clinical trial implementation. These methodologies are presented and discussed in parallel with related statistical techniques, so that students will be able to resolve questions related to study design and apply and evaluate different kinds of psychological investigations.

PSY 790 Doctoral Seminar: Dissertation Development and Proposal Development for Research Programmes (7.5 ECTS)

The aim of this course is to help students develop their dissertation and learn how to prepare a research proposal suitable for funding. The course will have a seminar format where students can express and develop ideas related to their theses. They will also define their problems, ask questions, and receive feedback from the instructor and from the rest of the participants in the group.

DOCTORAL PROGRAMME IN PSYCHOLOGY

Doctoral Programme Structure

The Doctoral Programme leads to a Doctor of Philosophy (Ph.D.) Degree. Applications are accepted from students who have already have a Master’s Degree in Psychology or related field. The Doctoral degree consists of a minimum of 240 ECTS, which includes the completion of six academic courses corresponding to 45 ECTS (7.5 ECTS each). Students are required to pass a comprehensive examination during the 5th semester of their studies and then begin with their Doctoral dissertation. The breakdown of the academic and dissertation courses is as follows:

<table>
<thead>
<tr>
<th>I. Academic Coursework</th>
<th>ECTS</th>
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<tbody>
<tr>
<td>Required Courses</td>
<td>22.5</td>
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<tr>
<td>Three from the following courses:</td>
<td></td>
</tr>
<tr>
<td>PSY 790 Doctoral Seminar: Dissertation and Research Programme Development</td>
<td>7.5</td>
</tr>
<tr>
<td>PSY 789 Applied Data Analysis II (Prerequisite: PSY 788 Multivariate Statistics for the Behavioural Sciences)</td>
<td>7.5</td>
</tr>
<tr>
<td>PSY 788 Advanced Research Methods II 7.5 or</td>
<td></td>
</tr>
<tr>
<td>PSY 749 Qualitative Research Methods in Psychology</td>
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</table>

<table>
<thead>
<tr>
<th>Elective Courses</th>
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</thead>
<tbody>
<tr>
<td>Four from the following courses:</td>
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<tr>
<td>PSY 706 Neurophysiology</td>
<td>7.5</td>
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<tr>
<td>PSY 707 Family and Child Development</td>
<td>7.5</td>
</tr>
<tr>
<td>PSY 710 Advanced Seminar in Psychology</td>
<td>7.5</td>
</tr>
<tr>
<td>PSY 711 Psychopharmacology</td>
<td>7.5</td>
</tr>
<tr>
<td>PSY 712 Cognitive Science</td>
<td>7.5</td>
</tr>
<tr>
<td>PSY 713 Experimental Psychology</td>
<td>7.5</td>
</tr>
<tr>
<td>PSY 715 Language Development and Language Disorders</td>
<td>7.5</td>
</tr>
</tbody>
</table>
Number of Entrants and Entry Process

The Department admits about five Doctoral students each year. The positions are announced at least six months before the beginning of each academic year, according to the formal procedures of the Academic Affairs and Student Welfare Service. Applications are examined by the Postgraduate Programme Committee of the Department, which submits a proposal to the Departmental Board. The decisions of the Department are implemented only after approval by the Postgraduate Committee of the University.

Each Doctoral student will be assigned an academic advisor, who is a faculty member in the Department and who will supervise the student during his/her studies and dissertation process. The Department requires that the candidate obtains the consent of a faculty member, who agrees to mentor him/her during the Doctoral studies, prior to the admission interview (which is conducted as part of the admission process).

Entry Criteria
1. Master’s degree from an accredited institution.
2. Student’s academic performance as indicated on university transcripts. Special weight is given to grades in related courses.
3. Minimum of three letters of recommendation (see Departmental Recommendation Form); at least 2 of the letters must be from former professors.
4. Distinctions and special awards.
5. Research participation and scientific publications.
6. Personal interview.

Requirements for the Doctoral Programme
1. Successful completion of 240 ECTS including the 45 ECTS of academic coursework described above.
2. Successful performance on the comprehensive examination according to the internal regulations of the Department and the University.

Study Terms and Conditions
The student must maintain a Grade Point Average G.P.A. of seven out of ten or higher, otherwise he/she will be placed on academic probation. If a student’s grade remains below seven for a second semester, the Departmental Board reviews the case and might decide to dismiss the student.

Doctoral Dissertation (180 ECTS)

The procedures for conducting the Doctoral dissertation can be found at the Department’s website. The student can begin the dissertation after the successful completion of the Comprehensive Examination. The dissertation is supervised by a faculty member of the Department.

### Elective Course

Select 1 of the elective list courses or one from another postgraduate course in the department.

#### II. Comprehensive Examination and Doctoral Dissertation

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>ECTS</th>
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<tbody>
<tr>
<td>PSY 777</td>
<td>Preparation for Final Exam (optional)</td>
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<tr>
<td>PSY 800</td>
<td>Comprehensive Examination</td>
<td>15</td>
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### Courses

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<tbody>
<tr>
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<td>PSY 870</td>
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<tr>
<td>PSY 871</td>
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<tr>
<td>PSY 872</td>
<td>Research Level IIB</td>
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<tr>
<td>PSY 873</td>
<td>Research Level III</td>
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<tr>
<td>PSY 874</td>
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<td>PSY 875</td>
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<td>PSY 876</td>
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<td>Writing Level IV</td>
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<tr>
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<tr>
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<td>PSY 883</td>
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<td>PSY 886</td>
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</table>

### Eight Academic Courses (X 7.5 ECTS)

- Comprehensive Examination: 15 ECTS
- Research Levels: 120 ECTS
- Dissertation Writing Levels: 60 ECTS
- Grand Total: 255 ECTS

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PSY 718  Psychology of Reading  7.5
PSY 719  Topics in Neuroscience  7.5
PSY 722  Social Psychological Dimensions of Migration  7.5
PSY 730  Neuropsychological Assessment  7.5
PSY 731  Cognitive Neuroscience: Understanding the Biology of the Mind  7.5
PSY 741  Intergroup Relationships in Divided Societies  7.5
PSY 746  Social Developmental Psychology of Intercultural Education  7.5
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<td>PSY 874</td>
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<td>PSY 875</td>
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<td>PSY 878</td>
<td>Writing Level IIB</td>
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<tr>
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Course Descriptions

All courses are credited with 7.5 ECTS.

**PSY 706 Neurophysiology (7.5 ECTS)**

Human behaviour results both from natural (biological) as well as exogenous (psycho-social) factors. The basic structure, organisation and function of the human nervous system, as they affect or modify behaviour will be examined. In the course the following topics will be studied: anatomy of the brain, spinal cord, peripheral nerves and muscles; structure and function of neurons; the effect of neurotransmitters, hormones, and other endocrinological factors. The interactions of these biological systems and their effects on behaviour will also be examined. The neuro-physiological basis of specific behaviours such as sleep, reproduction, memory, aggression, communication, as well as mental disorders will be studied in detail. In addition, the current research projects and findings that relate to the above will be reviewed.

**PSY 707 Family and Child Development (7.5 ECTS)**

See course description on previous pages.

**PSY 710 Advanced Seminar in Psychology (7.5 ECTS)**

The course allows an in-depth review and analysis of research and issues on specific advanced topics in the areas of cognitive, developmental, and educational psychology. Students will also be given the opportunity to pursue a research topic in greater depth.

**PSY 711 Psychopharmacology (7.5 ECTS)**

See course description on previous pages.

**PSY 712 Cognitive Science (7.5 ECTS)**

See course description on previous pages.

**PSY 713 Experimental Psychology (7.5 ECTS)**

The course aims to provide students with advanced knowledge and practice in designing, preparing and conducting psychology experiments with the use of computers. It provides the theoretical background on the rationale behind experimental designs as well as in-depth knowledge of experimental designs that are widely used today in psychological research. In addition, students are taught the basic principles of programming and learn how to prepare experiments with the software that is commonly used today to collect empirical data in various psychology areas.

**PSY 715 Language Development and Language Disorders (7.5 ECTS)**

See course description on previous pages.

**PSY 718 Psychology of Reading (7.5 ECTS)**

*Prerequisites for the Master’s programme: Cognitive Science, Learning and Cognition.*

Overview of psychological research, investigating the perceptual and cognitive processes that occur during reading. Emphasis is placed on the mental representations that support reading (general conceptual knowledge, linguistic knowledge and skill) and result from the comprehension of text (referential representation, text model). In addition, topics such as reading ability and its measurement and learning from text, are also examined.

**PSY 719 Topics in Neuroscience (7.5 ECTS)**

See course description on previous pages.

**PSY 722 Social Psychological Dimensions of Migration (7.5 ECTS)**

See course description on previous pages.

**PSY 730 Neuropsychological Assessment (7.5 ECTS)**

See course description on previous pages.

**PSY 731 Cognitive Neuroscience: Understanding the Biology of the Mind (7.5 ECTS)**

See course description on previous pages.

**PSY 741 Intergroup Relationships in Divided Societies (7.5 ECTS)**

See course description on previous pages.

**PSY 746 Social Developmental Psychology of Intercultural Education (7.5 ECTS)**

See course description on previous pages.

**PSY 788 Advanced Research Methods II (7.5 ECTS)**

The aim of the course is to familiarise and learn the main principles of the latent variable models, namely: models of confirmatory analysis of factors, models of structural equations, models from modern measurement theories (Rasch and IRT). During the course, students will learn practices for analysing data using confirmatory analysis techniques and structural equation models via the corresponding software. They will be able to evaluate and critically present published analyses of the above techniques and will acquire skills to analyse and write the related results with models of latent variables.

**PSY 789 Applied Data Analysis II (7.5 ECTS)**

See course description on previous pages.

**PSY 790 Doctoral Seminar Dissertation and Research Programme Development (7.5 ECTS)**

See course description on previous pages.
Marios Avraamides, Professor
Organisation of spatial memory, Spatial updating and orientation, Ego motion perception, Reasoning in Virtual Environments.

Fofi Constantinidou, Professor
Neuroscience of language and cognition, Effects of acquired neurological disorders on cognition, Clinical trials on the effectiveness of rehabilitation programmes in patients with acquired neurocognitive disorders.

Irene - Anna Diakidoy, Professor
Comprehension and learning from text, Knowledge acquisition and conceptual change, Creativity.

Kostas Fantis, Professor
Social and emotional development, Developmental psychopathology, Risk and protective processes, Development of different types of psychopathology (e.g. attention deficit hyperactivity disorder and conduct disorder), Desensitisation to media violence.

Irini Kadianaki, Associate Professor
Social psychological dimensions of immigration (i.e. issues of identity, dealing with stigma, otherness, citizenship). Social representations of migration, sexual orientation, mental health/illness, disability and identity of people belonging to stigmatised groups (people diagnosed with mental illness, disability, LGBT individuals). Qualitative methodology.

Maria Karekla, Associate Professor
Interface between anxiety-related disorders and behavioural medicine; Investigation of individual difference and other factors in the development, maintenance, assessment, and treatment of stress and anxiety-related problems (in clinical and non-clinical populations); Psychophysiology and new innovative methods in the exploration of these factors and problems; Informing current therapeutic procedures (e.g. Cognitive Behaviour Therapy and Acceptance and Commitment Therapy) by subjecting some of the basic assumptions of clinical behaviour analysis to experimental verification with the aim of achieving behaviour change.

Michalis Michaelides, Associate Professor
Psychometrics and testing, Research methods, Assessment conceptions.

Georgia Panayiotou, Professor
Emotion and cognition, Psychophysiology, Self/focused attention, Disruptive behaviour disorders in children.

Timotheos Papadopoulos, Professor
Reading development and acquisition of reading skills, Reading difficulties and subtypes, Cognitive profiles of poor readers, Diagnosis and remediation, Attention and planning deficits.

Charis Psaltis, Professor

Athanasiou Raftopoulos, Professor
Epistemology, Philosophy and history of science, Cognitive science, Philosophy of mind.

Georgios Spanoudis, Professor
Cognitive development, memory and intelligence, Language acquisition and language disorders, Pragmatics and semantics, Psychophysiology.

Panayiotis Stavrinides, Associate Professor
Research focuses on two main areas: First, it investigates psychopathic traits (lack of empathy and moral judgment, narcissistic traits, and extreme impulsivity) that lead to particular forms of childhood aggression. Second, it examines the relationship between various types of parenting and adolescent abnormal adjustment outcomes (substance use & delinquency).

Andria Shimi, Assistant Professor
Her research examines the development of attention and memory at the behavioural, neural, and genetic level in healthy and clinical child populations. More information on her research can be found at the lab’s website.

Alexandros Lordos, Assistant Professor
Interested in investigating how the acquisition of life skills can contribute to mental health, employability and constructive citizenship outcomes, as well as in strengthening resilience against micro-systemic and macro-systemic adversities.

Panos Zanos, Assistant Professor
Identifying biomarkers predicting vulnerability to relapse to drug-taking following protracted abstinence. Understanding the mechanisms of the rapid antidepressant action of the anaesthetic drug ketamine. Discovery/Development of novel, rapid-acting antidepressant medications. Unravelling the effects of ketamine and its metabolites on comorbid substance use and mood disorders. Drug Re-purposing.
Evangelos Paraskevopoulos, Lecturer

Tinnitus - Functional connectivity of cortical areas associated with tinnitus, as recorded by electroencephalographic measurements. Multisensory learning - Effects of multisensory learning on cognitive functions and electrophysiology of the cerebral cortex. Cognitive training and plasticity of brain networks of substances - Reorganisation of functional brain network connectivity due to music training, as recorded by electroencephalographic measurements. Cognitive training and plasticity of athletes’ brain networks through virtual reality - Reorganisation of functional brain network connectivity due to cognitive training through Multi-Object Monitoring in a virtual environment, as recorded by electroencephalographic measurements.

Contact Details

DEPARTMENT SECRETARIAT

Angela Papaioannou
Tel.: +357 22892086
E-mail: papaioannou.angela@ucy.ac.cy
www.ucy.ac.cy/psych/en
Introduction

Our mission is to develop and disseminate significant knowledge about Politics, Sociology and Journalism at the local, national and international levels.

The research interests of the members of the Department are geared towards the needs of Cypriot society, but they also have an international orientation. Emphasis is placed upon interdisciplinary research in the context of wider research projects both in Cyprus and abroad.

M.A. PEACE, CONFLICT AND DEMOCRACY

1.5 academic years (3 semesters, 30 ECTS every semester)

The proposed M.A. in Peace, Conflict & Democracy is a new interdisciplinary programme offered to students who are interested in understanding peace, conflict and democratic transformation globally. The Programme is designed to equip students with the analytical, theoretical and methodological skills required to explore central issues and challenges in the study of peace, conflict and democracy.

The M.A. programme is taught in English and comprises the following:

(A) Taught Courses
(B) Dissertation
(C) Internship Programme

Elective Courses, up to 5 electives  37.5
SPS 621 Nationalism & Ethnic Conflict  7.5
SPS 622 War & Peace: A History of Ideas  7.5
SPS 623 Elections & Democracy after Conflict  7.5
SPS 624 Topographies of Peace & Conflict  7.5
SPS 625 Dynamics of Radicalism & Conflict in Democracy  7.5
SPS 626 Human Rights, Gender & Conflict Transformation  7.5
SPS 627 Reporting Peace & Conflict  7.5
Internship  7.5
SPS 628 Special Topics in Peace, Conflict & Democracy  7.5

Compulsory – Dissertation  30
SPS 632 Master’s Thesis  30

Core/Compulsory Courses  22.5
SPS 619 Fundamentals of Peace & Conflict Transformation  7.5
SPS 615 Fundamentals of Democracy  7.5
SPS 620 Applied Research  7.5

Entry Criteria for the M.A. Programme

Academic Criteria

1. The Programme will consider applicants with an academic background/degree in Social Sciences, Arts or Humanities or any other associated field.

2. Graduates of Greek universities or of the University of Cyprus must hold at least 7.5 or above.

3. International graduates must have the equivalent grade (e.g. UK universities must have an upper second-class honors degree (60+)).

4. Applicants with extensive professional experience (>5 years) in the fields of Peace and Conflict or Democratisation will be admitted if they already hold a postgraduate degree or may be considered if they hold at least 7.0 from an internationally recognised university.
English Language Criteria
Where applicants’ previous studies have not been conducted in English, they are expected to show an adequate level of proficiency in English.
1. An IELTS Academic* score of 6.5 (with at least 5.5 in each section) taken not more than 2 years since the submission of application.

Supporting Documents
1. Motivation Letter
2. Letters of References

Programme Structure

<table>
<thead>
<tr>
<th>Courses Description</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compulsory Courses</td>
<td>22.5</td>
</tr>
<tr>
<td>Elective Courses –</td>
<td>37.5</td>
</tr>
<tr>
<td>Courses of Specialisation</td>
<td></td>
</tr>
<tr>
<td>Postgraduate Assignment</td>
<td>30</td>
</tr>
<tr>
<td>Grand Total</td>
<td>90</td>
</tr>
</tbody>
</table>

Courses Description

**SPS 619 Fundamentals of Peace & Conflict Transformation (7.5 ECTS)**
The course is designed to:
- Introduce students to fundamental theories of violent conflict, conflict resolution, peacebuilding, transitional justice, and democratic transitions.
- Identify key tensions in the study of peace/conflict transformation and transitional justice.
- Help students apply theoretical ideas and concepts in explaining specific cases in world politics.

**SPS 615 Fundamentals of Democracy (7.5 ECTS)**
The course is designed to:
- Introduce students to core theories of democracy and the design of democratic institutions.
- Provide comprehensive analysis of our understanding of the factors that produce democratic transitions, consolidation and backsliding.
- Critically evaluate the contemporary challenges to democracy

**SPS 620 Applied Research (7.5 ECTS)**
The purpose of the course is to introduce students to the fundamentals of empirical research in the social sciences; to provide hands-on experience through the critical assessment of published research in peace, conflict and democracy; and to apply the theoretical and technical tools learnt to an individual research plan.

**SPS 621 Nationalism & Ethnic Conflict (7.5 ECTS)**
The course is designed to introduce students to the key debates on nationalism and key writings on ethnic conflict; to shed light on contradictory expressions of nationalism in modern society and politics; and explore different methodological approaches to the study of nationalism.

**SPS 622 War & Peace: A History of Ideas (7.5 ECTS)**
Students are expected to engage with:
- works in and out of the canon of the history of (western) political thought, especially as regards thought on war and peace,
- various hermeneutical methods in the study of the history of political thought,
- different conceptualisations of the perils of war and the promises of peace from Hellenistic philosophy to Enlightenment political thought.

**SPS 623 Elections & Democracy after Conflict (7.5 ECTS)**
The course is designed to introduce students to the challenges and dilemmas that post-conflict societies face in their effort to create inclusive political institutions. Students will explore a wide array of issues, including post-conflict electoral engineering, the role of the international community in democratic transitions and the systematic comparative analysis of a number of countries in transition.

**SPS 624 Topographies of Peace & Conflict (7.5 ECTS)**
The course is designed to map and analyse the politics surrounding war and disaster zones, peace and ecological parks, military bases, buffer zones, de facto states, divided cities, indigenous homelands, cultural heritage, biocolonialism and common resources.

**SPS 625 Dynamics of Radicalism & Conflict in Democracy (7.5 ECTS)**
The course covers a wide variety of radicalisation processes in democratic settings. It aims to familiarise students with these processes and to offer the theoretical and analytical tools to better appreciate the dynamics of radicalisation and to critically appraise the methods used to study them.

**SPS 626 Human Rights, Gender & Conflict Transformation (7.5 ECTS)**
The course purpose and objectives are to critically investigate, research and study:
- The relevant human rights framework.
- The intersectionality between human rights, gender and conflict transformation.
- Peace and conflict as gendered phenomena, theoretical and empirical perspectives relating to the role of women, men, femininities and masculinities, gender identities in the context of conflicts, intersecting vulnerabilities, conflict transformation and peacebuilding and post-conflict democratisation, as well as to the manner in which gender, gendered structures processes and attitudes influence the outcome of conflict and the prospects of peacebuilding processes and post-conflict sustainability.
- Women, Peace and Security Agenda: critiques, trends and perspectives.
- Conflict related sexual violence (CRSV) and children born of war (CBOW).
- Feminist and critical gender perspectives to conflict analysis, and pathways to conflict transformation, sustainable peace and post-conflict democratisation.

**SPS 627 Reporting Peace & Conflict (7.5 ECTS)**
The course will shed light on the role of media and professional journalism in conflict/peace-building processes; ethical dimensions of confrontational and peace journalism;
and the impact of digital/social media reporting in deeply divided societies.

**Internship (7.5 ECTS)**

The course is designed to:
- Develop students’ employability skills.
- Offer a short placement at a research and/or policy organisation.
- Develop practical written communication skills in order to work in a political field including policy-writing, writing political editorial or political advocacy.

**SPS 628 Special Topics in Peace, Conflict & Democracy (7.5 ECTS)**

The course introduces students to a range of special topics related to peace and conflict. Students also become familiar with different disciplinary approaches related to peace and conflict transformation.

**SPS 632 Master’s Thesis (30 ECTS)**

Submission of a final year dissertation is a mandatory part of the proposed postgraduate programme. Students will be offered the opportunity to submit either a 15,000-word thesis in a written format or produce a visual dissertation in the form of a short documentary with a supplementary 5,000-word research paper (depending on the availability of supervisors with relevant experience on the subject).

**MASTER IN POLITICAL SCIENCE WITH SPECIALISATION IN INTERNATIONAL RELATIONS OR EUROPEAN POLITICS**

The M.A. programme comprises the following:

(A) Taught Courses
(B) Dissertation
(C) Internship Programme (optional)

(A) Taught Courses (60 ECTS)

Each candidate is required to complete eight courses. Three of them are compulsory for both directions, three are compulsory as specialisation courses, while the remaining two are chosen from the other direction of specialisation in the M.A. programme or from Special Issues). Each taught course is credited with 7.5 ECTS.

1. **Core Courses**
   - SPS 540 International Political Theory
   - SPS 541 Regional and International Governance
   - SPS 500 Research Methods

2. **Specialization Courses**
   2.1 Compulsory courses for the International Relations direction and optional for the European Politics direction
   - SPS 640 International Political Economy
   - SPS 641 Diplomacy
   - SPS 642 International Law

   2.2 Compulsory courses for the European Politics direction and optional for the International Relations direction
   - SPS 643 Contemporary European Politics
   - SPS 644 European Political Economy
   - SPS 645 European Union as International Actor

3. **Additional Courses**
   (Choice of two optional courses, either from the other specialisation direction in 2.1 or 2.2 above and/or from the courses below periodically taught by Visiting Academics)
   - SPS 513 Special Issues in International Relations
   - SPS 515 Special Issues in European Politics

(B) Dissertation (30 ECTS)

In their third semester, students attend two courses and begin writing their dissertation. The dissertation must be around 15,000 words, including bibliography. The fourth semester is devoted to writing the dissertation.

(C) Internship Programme (10 ECTS)

Students have the option of joining a workplace, organisation, NGO or other institution in Cyprus related to political science for a period of two months. At the
end of the internship, students will be evaluated by the host organisation and by the Internship Coordinator on the basis of a Short Activity Report.

**Total: 90 ECTS, 100 ECTS (with Internship)**

### Indicative Programme of Studies per Semester

<table>
<thead>
<tr>
<th>Semester</th>
<th>Courses</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Courses</td>
<td></td>
<td>22.5</td>
</tr>
<tr>
<td>SPS 540</td>
<td>International Political Theory</td>
<td>7.5</td>
</tr>
<tr>
<td>SPS 640</td>
<td>International Political Economy</td>
<td>7.5</td>
</tr>
<tr>
<td>SPS 642</td>
<td>International Law</td>
<td>7.5</td>
</tr>
<tr>
<td>SPS 643</td>
<td>Contemporary European Politics</td>
<td>7.5</td>
</tr>
<tr>
<td>(or any other Optional Course for the specialisation in European Politics)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Second Semester</strong></td>
<td></td>
<td>22.5</td>
</tr>
<tr>
<td>3 Courses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPS 541</td>
<td>Regional and International Government</td>
<td>7.5</td>
</tr>
<tr>
<td>SPS 641</td>
<td>Diplomacy</td>
<td>7.5</td>
</tr>
<tr>
<td>SPS 644</td>
<td>European Political Economy</td>
<td>7.5</td>
</tr>
<tr>
<td>SPS 645</td>
<td>European Union as International Actor</td>
<td>7.5</td>
</tr>
<tr>
<td>(or any other Optional Course for specialisation in International Relations)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Summer Semester: Optional Internship Programme (10 ECTS)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Third Semester</strong></td>
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<td>15</td>
</tr>
<tr>
<td>2 Courses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPS 500</td>
<td>Research Methods</td>
<td></td>
</tr>
<tr>
<td>Optional Course</td>
<td></td>
<td></td>
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<tr>
<td><strong>Fourth Semester</strong></td>
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<td>30</td>
</tr>
<tr>
<td>Dissertation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Submission of Application

Applications must include the following:

1. A photocopy of a university undergraduate degree. In lieu of a university degree, the following are also acceptable: a degree or a qualification that has been approved by KY.S.A.T.S. (Cyprus Council for the Recognition of Higher Education Qualifications) as being equivalent to a university degree and evidence of imminent university graduation by the end of the week before enrolment begins.

2. A detailed transcript of undergraduate degree results.

3. A brief Curriculum Vitae.

4. A certificate attesting to English language proficiency, as well as certification of Greek language proficiency for graduates of non-Greek universities.

5. Two reference letters (at least one from an academic).

6. A brief statement (up to two pages in length) describing the applicant’s research goals and interests.

### Entry Criteria for the M.A. Programme

1. Candidates for the M.A. Programme must be graduates of an accredited university department, holding a degree in Political Science or a relevant field.

2. Graduates of Greek universities or the University of Cyprus must have a grade of 7.0 or higher. The equivalent grade is required from candidates-graduates of other universities.

3. The Programme is taught in Greek. However, the dissertation and other academic essays may be written in English or another language upon the supervisor’s and the M.A. coordinator’s approval.

4. A good knowledge of the English language is required. The knowledge of an additional foreign language will be considered as an extra qualification.

5. The Departmental Council upon recommendations from the Postgraduate Studies Committee, makes the final decisions on candidates’ admission to the Programme. The Committee will decide whether a candidate must undergo an interview or/and a written examination, even if all entry requirements are satisfied.

6. Each year a total of 20 candidates will be admitted to the Programme (10 in each specialisation).

### Study Rules

These are regulated according to the University Postgraduate Study Rules.

### Requirements for the M.A. Degree

An academic advisor is assigned to each new entrant to the M.A. course. A total of four semesters of study is required, during which time the student must successfully complete 100 ECTS, allocated as follows:

<table>
<thead>
<tr>
<th>ECTS</th>
<th>Courses</th>
<th>60</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dissertation</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Internship Programme (optional)</td>
<td>10</td>
</tr>
</tbody>
</table>

Students will be awarded an M.A. in Political Science (International Relations) or M.A. in Political Science (European Politics).
Course Descriptions

SPS 500 Research Methods (7.5 ECTS)
The course will help students understand how to develop research projects using scientific methods and approaches. The module will include: ways of choosing research questions, the importance of reviewing bibliography, developing theoretical research frameworks, categories of variables, research questions, research hypotheses, formulation of questionnaires and other methods of measuring, the validity and credibility of methods of measuring, internal validity, research ethics, sampling techniques, methods of data collection, data analysis and interpretation of results using the statistics package SPSS, various kinds of research, authoring a scientific research paper.

SPS 513 Special Issues in International Relations (7.5 ECTS)
The course examines important issues of international relations, of concern to both the scholarly and the 'international' community. Such issues include international security, NGO activism, as well as global communication, environmental and intercultural relations.

SPS 515 Special Issues in European Politics (7.5 ECTS)
The course examines important issues of European politics, of concern to the scholarly community as well as the 'European' community. Such issues include the legitimacy crisis of European democracy and the challenges facing Europe in the 21st century.

SPS 540 International Political Theory (7.5 ECTS)
The course examines international political theory as it has emerged and developed from classical and modern political theory. It makes a historical and philosophical investigation into key concepts and their use in international politics, their acceptance, interpretive debate, their proper, improper, or rhetorical use by the various political actors on the world stage. Specifically, the course examines concepts such as sovereignty, governance, power, violence, peace, security, civilisation, development, order, community, self-determination, legitimation, friendship, enmity, coexistence, solidarity, justice, integration, etc.

SPS 541 Regional and International Governance (7.5 ECTS)
The establishment of international and regional organisations and institutions is one of the most notable trends of the post-war era. Indeed, there are more than 5,000 international organisations in the world today. The course examines theories and practices of governance at the regional and international level, looking at the factors affecting the establishment of international organisations, their evolution and future, as well as various trends in international governance. The course also analyses the problems and pathologies of international organisations and their formal institutional structures and investigates the general and specific nature of organisations of regional and international magnitude. The course offers insight into the functioning of international organisations such as the United Nations, World Bank, WTO, IMF and regional institutions like the EU, the African Union, ASEAN, Mercosur. Additionally, this module examines such themes as bureaucracy, democracy, interventionism, and resistance movements.

SPS 640 International Political Economy (7.5 ECTS)
The course examines international relations regarding economic transactions among nations, including discussion of the basic poles of international economy and the pattern of uneven economic development among states. Emphasis is given on modern trends of economic interpenetration, interdependence, and the dominance of national economies as well as of leading international institutions (such as the World Trade Organisation and the IMF), which have decisive repercussions on the institutional framework or/and on the crisis management of the 'globalised' economy.

SPS 641 Diplomacy (7.5 ECTS)
The course examines diplomatic theory and practice from the perspective of interstate relations and beyond. Specifically, it surveys the development of diplomatic thought, the different theoretical approaches to diplomacy, the traditional and emerging actors, and the new structures and processes of diplomatic practice. It looks at the scope and extent of diplomatic relations, diplomatic law, the types of diplomatic mission, diplomatic communication, public diplomacy, mediation and negotiation. It discusses cases studies like coercive diplomacy, crisis management, and celebrity diplomacy.

SPS 642 International Law (7.5 ECTS)
The course examines the basic concepts and principles of international law, as well as its law-making and enforcement mechanisms. It provides an overview of the traditional and contemporary theoretical approaches to international law and examines its sources (treaties, customs, etc.) and subjects (states, international organisations, etc.). It highlights issues of statehood and recognition and the role of non-state actors. The course also examines the fundamental rules of international law, such as the prohibition on the use of force in international relations, the principle and means of peaceful settlement of disputes, as well as fields, such as the law of the sea.

SPS 643 Contemporary European Politics (7.5 ECTS)
Europe is comprised of states with very different political systems, social structures and cultural characteristics. The course examines the political systems of various European states and attempts to highlight particular issues arising from their heterogeneity as well as from the need to formulate and apply different or/and common policies. It looks closely at the most important differences among states, common policies and examines how their particularities have contributed to the development of European institutions. On the other hand, through the analysis of specific policies, the module examines how the EU affects the evolution of institutions and practices in other member states.

SPS 644 European Political Economy (7.5 ECTS)
European integration is a complex, dynamic process comprising two main and interdependent components-economic and political. During the past decades, these components have developed at different rates, leading to imbalances, problems, and deep and unresolved issues regarding the institutional framework of the EU. The course will focus on the issue of the sustainability of the EU as an institution-characterised as it is by uneven levels of economic development, and rapidly changing geography.

SPS 645 The EU as International Actor (7.5 ECTS)
The course examines and analyses the role of the EU in the world, through the historical evolution of its foreign relations and policies: Common Foreign Policy and Security Policy, Trade Policy, Development Policy, Neighbourhood Policy, issues of...
EU constitutes a significant, unconventional actor on the diplomacy in resolving international conflicts, etc. Today, the EU constitutes a significant, unconventional actor on the international stage, with more authority than conventional international institutions, and less authority than that of states. How does the EU participate in international institutions? How is its role and policy affected by the intrinsically different approaches or foreign policies of its member states? These questions are open to multiple answers. Using the wide-ranging theoretical discourse developed around these issues, the course offers a rich framework for discussing the phenomena shaping the network of foreign relations and policies of the EU.

EUROPEAN MASTER IN HUMAN RIGHTS AND DEMOCRATISATION

The Department of Social and Political Sciences participates in the Consortium of universities offering the European Master in Human Rights and Democratisation. The Consortium consists of 41 universities from the 28 European Union member states and constitutes an example of European inter-university co-operation. The academic year of the European Master in Human Rights and Democratisation is divided into two semesters:

• The first semester (September to January) in Venice/Lido.
• The second (February to July) at an E.MA. participating university, situated in the member states of the European Union. This second part of the Programme is conceived as a European exchange, and students are expected to undertake their second semester research in a country other than their own.

Admission

Applications are to be sent to the Secretariat of the European Inter-University Centre for Human Rights and Democratisation in Venice, Italy.

EIUC SECRETARIAT

European Master Degree in Human Rights and Democratisation (E.MA.)

Monastery of San Nicolò
26 Riviera San Nicolò
I-30126 Venice - Lido, Italy
Tel.: +39 041 2720911
E-mail: info@gchumanrights.org

For more information:
www.emahumanrights.org
https://gchumanrights.org

Participating Universities

The European Master in Human Rights and Democratisation is organised through the joint efforts of the following participating universities: Abo Akademi University (Finland), Adam Mickiewicz University in cooperation with the Poznan Human Rights Centre (Poland), Aristotle University of Thessaloniki (Greece), Masaryk University of Brno (Czech Republic), Ca’ Foscari University of Venice (Italy), Catholic University Leuven (Belgium), University of Coimbra (Portugal), Comenius University of Bratislava (Slovak Republic), University of Copenhagen (Denmark), University of Cyprus (Cyprus), University of Deusto, Bilbao (Spain), National University of Ireland, Dublin - University College Dublin (Ireland), University of Hamburg (Germany), University of Helsinki (Finland), National University of Ireland, Galway (Ireland), University of Graz (Austria), Eotvos Lorand University of Budapest (Hungary), University of Latvia (Latvia), Université Libre de Bruxelles (Belgium), New University of Lisbon (Portugal), University of Ljubljana (Slovenia), Lund University (Sweden), Université du Luxembourg (Luxembourg), Maastricht University (Netherlands), University of Malta (Malta), Université de Montpellier (France), University of Nottingham (United Kingdom), University of Padua (Italy), Panteion University, Athens (Greece), Queen’s University of Belfast (United Kingdom), Université Robert Schuman, Strasbourg (France), Ruhr-University Bochum (Germany), University of Seville (Spain), University of Southern Denmark in co-operation with the Danish Institute for Human Rights (Denmark), University of Tartu (Estonia), Uppsala University (Sweden), Utrecht University (The Netherlands), University of Vienna (Austria), Vilnius University (Lithuania), University of Bucharest (Romania) and Sofia University St Kliment Ohridski (Bulgaria).

Ph.D. Programmes

The Department of Social and Political Sciences offers two Ph.D. programmes:

• Ph.D. Programme in Sociology
• Ph.D. Programme in Political Science

Admission Requirements and Study Rules

For information on the admission requirements for Ph.D. programmes, please refer to the Admission and Attendance Regulations – Application Requirements or consult the Graduate School, or the Department’s Secretariat.

In addition to the general requirements, good knowledge of English is a prerequisite. Knowledge of a second European language will be considered an additional qualification. The annual number of entrants to the Ph.D. programme is six.

It is also noted that according to the Admission and Attendance Regulations “within the framework of student exchange, a Ph.D. student may spend up to one calendar year of study at a university abroad.”
Requirements and Structure
For information on the requirements, the structure of the Ph.D. programmes, application requirements and registration, please refer to the Admission and Attendance Regulations – Application Requirements or consult the Graduate School, or the Department Secretariat. In brief, the requirements and the structure of the Ph.D. programmes are as follows:

1. **Research Supervisor**
   A research supervisor, appointed by the Departmental Council, is required to guide the student towards the Ph.D. dissertation.

2. **Course Attendance**
   The academic staff may advise any Ph.D. candidate to follow courses from the M.A. Programme if it’s considered to be necessary for the Ph.D. candidate’s research and/or will help him/her to develop the research topic.

3. **Approval of Ph.D. Proposal**
   During the third semester of postgraduate study, Ph.D. candidates conduct preliminary research, which will lead to a detailed Ph.D. proposal.

4. **Comprehensive Examination**
   Each candidate is required to successfully complete a comprehensive written examination, no later than the seventh semester. The department organises these examinations at least once a year.

5. **Ph.D. Thesis**
   Students must complete an original doctoral thesis. The thesis must be an important contribution to the subject. The Ph.D. thesis may be written in a language other than Greek upon the research supervisor’s approval.

6. **Defence of Ph.D. Thesis**
   The thesis is defended before a five-member examining board.

7. **Duration of Study**
   A Ph.D. degree may be completed in a minimum period of six (6) semesters and a maximum of sixteen (16) semesters starting from the date of admission.

8. **Successful Completion of 240 ECTS**
   The credits break down as follows:

<table>
<thead>
<tr>
<th></th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Courses</td>
<td>60</td>
</tr>
<tr>
<td>Research (4 semesters x 30 ECTS)</td>
<td>120</td>
</tr>
<tr>
<td>Writing of Postgraduate Thesis (2 semesters x 30 ECTS)</td>
<td>60</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>240</strong></td>
</tr>
</tbody>
</table>

Submission of Application - Registration
In addition to the general requirements, applicants must also consider the following:

1. Candidates, who have not yet completed their M.A. Programme but are enrolled and are studying for the degree, may be accepted provided they complete their studies by the 31st of July of the year that they will be enrolling for the Ph.D. course, following the approval of the Postgraduate Committee.

2. Evidence (e.g. certificate) of good knowledge of the English language.

3. A statement describing the candidate’s scholarly and research interests.
Kalliope Agapiou-Josephides, Assistant Professor
Holder of Jean Monnet Chair in European Political Integration
European political integration with an emphasis on institutional aspects, Common foreign and security policy, Euro-Mediterranean partnership. European Union and Cyprus with an emphasis on accession and harmonisation process. Women and politics.

Philemon Bantimaroudis, Associate Professor
Agenda setting theory, Framing theory, Gatekeeping, Group-mediated delusions.

Andria Christofidou, Lecturer
Gender & sexuality, Masculinities, The body, Art as a space of social resistance Reflexivity & resistance.

Costas Constantinides, Lecturer
Audiovisual Media.

Costas M. Constantinou, Professor

Kyriakos Demetriou, Professor
Ancient political thought with emphasis on the Sophists, Plato and classical constitutions. Issues in modern political thought, especially British Empiricism, Liberalism (seventeenth century) and philosophical radicalism/ utilitarianism (nineteenth century). The reception of classical antiquity in modern European historiography. Contemporary research interests include theories of democracy and the interpretation of Platonic political philosophy.

Daniela Donno, Associate Professor
International organisation and norms, Electoral integrity, Women’s rights, Authoritarian regimes.

Antonis Ellinas, Professor
Comparative politics: Political parties, bureaucracies, media, political trust.

Adam Gemar, Lecturer
Inequalities, Social class, Culture, Sport, Religion, Education.

Nayia Kamenou, Lecturer
Main research interests in Gender Studies, LGBTI Studies and Queer Studies with an emphasis on: The interrelations between nationhood, ethnic identities, gender and sexuality; the impact of Europeanisation on LGBTIQ identities, rights and political mobilisation; the role of women and gender in the formation of political agency and political identities; and the role of women and gender in peace-building processes.

Iosif Kovras, Associate Professor
Transitional justice, Human rights, Conflict analysis and resolutions.

Jason Lambrianou, Associate Professor
Quantitative methods and measurement in social sciences, Sociology of education, Political trust and participation.

Antis Loizides, Assistant Professor
Political theory, History of political thought, British utilitarianism.

Theodora Maniou, Assistant Professor
Journalism, Media studies, Broadcasting, Multimedia.

Michalis Moutselos, Lecturer
Comparative politics, Social movements, Immigration, Europeanisation processes.

Yiannis Papadakis, Professor
Nationalism, Ethnicity, Ethnic Conflict, Borders, Social Memory, History Education, Cypriot Cinemas, Migration, Social Democracy, Cemeteries in a comparative Perspective

Venetia Papa, Assistant Professor
New media, Data journalism, Online activism, Internet and media.

Victor Roudometof, Associate Professor
Globalisation and international studies, American and European studies, Sociology of religion, World-historical and comparative-historical sociology and world history, Cultural studies, Political sociology, especially nationalism and ethnicity in the Balkans and the Ottoman Empire, Race, ethnicity, transnationalism and international migration.

Sophia Stavrou, Assistant Professor
Sociology of education with an emphasis on social inequalities in education and in the sociology of curriculum, European social policy, especially relations between higher education and employment, New governance in social policy, internationalisation and the social impact of quality assessment and quality assurance mechanisms, The evolution of academic disciplines and knowledge, in particular in humanities and social sciences, Youth migration and youth employment, Qualitative research methods, especially discourse analysis in the social sciences.

Stavros Tombazos, Professor
Political economy with emphasis on issues and aspects related to globalisation, European political and economic integration, systems of international hegemony and dependence, sustainable development, and the relation between economic dynamics and ecological problems. Political philosophy with focus on the German political theories of the 19th and 20th centuries. Other research interests in the areas of theories of the state and of social classes, civil society and social movements.
Dimitris Trimithiotis, Lecturer
New production, Media discourse, Political communication, Digital journalism, Peace journalism, Research methods.

Eren Duzgun, Assistant Professor
International Relations Theory, Historical Sociology, Political Economy

Contact Details
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E-mail: sofroniou.stavroula@ucy.ac.cy

www.ucy.ac.cy/sap/en
Appendices

- **Academic Calendar**
  The academic calendar is available on the University’s website at www.ucy.ac.cy/calendar-en

- **Telephone and E-mail Directory**
Telephone and E-mail Directory

Call Centre 22894000

UCY Administration
University Council Chairperson’s Office 22894350/4011
Rector’s Office 22894008/19 rector@ucy.ac.cy
Vice-Rector’s Office (Academic Affairs) 22894003 vrecta@ucy.ac.cy
Vice-Rector’s Office (International Affairs, Finance and Administration) 22894005 vrectof@ucy.ac.cy
Director of Administration and Finance 22894013 director@ucy.ac.cy

Faculties/Departments

HUMANITIES
English Studies 22893427  english@ucy.ac.cy
French and European Studies 22894389/french@ucy.ac.cy
Turkish and Middle Eastern Studies 22893950 tus@ucy.ac.cy
PURE AND APPLIED SCIENCES
Chemistry 22892270 chem@ucy.ac.cy
Biological Sciences 22892894 biol@ucy.ac.cy
Mathematics and Statistics 22892600 commas@ucy.ac.cy
Computer Science 22892700 cs@ucy.ac.cy
Physics 22892820/6 physics@ucy.ac.cy
Chemistry 22892270/2800 chem@ucy.ac.cy
MEDICAL SCHOOL
Medical School 22894352 med@ucy.ac.cy
SOCIAL SCIENCES AND EDUCATION
Social Sciences and Education 22894342 sociology@ucy.ac.cy
Education 22892940/1/2 educ@ucy.ac.cy
Law 22892920 law@ucy.ac.cy
Psychology 22892070/66
GRADUATE SCHOOL 22894044 fgse@ucy.ac.cy
ECONOMICS AND MANAGEMENT
Economics and Management 22894337 fem@ucy.ac.cy
Public and Business Administration 2893650/3740 cbpa@ucy.ac.cy
Accounting and Finance 22893605/41 afmi@ucy.ac.cy
Economics 22893701/2 dept.econ@ucy.ac.cy
ENGINEERING
Engineering 22894396 fe@ucy.ac.cy
Architecture 22892960/80 arch@ucy.ac.cy
Electrical and Computer Engineering 22892240/51/71 ece@ucy.ac.cy
Mechanical and Manufacturing Engineering 22892248/50/80 mme@ucy.ac.cy
Civil and Environmental Engineering 22892200/49 cee@ucy.ac.cy
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Byzantine and Modern Greek Studies 22893870/4302 bmg@ucy.ac.cy
History and Archaeology 22892180  his@ucy.ac.cy
Classics and Philosophy 22893850 classics@ucy.ac.cy

Research Units/Centres/Institutes

Archaeological Research Unit 22893560 arch@ucy.ac.cy
FOSS Research Centre for Sustainable Energy 22894396/21 foss@ucy.ac.cy
Centre for Medieval Arts and Rituals (CeMAR) 22893881 cerem@ucy.ac.cy
Centre for Applied Neuroscience 22895190 can@ucy.ac.cy
Research Centre “EMPHASIS” 22893812 info.emphasis@ucy.ac.cy
The Petrondas Institutes of Modern Greek Studies 22893825 petrondas@ucy.ac.cy
Asa Cervantes Nicosia 22895136/7 asa.nicosia@cervantes.es
Confucius Institute 22894461/4724 confuc@ucy.ac.cy
Research Centre for Intelligent Systems and Networks “ROI2Z” 22893450/1 kios@ucy.ac.cy
Language Centre 22892901 lcentre@ucy.ac.cy
Centre for Teaching and Learning 22894546 kedima@ucy.ac.cy
Centre of Excellence and Biomedical Research, biobank@ucy.ac.cy
Economics Research Centre 22893660 econ@ucy.ac.cy
Research Centre for Gender Studies 22892959
Cyprus Neuroscience Research Unit (CNRU) 22894352 neurology@ucy.ac.cy
International Water Research Centre “NIREAS” 22893527 nireas@ucy.ac.cy
Centre for Field Studies (UCFS) 22895257/2077 pakepe@ucy.ac.cy
School of Modern Greek 22892928/5289 smgreek@ucy.ac.cy
Oceanography Centre 22893989

Administrative Services

University Development Service 22894348 uds@ucy.ac.cy
Human Resources Service 22894177 hr@ucy.ac.cy
International Relations Service 22894288 irs@ucy.ac.cy
Internal Audit Service 22894380 diraudit@ucy.ac.cy
The Information Centre-Library “Stelios Ioannou” 22892020/2137 lib@ucy.ac.cy
Financial Services 22894119 fs@ucy.ac.cy
Information Infrastructure Service 22895100 its@ucy.ac.cy
Information Systems Service 22892330 ias@ucy.ac.cy
Academic Affairs and Student Affairs 22894021 aasw@ucy.ac.cy
Selfare Service 22894018 self@ucy.ac.cy
Technical Services 22894200 ts@ucy.ac.cy
Research and Innovation Support Service 22894286/4313
Other Organised Entities

European Office Cyprus 22894278
Centre for Life Long Learning, Assessment and Development (KEPEAA) 22894151
Centre for Entrepreneurship (C4E) 22895110
Career Centre 22894057/8
Registry.cy 22892127
“Lito Papachristophorou” Preschool and the University of Cyprus Nursery School 22894136/4150
Cyprus University Press 22894314
Cultural Centre “Michalis Piers” 22894531
Radio Station (UCY Voice) 22895140
Student Welfare Fund 22894052
Student Union (FEPAN) 22894026

Other Services

Sports Centre 22894182
Personal Emoluments and Pensions Section 22894156/60
University Development and Alumni Relations Office 22894356
Diversity, Equality and Inclusivity Office 22894451/4363
Official Events Planning Office 22894347
Express Services Office 22895555
Communication and Public Relations Office 22894304/5
Health Centre (Kallipoleos) 22895280
Health Centre (UCY Campus) 22895270
Mental Health Centre 22892136
Legal Counsellor of the University of Cyprus 22894358
Access to Information 22894361/42
Data Protection Office 22894361/42
Security (Central Campus) 22892011
Security (New Campus) 22894055

Shops/Restaurants/Coffee Shops

Parga Book Centre/UCY Copy Centre 22022876
Hellenic Bank (CC)* 22501713
Operations Directorate Office 22894174
Restaurant (ground floor SFC 01) 22895135
Restaurant (Kallipoleos) 22892012
Coffee Shop at the Learning Resource Centre “Stelios Ioannou” 22893765
Coffee Shop at the Sport Centre 22894054
Coffee Shop at Shacolas Educational Centre for Clinical Medicine 22893764
Hairdressing Salon by ZAC Hair Designers (CC)* 22895133
Canteen (University House A.G. Leventis) 22894425
Coffee Shop (CTF 01) 22893763
Coffee Shop (CTF 02) 22893762
Mini Market (CC)* 22895139
Bank of Cyprus (CC)* 22129832

* CC = Commercial Centre