



University
of Cyprus



Postgraduate Prospectus 2025-2027



Postgraduate Prospectus 2025-2027
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Rector's Message

Dear all,

Postgraduate studies at the University of Cyprus complement the basic undergraduate studies, providing 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, committed to the principles, ideas, and values it has been pursuing since its founding in 1989, has been established as an organisation with a wide range of programmes of study, internationally recognised academic staff, modern buildings, and top distinctions at the international level, experiencing steady growth in teaching and research. Scientific entities for the production of new applications and the development and expansion of knowledge, such as, 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, through the upgraded, ergonomic, modern, and expanding building facilities of its 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 and innovation. The students of the University of Cyprus are dynamically integrated into the job market and are trained to be individually responsible as members of society.

In addition, I would like to note that the vast majority of graduates of the University of Cyprus, whose social recognition is apparent within Cyprus and abroad, succeed in being absorbed as active working professionals in the local job market, while our higher education institution itself very often offers employment to alumni in research programmes or administrative positions. We consider our university as the university of the future. We train you to ensure you are always equipped with appropriate knowledge and educational experiences in an ever-changing job market. We measure our success by 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 constantly changing and volatile international 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 and doctoral programmes, with 47 programmes offered in English. Ranked among the top universities worldwide, according to all renowned world university rankings (QS 2025 top 389, TIMES best 401-500-2025, Shanghai 2024 top 701-800), the University of Cyprus continues along with its multifaceted community (students, academics, researchers, administrative staff) a unique journey of excellence, aiming to actively contribute to an impactful and positive change for the local community 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, 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 realise your dreams.

Yours sincerely,

A handwritten signature in black ink, which appears to read 'Tasos Christofides'.

Professor Tasos Christofides
Rector

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General Information



General Information

www.ucy.ac.cy

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 comprised of 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 science and knowledge 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 should 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 society. At the same time, the University sets high standards through the research programmes of its departments, aiming at the foundation and development of all branches of science 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, corresponding to the already existing specialisations of the academic departments, the research centres, and the research units. Some of these projects are funded by European framework programmes (such as HORIZON 2020, HORIZON EUROPE, including 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 honoured with international awards in various fields and is ranked, after international evaluations, in honorary 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 the 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 conducting 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 great 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 the 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 for Medieval Arts and Rituals (CeMAR)
- Economics Research Centre
- Research Centre "EMPHASIS"
- International Water Research Institute "NIREAS"
- Oceanography Centre
- FOSS Research Centre for Sustainable Energy
- Centre for Field Studies (UCFS)
- PHAETHON Research and Innovation Centre of Excellence for Intelligent, Efficient and Sustainable Energy Solutions
- Centre of Excellence in Biobanking and Biomedical Research, biobank.cy
- KIOS Research and Innovation Centre of Excellence

The Academic Staff

The academic staff comprises Cypriots, Greeks, and international scholars who have been distinguished in renowned universities of Europe, the USA, and other parts of the world.

Governing Bodies

The University is a public corporate body. It is governed by the Council and the Senate. The Council takes decisions on strategic matters and is responsible for the management of the administrative and financial affairs of the University, while the Senate is the supreme academic body of the University. The Faculties and Departments are administered by Boards; 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 and Innovation Support Service
- Technical Services

The Administrative Services constitutes the executive body that provides the infrastructure and support required for the implementation of the decisions and policies of the University Council and the Senate.

The Director of Administration and Finance is a non-voting member of the University Council and the Senate and undertakes the implementation of their decisions.

UNIVERSITY BUILDINGS - MAPS

The building premises of the University of Cyprus are mainly located at the new University Campus in Athalassa and the old Central Campus (Academia). Currently, the University owns or rents other buildings throughout Nicosia to cover its housing needs until the full development of the Athalassa Campus. Upon its completion, based on current data, the University Campus will accommodate 10.000 students in total. On the following website, www.ucy.ac.cy/maps/en, maps of the University Buildings are listed. 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: the Infrastructure of the University Campus Phase A, the Services Buildings, the Campus Management Office, the Student Residences Phase A, the Faculty of Pure and Applied Sciences, the Common Teaching Facilities 01, the University House "Anastasios G. Leventis" which houses the Management and most of the Administrative Services of the University, the Sports Centre and sports fields, the Faculty of Economics and Management, the Common Teaching Facilities 02, the Social Facilities Centre, the Learning Resource Centre-Library "Stelios Ioannou", and the Cancer Research Institute.

The premises of the Faculty of Engineering, the Medical School, the Department of Biological Sciences, and the Common Teaching Facilities 03 are currently under construction. Under construction is also the project of 5MW Photovoltaic Park "Apollon", with an energy storage system.

CAMPUS SERVICES

Bank branches, shops, a bookstore, a courier service, a medical lab, restaurants, canteens, and cafeterias operate within the UCY premises, which serve the University community and visitors.

LIBRARY

The mission of the Library is to support the University community through the provision of high-quality scientific information, thus contributing to the achievement of the strategic objectives of the University regarding research, teaching, knowledge dissemination, and social contribution.

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, workstations, 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 room is located on the ground floor and is open seven days a week, all year round. Only the print collections of the Archaeological Research Unit and selected textbooks of the Medical School are not housed in the Library.

Information Sources

The Library has information sources in print and other physical form (e.g. audiovisual material), as well as in electronic form. Access to online resources is provided through paid subscriptions, either through the participation of the Library in the Cypriot Libraries Consortium or through individual purchases. All Library material is available through its catalogues that are accessible from its website (<http://library.ucy.ac.cy>). More specifically, the Library collection includes:

Books

There are approximately 400.000 print books, organised according to the Library of Congress Classification system, all searchable through the online Library catalogue <https://cypruslibraries.ac.cy/search~S2> . or the Library website.

Electronic Books

There are approximately 765.000 electronic books, accessible from the Library catalogue or website. Access to the full text is granted to all members of the university community through authentication.

Databases

The Library has access to 193 databases of varied content, including full-text and bibliographic databases, databases that give access to journal articles, e-books, data, as well as statistical and economic databanks, etc.

Print Journals

More than 5.800 (90.000 volumes) titles of print journals, in Greek and in other languages, all current and non- current, searchable through the online Library catalogue or the Library website.

Electronic Journals

More than 30.000 titles of online journals, accessible from the Library website. Access to the full text is granted to all members of the university community through authentication.

Digital Collections

These collections include digitised archival material (print, audio, photographic, video) and aim to preserve rare material and render it accessible to all academic community members, and the broader society.

They are accessible from the Library website through the digital repository of the Library "LEKYTHOS", at the following link <https://lekythos.library.ucy.ac.cy> .

"GNOSIS" - Institutional Repository of the University of Cyprus

The University of Cyprus Library has created and administers the Institutional Repository GNOSIS, aiming to collect and present the research output of the academic and research community of the University of Cyprus.

The Institutional repository is fully compliant with the infrastructure of the European Project OpenAIRE, ensuring that the European and national Open Access policy is met. The repository can be found at the following link <https://gnosis.library.ucy.ac.cy> .

Reference Material Collection

Apart from 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 Members

Library Use

All members of the University of Cyprus (students, academic, research, and administration staff), as well as registered external members, can use the reading areas and the material of the Library. Visitors may use the Library facilities, services and collections on-site upon relevant request and payment of an annual fee.

Lending Services

The Library provides its members automated services for the use of print 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, members can serve themselves by using the self-service checkout and self-return stations located in the Library, as well as their library account (My Library), accessible through the online catalogue.

There are Self-service Checkout Stations on all five levels of the Library and a 24/07 Self-Return Station system near the Library entrance, allowing students to return books on a 24-hour basis.

Inter-Library Loan Services

The Library undertakes the provision of books, journal articles, conference proceedings, conference presentations, etc., needed for research or teaching purposes, 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 on all five levels of the Library for students to print, copy, and scan documents.

For the use of this equipment, the university ID card is required, which can be credited either online or at the credit machine.

Lockers

At the entrance of the Learning Resource Centre – “Stelios Ioannou” Library, where users can safely place personal items, for a small fee. The university card is required for locker use.

Services to Users with Print Disabilities

Since 2000, a specially adapted workstation for users with print disabilities has been operating. The Library converts, where appropriate, class material to digital or large-font form to facilitate the study for users with print disabilities.

Research Assistance

Information Literacy

The Library holds educational seminars to familiarise students and academics with the services it offers, as well as to help them develop and enhance their information literacy skills in searching, locating, processing and evaluating valid scientific material.

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

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 the Library. Replies are sent via real-time chat.

By Appointment

Users can schedule a research consultation appointment with the Librarian 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 primarily available to members of the academic community of the University of Cyprus and subsequently to external users.

European Documentation Centre (EDC)

The European Documentation Centre (EDC) of the University of Cyprus was established in 2012 to provide information about the legislation, institutions, and policies of the European Union. 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 University community and the wider public during the working hours of the Library. Its collection includes print material and online resources, such as official publications of the EU, annual reports, journals, statistical and economic databases, bibliographies, textbooks, pamphlets, etc.

Participation of the Library in European/Research Programmes

The Library, through its participation in European research projects (OpenAire, PASTEUR4OA, FOSTER, NI4OS-Europe, YUFERING, DIOSI, CeOS_SE, etc.) and international networks (LIBER, IFLA, YERUN, OPERAS, SPARC Europe, etc) follows and promotes European policies for Open Science Aspects. At the same time, it plays a key/crucial role in shaping national policy for the research community of the Republic of Cyprus. The Library also acts as the only National Open Access Desk (NOAD) of the country (OpenAire), .

The Library, through its participation in European research projects (OpenAire, PASTEUR4OA, FOSTER, NI4OS-Europe, YUFERING, DIOSI, CeOS_SE, etc.) and international networks (LIBER, IFLA, YERUN, OPERAS, SPARC Europe, etc), follows and promotes European policies for Open Science, transferring relevant knowledge and expertise at the national and institutional level. The Library also acts as the only National Open Access Desk (NOAD) of the country (OpenAire), playing a crucial role in shaping national policy for the research community in Cyprus.

IT INFRASTRUCTURE SERVICE

User Accounts

All students need to have a university account (username and password) to access the IT systems of the University of Cyprus, such as the email, the IT labs, the Banner student registration system, the Blackboard e-learning system, the VPN service, the ucywifi wireless network, the eduroam European Universities wireless network, etc. Students bear responsibility for the correct use and safety of their account. All students are provided with tools for the management of their accounts (password change, forgotten password change through answering predefined questions, forgotten username recovery) at the link www.ucy.ac.cy/pwdportal.

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 email service is provided via the <https://www.microsoft365.com/> portal, using the username (username@ucy.ac.cy) and password of their 11 account. From the same portal, students also have access to collaboration tools, such as Onedrive, the Office package (Word, Excel, PowerPoint, Outlook, which the student may install on up to 5 computers and/or 5 mobile devices/tablets) and many other collaboration tools, such as Teams, OneNote, Forms, and Yammer.

Open Access PC Labs

The University is equipped with laboratories, in which there are open-access computers. A wide variety of teaching software is installed on these computers for project work and teaching purposes. There is also the possibility of printing and renewing an individual printing limit.

Multimedia and Videoconference

Multimedia services include the production, broadcasting and management of audiovisual and multimedia content that is used for eLearning purposes, teaching and research, as well as for informing the members of the University community.

Network Services

The University has a high-speed and highly available network infrastructure for Internet access and network services. Support is provided to users in the University community, as well as to IT support teams. Wireless Network

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

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Residential Halls - Network Services

Student halls provide wired and wireless network services to residents.

Remote Access Service (VPN)

All members of the academic and administrative staff, as well as students, who have an active account may connect to the University network via the Internet. The VPN connection provides access to resources of the University of Cyprus that are not available directly from the Internet.

Telephony Integrated Services

Integrated Services include IP telephony, 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 to detect anomalies and prevent security risks and malicious behaviour. It also investigates all security incidents.

Helpdesk

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

INFORMATION APPLICATIONS SERVICE

E-Learning

By registering for courses in the e-learning system, all students gain access to the course area, using their account codes, where they can find material relevant to the course. It is also available in mobile apps.

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.

E-University

E-University aims at providing automated and qualitative services to the University community, external contracting institutions, and the wider society. These services focus on the qualitative support of research and teaching using information technology 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>.

INTERNATIONAL RELATIONS

International relations play a crucial role in promoting the University of Cyprus on the global stage. Today, the University of Cyprus is internationally renowned for the quality of its research and teaching. Its ranking in the 84th place among the top 200 universities in the world under 50 years old (2024) by Times Higher Education, as well as the fact that it is the only university in Cyprus included in the prestigious Shanghai List, confirm its international recognition.

The University of Cyprus is an active member in more than 70 university networks and associations worldwide, 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 Association of Commonwealth Universities (ACU), and the Young European Research Universities Network (YERUN). It also works closely with many other European and international organisations.

The University has signed Agreements of Cooperation with 151 universities and research institutions in Europe, Australia, the Middle East, Asia, the USA, Canada, Latin America, and Africa. These agreements, which can be either inter-university or inter-departmental, provide for, inter alia:

- Student and staff exchanges.
- Educational and research cooperation.
- Exchange of teaching and research material.
- Organisation of conferences.

The University of Cyprus offers six joint degree programmes (at the Master's and Ph.D. levels) in collaboration with other European universities, and it has signed several Cotutelle Agreements with universities abroad.

Student and staff mobility is a key tool of the internationalisation strategy of the institution. The University of Cyprus has participated in the Erasmus+ Programme since the academic year 1997/1998 and in the Erasmus+ International Programme since 2015/2016, facilitating the mobility of students and staff. The University also actively participates in the Erasmus+ Blended Intensive Programmes (BIPs). The University of Cyprus has organised four BIPs in Cyprus, while students of the University have participated in many BIPs abroad. The University of Cyprus is planning to organise more BIPs in Cyprus. As an Erasmus Without Paper (EWP) Champion of the European Commission, the University of Cyprus contributes to the digitalisation of the Erasmus+ Programme and to increasing the accessibility of the opportunities it offers.

Student and academic exchanges also take place within the framework of Agreements of Cooperation. Another activity which is further developed, thus enhancing the internationalisation of the institution, is the organisation of International Summer Schools with the participation of students from abroad, in collaboration with academics from partner institutions.

Throughout the year, the University of Cyprus welcomes international delegations from institutions and organisations from the international arena, diplomatic delegations of other countries, and diplomatic missions of Cyprus abroad, as well as students of the Diaspora. The International Relations Service arranges guided tours around the University Campus and the Library for its visitors and other officials, undertaken by student ambassadors who are selected within the framework of the "Student Ambassadors" Programme.

The operation of the Aula Cervantes in 2011 and the Confucius Institute in 2014, the first to be established in Cyprus and the first HSK Examination Centre (Hanyu Shuiping Kaosh), constitutes an important strategic development, highlighting the impact of the University of Cyprus internationally.

Another important development is the participation of the University of Cyprus in the European University Alliance "Young Universities for the Future of Europe" (YUFE). The Alliance comprises ten young research universities and two associate partners. Together, the YUFE partners will establish one of the first European Universities, with various campuses in YUFE cities, offering a common European University degree based on a combination of academic, professional, and civic skills.

International student recruitment is one of the main strategic goals of the University of Cyprus towards its efforts for internationalisation. With an increasing number of postgraduate programmes offered in English, the University is steadily experiencing a growth in the number of international students. The International Students and Staff Office of the International Relations Service offers comprehensive support and information to international students and staff (academic and administrative) before, during, and after their arrival in Cyprus. At the same time, the Office provides all the necessary information regarding studying, working, and living at the University of Cyprus, and Cyprus in general, while cooperating closely with all the

Administrative Services and Departments of the University of 13 Cyprus, as well as with national and international authorities, to ensure the continuous improvement and high quality of the services provided.

CULTURAL EVENTS/LECTURES

The University of Cyprus organises 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. Realising 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 University has established a dynamic participation in the cultural and intellectual life of Cyprus, a participation that 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, students and 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 publications of the University, please visit the website www.ucy.ac.cy/publications/en.

The publishing activity of the University of Cyprus is enhanced with the operation of the Cyprus University Press (www.ucy.ac.cy/panekey). The main objective of the Cyprus University Press is to support and promote the writing activity, not only in Cyprus and Greece, but internationally as well, thus promoting intellectual production.

MICHALIS PIERIS CULTURAL CENTRE

The Michalis Pieris Cultural Centre 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 the 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 has already been published. Generally, the programmes of the theatrical performances include the 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 the publications of the Cultural Centre, which also include honorary volumes, conference proceedings, and others, please visit the website www.ucy.ac.cy/cucentre/en.

The second part of the mission of the Cultural Centre 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 recognised, 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

Postgraduate Studies

The University of Cyprus accepted its first postgraduate students in the academic year 1997-98.

All academic departments of the University offer postgraduate programmes of study at a Master's (M.A., L.L.M., M.Sc. and M.Eng.) and Doctor of Philosophy (Ph.D.) level, in a wide range of subjects.

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 Board of the Department for a two-year term of office.

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 students in their research and provides them with 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). One ECTS credit is equivalent to a workload of 25-30 hours per semester. Full-time attendance 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, i.e. in Greek and Turkish, as well as in other international languages.

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

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 training).
- Other criteria set by the department, which may include a written examination, 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 the resubmission procedure.

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 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.
- Presentation of the proposal to a three-member Committee, which 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 for the completion of the Doctoral programme is not violated. This Committee is appointed by the Board of the Department, following the recommendation of the Postgraduate Programmes Committee and the research advisor, who chairs the Committee.
- Submission of an original dissertation that makes an important contribution to the relevant discipline.

- Defence of the dissertation before a five-member examining committee. The Committee is appointed by the Board of the Department, following the recommendation of the Postgraduate Programmes Committee and the research advisor, and it is composed of three members of the departmental academic staff, as follows: 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 Chairperson of the Examining Committee is a member of the academic staff of the relevant department, but not the research supervisor.
- If the Examining Committee recommends not to award a degree, the Ph.D. candidate may be allowed to resubmit the dissertation and repeat the entire process of defence once more, after due modifications have been made according to the recommendations of the Committee.
- 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 he/she has successfully completed the comprehensive examination and has obtained the required credit units.

Application Requirements

Applications must be submitted electronically to the University of Cyprus by the 31st of March for admission in the fall semester, and by the 31st of October for admission in the spring semester. Applicants must have a university degree, awarded by an accredited institution, or a degree evaluated as equivalent to a university degree by the Cyprus Council for the Recognition of Higher Education Qualifications (KYSATS). Individuals who are expected to be awarded a university degree or a graduation certificate, meeting 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 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 the referees. For the Faculty of Engineering and the Department of Psychology, all recommendation letters must be completed on a special form, which can be found on the website: www.ucy.ac.cy/graduateschool/postgraduate-programmes-places/?lang=en.

Some departments require three letters of recommendation to be submitted along with the application; therefore, before submitting your application, please visit the webpage of the relevant department to verify the number of letters of recommendation required.

Fees for Master's Degrees

Master's Degree Master's Degrees: €5.125 per programme, with the following exceptions:

- Master in Business Administration (MBA): €10.250.
- Master in Financial Analysis: €15.000
- 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.
- Master in Human Resource Management: €7.500.

For the Applied Programme in School Psychology, an extra fee of €1000 is charged for clinical practicum. This amount covers the expenses for the 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). The maximum tuition fees for a Ph.D. Degree are €9.000.
- For the Applied Ph.D. Programme in Clinical Psychology, an extra fee of €1.000 is charged for clinical practicum 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 provided for in the Postgraduate Studies Regulations. For more information, students may contact the Graduate School (tel.: +357 22894044) or visit the website www.ucy.ac.cy/graduateschool/en.

All fees must be paid electronically prior to registration. The deposit of fees, which is paid in advance, is not refundable.

Funding for Postgraduate Students

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 the scholarships offered by the State and the University of Cyprus, the University of Cyprus may subsidise a postgraduate student who offers to work as an assistant in his/her department or other departments. Assistantships may involve assisting in teaching, tutorials, helping with assignments, lab supervision, grading, etc. They do not apply either to the research activity of the student or 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 foreign students regarding studies at the University of Cyprus, as well as support to all non-European students and staff concerning immigration requirements and visa issues, such as entry visas, issuance and renewal of residence permits in Cyprus, medical examinations, etc.

Career Centre (CC)

The Career Centre constitutes the link between the students and graduates of the University of Cyprus and the labour market. The Centre guides and supports students and graduates through services and programmes designed to meet the requirements and special conditions of the modern working 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 their postgraduate studies.

The Career Centre aims to develop and upgrade the skills of students and graduates, as well as to enhance their employability. More specifically, the Career Academy Programme is a rich and continuous training programme which includes 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 students a wide range of employment and networking opportunities with businesses and organisations during and after enrolment. During their studies, students have the opportunity to be placed in companies and organisations to gain work experience in the professional sector of their interest.

In addition, students and graduates gain access to a great number of jobs in companies and organisations both in Cyprus and abroad, with which the Career Centre is in close cooperation. A percentage of vacant 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 may visit the website www.ucy.ac.cy/careercentre/en.

Counselling and Psychological Support

The University of Cyprus provides psychological support and counselling services free of charge 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 both during their studies and afterwards. Individual or group psychotherapy and counselling sessions are offered to students. Common concerns among students visiting the Centre include anxiety, stress, relationships, mood swings, problems with their academic life (difficulties in adjusting to their new way of life, etc.), coping with the loss of a beloved one, as well as personal or career decisions that need to be made.

The Centre also organises presentations and workshops on issues relating to students' psychological well-being. It launches prevention and sensitisation/awareness campaigns on topics related to psychological health and well-being, in collaboration with student and youth groups, as well as with entities 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.

Social and 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 subsidised by the Student Welfare Fund. The Fund is supported financially by the University of Cyprus as well as by external contributions and donations.

Services for Students with Disabilities

Students with disabilities are treated equally to all other students, whilst every effort is made to offer practical solutions to their specific problems, such as access to the University facilities and/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 or 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 also 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 prepared by the Housing Office.

Health

General Health Scheme (GHS)

The General Health Scheme offers Cypriot students medical care, provided they are registered in the Beneficiary Portal and have chosen a personal doctor. Students may find relevant information at the following link: www.gesy.org.cy.

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

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

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

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 enrolling at the University, automatically becomes a member of the Student Union. The Student Union is represented in all bodies of the University (Council, Senate, Boards of the Departments and Faculties). Its executive body is the Administrative Council, which consists of 21 members, elected annually by the members of the Union. It has a record of rich and varied activity, with the following main objectives:

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

Sports

Sport 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. To encourage the University community to participate in sports activities, a wide variety of activities are offered, while the opening hours of the sports facilities have been extended daily **from 07:30 to 22:00 and on Saturdays from 08:30 to 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 University aims to render sports an inseparable part of university life.

Internal Championships

- Internal championships are open to the entire University community. Emphasis is placed on play and participation rather than just on winning. They offer a way to improve overall physical fitness, develop skills and techniques in a variety of sports, while having fun.
- International regulations apply to all matches/competitions. The University enforces its own, stricter regulations in terms of discipline, since the Sports Centre respects and embraces the Olympic spirit.

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
- TAE KWON DO
- Aerobic Exercise

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 organised by the Club Coordination Committee, during which students have the opportunity to learn about the activities of the various clubs from their representatives and 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 operation of the clubs. There are also periodic workshops related to administrative and communication matters, which aim to develop leadership abilities, as well as to improve communication and administrative skills.

List of Clubs

- Archaeology Club
- Art Club
- Cyprus Association for Special Education
- Students with Disabilities Club
- Dance Club

- Environmental and Animal Welfare Club
- International Students Club
- Cinema Club
- Journalism Club
- Orthodox and Hellenic Tradition Club
- Photography Club
- Psychology Club
- Sailing Club
- “Terpsichorian” Music Group Club
- Theatre Club
- Fencing Club
- Sociology Club
- Chess Club
- Volunteers Club
- Greek Language and Foreign Civilisations Club
- Philosophy Club
- Handball Club
- Law Club
- Computer Science Club

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 to gain work experience (Erasmus+ Placements). They can also participate in Blended Intensive Programmes (BIPs) or in an exchange programme within the framework of Bilateral Cooperation Agreements, concluded by the University of Cyprus with universities or networks in the international arena. Doctoral 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 may 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 to promote the work of the Institution, provide information to the members of the university community, and give voice to students. It aims to:

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

All members of the University community can become radio producers at UCY Voice. UCY Voice organises 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 www.ucyvoice.ucy.ac.cy and from a mobile app. UCY Voice broadcasts on a 24-hour basis and its programmes cover the entire spectrum of information and entertainment.

SCHOOL OF MODERN GREEK

The School of Modern Greek (SMG) has been operating since 1998. It aims to teach Modern Greek as a second or foreign language and to promote the Greek culture. Its programmes are primarily addressed to 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), offered every semester.
- Non-intensive programmes (6 hours x 26 weeks), starting in the fall 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), starting in the fall semester.
- The A1 programme for Erasmus students (6 hours x 13 weeks), offered every semester.

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

A certificate is issued upon successful completion of each programme. Levels C1 and C2 are recognised by the State of Cyprus as acceptable proof of very good and excellent knowledge of the Greek language, respectively. For Erasmus students, the programme is credited with 6 ECTS, while the other programmes are credited with 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 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, located at 30 Nikodimou Mylona Street (3rd floor).



- Faculties
- Departments
- Research Units
- Centres and Institutes

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, 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 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**, biobank.cy - www.biobank.ucy.ac.cy

INSTITUTES

-  **Aula Cervantes Nicosia** - <https://nicosia.cervantes.es>
-  **Confucius Institute** - www.ucy.ac.cy/confucius/en

MASTER Programmes

FACULTY OF ECONOMICS AND MANAGEMENT

DEPARTMENT OF ACCOUNTING AND FINANCE

Finance (MSc) (english and greek language)

Business Administration (MBA) (part time and full time) (Interdepartmental)
(in english language)

DEPARTMENT OF BUSINESS AND PUBLIC ADMINISTRATION

Human Resource Management (MSc) (in english language)

Business Administration (MBA) (part time and full time) (Interdepartmental)
(in english language)

Data Science (Business Analytics/Computer Science/Statistics) (MSc) (Interdepartmental)
(in english language)

Design for Social Innovation (Joint & Interdepartmental) (in english language)

DEPARTMENT OF ECONOMICS

Business Economics (TIME MBE: Technology Innovation Management and
Entrepreneurship) (MBE) (in english language)

Economic Analysis (MSc) (in english language)

Monetary And Financial Economics (MSc) (in english language)

Behavioural Economis (MSc) (Interdepartmental) (in english language)
(distance learning)

FACULTY OF ENGINEERING

DEPARTMENT OF ARCHITECTURE

Conservation and Restoration of Historic Buildings and Sites (MSc) (Interdepartmental)
(in english and greek language)

Energy Technologies and Sustainable Design (MSc/MEng) (Interdepartmental)
(in english and greek language)

Design for Social Innovation (Joint & Interdepartmental) (in english language)
(Distance Learning)

Advanced Arcitecture Studies (MSc) (in english and greek language)

DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

Civil Engineering/Construction and Transport Infrastructure Management (MSc/MEng)
(in english language)

Civil Engineering/Geotechnical Engineering (MSc/MEng) (in english language)

Civil Engineering/Novel And Traditional Construction Materials (MSc/MEng)
(in english language)

Civil Engineering/Structural Analysis And Earthquake Engineering (MSc/MEng)
(in english language)

Environmental Engineering (MSc/MEng) (in english language)

Natural Gas in Energy Transition (MEng) (in english language)

Conservation and Restoration of Historic Buildings and Sites (MSc) (Interdepartmental) (in english and greek language)

Energy Technologies And Sustainable Design (MSc/MEng) (Interdepartmental) (in english and greek language)

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

Computer Engineering (MSc/MEng) (in english language)

Electrical Engineering (MSc/MEng) (in english language)

Intelligent Critical Infrastructure Systems (MSc) (in english language)

Artificial Intelligence (MSc) (Interdepartmental) (in english language)

Energy Technologies and Sustainable Design (MSc/MEng) (Interdepartmental) (in english and greek language)

DEPARTMENT OF MECHANICAL AND MANUFACTURING ENGINEERING

Advanced Materials and Nanotechnology (MSc) (in english language)

Mechanical and Manufacturing Engineering (MSc/MEng) (in english language)

Energy Technologies and Sustainable Design (MSc/MEng) (Interdepartmental) (in english and greek language)

FACULTY OF HUMANITIES

DEPARTMENT OF ENGLISH STUDIES

Teaching English to Speakers of Other Languages (TESOL) (MA) (in english language)

Theoretical and Applied Linguistics (MA) (in english language)

English Studies (in english language)

DEPARTMENT OF FRENCH AND EUROPEAN STUDIES

Teaching French as a Foreign Language (MA) (in french language) (Online & Distance)

European Studies (MA) (in greek/english/french language)
αναστάληκε η λειτουργία για το 2024/2025

DEPARTMENT OF TURKISH AND MIDDLE EASTERN STUDIES

Turkish Studies (MA)

FACULTY OF LETTERS

DEPARTMENT OF BYZANTINE AND MODERN GREEK STUDIES

Modern Greek Studies (MA)

Byzantine Studies and the Latin East (MA) (Interdepartmental)
(in english and greek language)

DEPARTMENT OF HISTORY AND ARCHAEOLOGY

Ancient History (MA)

Archaeology of the Mediterranean from Prehistory to the Byzantine Era (MA)
(english and greek language)

Digital Heritage and Landscape Archaeology (MSc) (in english language)

Modern and Contemporary History (MA)

Byzantine Studies and the Latin East (MA) (Interdepartmental)
(in english and greek language)

Conservation and Restoration of Historic Buildings and Sites (MSc)
(Interdepartmental) (in english and greek language)

DEPARTMENT OF CLASSICS AND PHILOSOPHY

Classical Studies (MA) (in english and greek language)

European Master in Classical Cultures (MA) (joint with universities of Austria,
France, Germany, Greece, Italy, Poland, Spain, Turkey) (in english language)

FACULTY OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

Biodiversity and Ecology (MSc) (in english language)*

Biomedical Sciences (MSc) (in english language)*

DEPARTMENT OF CHEMISTRY

Chemistry (MSc) (in english and greek language)

DEPARTMENT OF COMPUTER SCIENCE

Advanced Information Technologies (MSc) (professional programme)

Computer Science (MSc)

Artificial Intelligence (MSc) (Interdepartmental) (in english language)

Cognitive Systems (MSc) (Interdepartmental and joint with Open University
of Cyprus) (in english language) (distance learning)

Data Science (Business Analytics/Computer Science/Statistics) (MSc)
(Interdepartmental) (in english language)

* The postgraduate programmes of the Department of Biology are currently in the process of being approved by DIPAE (The Cyprus Agency of Quality Assurance and Accreditation in Higher Education). Once the process is complete, details regarding the available programmes will be posted on the department's website.

DEPARTMENT OF MATHEMATICS AND STATISTICS

Mathematical Sciences (MSc) (in english and greek language)

Data Science (Business Analytics/Computer Science/Statistics) (MSc)
(Interdepartmental) (in english language)

DEPARTMENT OF PHYSICS

Physics (MSc) (in english and greek language)

FACULTY OF SOCIAL SCIENCES AND EDUCATION

DEPARTMENT OF EDUCATION

Curriculum Studies, Teaching and Comparative Education (MA)

Educational Administration and Evaluation (MA)

Gender Studies (MA) (in english and greek language)

Instructional Technology (MA) (in english and greek language)

Language Literacy and Education (MA)

Learning in Natural Sciences and Environment/Environmental and
Sustainability Education (MA)

Learning in Natural Sciences and Environment/Learning In Natural Sciences (MA)

Mathematics Education (MA)

Pedagogical Sciences/Multiculturalism, Migration and Decolonial Education (MA)

Pedagogical Sciences/Preschool Education (MA)

Pedagogical Sciences/Sports Pedagogy (MA)

Special and Inclusive Education (MA)

Creative Learning and the Arts in Childhood (MA) (Online & Distance)

Education Policies for Global Development (in english language) (Interdepartmental)

DEPARTMENT OF LAW

Law/Criminal Justice and Human Rights (LLM)

Law/European Commercial Law (LLM)

DEPARTMENT OF PSYCHOLOGY

School Psychology (MA)

Social and Developmental Psychology (MA)

Behavioural Economics (MSc) (Interdepartmental) (in english language)

Cognitive Systems (MSc) (Interdepartmental and joint with Open University
of Cyprus) (in english language) (distance learning)

School Counseling and Guidance (MA) (joint with National and Kapodistrian
University of Athens)

DEPARTMENT OF SOCIAL AND POLITICAL SCIENCES

Peace, Conflict and Democracy (MA) (in english language)

Political Sciences/International Relations (MA)

Political Sciences/Comparative Politics (MA)

European Master in Human Rights and Democratisation (MA)
(joint with European Universities) (in english language)

Journalism and Creative Industries (MA)

MEDICAL SCHOOL

Precision Medicine in Clinical Practice (MSc) (in english language)

Methods in Medicine Research (MSc)

FACULTY OF ECONOMICS AND MANAGEMENT

DEPARTMENT OF ACCOUNTING AND FINANCE

Finance (in english language)

DEPARTMENT OF BUSINESS AND PUBLIC ADMINISTRATION

Business Administration (in english language)

DEPARTMENT OF ECONOMICS

Economics (in english language)

FACULTY OF ENGINEERING

DEPARTMENT OF ARCHITECTURE

Architecture

DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

Civil Engineering (in english language)

Environmental Engineering (in english language)

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

COMPUTER ENGINEERING (in english language)

ELECTRICAL ENGINEERING (in english language)

DEPARTMENT OF MECHANICAL AND MANUFACTURING ENGINEERING

Advanced Materials and Nanotechnology (in english language)

Mechanical and Manufacturing Engineering (in english language)

FACULTY OF HUMANITIES

DEPARTMENT OF ENGLISH STUDIES

English Literature and Comparative Cultural Studies (in english language)

Linguistics (in english language)

Translation Studies (in english language)

DEPARTMENT OF FRENCH AND EUROPEAN STUDIES

European Studies (in greek/english/french language)

French Studies (in french language)

DEPARTMENT OF TURKISH AND MIDDLE EASTERN STUDIES

Turkish Studies

FACULTY OF LETTERS

DEPARTMENT OF BYZANTINE AND MODERN GREEK STUDIES

Modern Greek Studies

Byzantine Studies and Latin East (Interdepartmental)
(in english and greek language)

DEPARTMENT OF CLASSICS AND PHILOSOPHY

Classical Studies

DEPARTMENT OF HISTORY AND ARCHAEOLOGY

Ancient History (in english and greek language)

Archaeology of the Mediterranean from Prehistory to the Byzantine Era
(in english and greek language)

Digital Heritage and Landscape Archaeology (in english language)

Modern and Contemporary History (in english and greek language)

Byzantine Studies and Latin East (Interdepartmental)
(in english and greek language)

FACULTY OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

Biomedical Sciences (in english language)*

Biodiversity and Ecology (in english language)*

DEPARTMENT OF CHEMISTRY

Chemistry (in english and greek language)

DEPARTMENT OF COMPUTER SCIENCE

Computer Science

DEPARTMENT OF MATHEMATICS AND STATISTICS

Mathematics (in english and greek language)

Statistics (in english and greek language)

DEPARTMENT OF PHYSICS

Physics (in english and greek language)

FACULTY OF SOCIAL SCIENCES AND EDUCATION

DEPARTMENT OF EDUCATION

Curriculum Studies, Teaching and Comparative Education

Educational Administration and Evaluation

Gender Studies (in english and greek language)

Instructional Technology (in english and greek language)

Language Literacy and Education

Learning in Natural Sciences and Environment

Mathematics Education

Pedagogical Sciences/Multiculturalism, Migration and Decolonial Education

Pedagogical Sciences/Theory and Philosophy Of Education

Pedagogical Sciences/Religious Education

Pedagogical Sciences/Sociology of Education

Pedagogical Sciences/Preschool Education

Pedagogical Sciences/Sports Pedagogy

Special And Inclusive Education

* The postgraduate programmes of the Department of Biology are currently in the process of being approved by DIPAE (The Cyprus Agency of Quality Assurance and Accreditation in Higher Education). Once the process is complete, details regarding the available programmes will be posted on the department's website.

DEPARTMENT OF LAW

Law

DEPARTMENT OF PSYCHOLOGY

Clinical Psychology

Psychology

DEPARTMENT OF SOCIAL AND POLITICAL SCIENCES

Sociology

Political Sciences



Faculty of Economics and Management



DEPARTMENTS

- Accounting and Finance
- Business and Public Administration
- Economics



Department of Accounting and Finance

www.ucy.ac.cy/afn/en

The Department of Accounting and Finance offers a comprehensive curriculum, which, on the one hand, provides students with a broad knowledge in the diverse area of Business Administration and, on the other hand, specialized in-depth knowledge in the disciplines of Accounting and Finance.

Introduction

The business environment is rapidly changing. World markets are becoming increasingly global, organizations 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 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 organizations to success. Those who fail to act on or respond to these changes will expose their organizations 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 organizations 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 organizations 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 offered in English language, 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.

	ECTS
Fall Semester	28,5
All courses are required	
AFN 521 Corporate Finance	7,5
AFN 522 Investments	7,5
AFN 523 Empirical Methods in Finance I	6.0
AFN 526/626 Financial and Integrated Reporting	7,5
Spring Semester (31,5-35,5 ECTS)	
2 required & 3 electives	
AFN 525 Options and Futures	7,5
AFN 536 Business Valuation	6
Three (3) Electives *	18-22
*At least one course on empirical	
Electives courses	
DSC 532 Statistical Learning (EMP)	7
ECO 673 Applied Microeconometrics (EMP)	7
AFN 524 Empirical Methods in Finance II (EMP)	7,5
AFN 528 Blockchain and Decentralized Finance	6
AFN 530 Central Banking Policy	6
AFN 533 Bank Financial Management	6
AFN 534 Financial Risk Management	6
AFN 539 Insurance Risk Management	6
MSc Dissertation	
Start in early Summer of first academic year	
Finish by end of Fall semester of next academic year	

Research Thesis

During the third semester of the M.Sc. Programme, students must complete a 30 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

E. Benos, Associate Professor

Master of Business Administration (MBA) (full-time and part-time study) (Interdepartmental)

Details about the above programme you may find below, in the Interdepartmental and Other School Programmes section.

Doctoral Programme in Finance

The Doctoral Programme in Finance is offered in English language. 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 defense 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.

Doctoral Student Advising

After a student is admitted to the Ph.D. Programme, the Graduate Studies Committee and the Directors of the Ph.D. Programme provide guidance to the student regarding course requirements and preparation for the comprehensive exams. Each student's programme is individually tailored to meet the student's specific profile and area of concentration. Upon completion of the coursework (or most of it), the student may take the comprehensive exams. Following success in these exams, the student must then select the thesis advisor.

Coursework

The first two semesters of the Doctoral Programme are similar to those of the M.Sc. Programme. The courses AFN 521 (Financial Theory), AFN 522 (Investments), AFN 525 (Options and Futures), AFN 626 (Financial Analysis and Capital Market Research), AFN 627 (Theory and Methodology in Accounting and Finance), AFN 661 (Advanced Corporate Finance), AFN 662 (Advanced Asset Pricing), AFN 663 (Advanced Methods in Empirical Finance) are required (55 ECTS). The Ph.D. student will also select 36 ECTS from other master courses (of the Department, or after approval of the Department of Economics, Department of Mathematics and statistics, etc.), according to his/her interests and research endeavors. It is expected that during their first and second year, all students acquire knowledge in mathematics, modelling, optimization and mathematical programming, probability theory and statistics (a graduate or two undergraduate courses), stochastic processes and econometrics (two econometric theory courses). It is also expected that all students will have sufficient knowledge of computer programming (like in C/C++).

Holders of a Master's degree in a field relevant to the Doctoral Programme, may waive some coursework after the approval of the Departmental Council. According to their previous graduate studies, it is expected that all doctoral students 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 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 on 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 on 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 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 enroll 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

	ECTS
First Year	
Fall Semester	
Elective/Advance and Methology Courses (from the Department as well as other University departments)	30
Total	30
Spring Semester	
Elective/Advance and Methology Courses (from the Department as well as other University departments)	30
Total:	30
First Year: Total:	60
Second Year	
Fall Semester	
Elective/Advanced and Methodology Courses (from the Department as well as other University departments)	30
Total:	30
Spring Semester	
AFN 890 Comprehensive Exams	15
AFN 881 Research Stage	15
Total:	30
Second Year: Total:	60
Third Year	
Fall Semester	
AFN 882 Research Stage	15
AFN 883 Research Stage	15
Total:	30
Spring Semester	
AFN 884 Research Stage	15
AFN 885 Research Stage	15
Total:	30
Third Year: Total:	60
Fourth Year	
Fall Semester	
AFN 886 Research Stage	15
AFN 887 Research Stage	15
Total:	30
Spring Semester	
AFN 888 Research Stage	15
AFN 781 Writing Stage	15
Total:	30
Fourth Year: Total	60

Coordinators of Doctoral Programme

Andreas Charitou, Professor

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Andreas Milidonis, Professor

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Course Descriptions

AFN 521 Corporate Finance (7.5 ECTS)

This course covers essential topics of corporate financial policy. After a brief review of the time-value of money, the course analyzes the three main decisions that corporations take: 1) the financing and capital structure decision 2) the capital budgeting decision and the associated decision-making rules (e.g., NPV, IRR, real options, etc.) 3) payout policies and ways of implementing them via dividend payments and share repurchases. Depending on time availability, the course may also discuss topics in international finance, corporate governance and financial distress.

AFN 522 Investments (7.5 ECTS)

This 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 a security is correctly valued in the market. Portfolio management deals with efficiently combining securities into 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 Empirical Methods in Finance I (6 ECTS)

This is an introductory course on empirical methods as applied in finance. The course starts with an introduction to regression analysis and time series, covering such topics as ARMA models, stationarity, vector auto-regressions, unit roots and cointegration. The course then teaches students how to study return distributions and test asset return predictability and market efficiency. Finally, the course covers methods used in event studies. The course also provides an overview of key financial databases and uses the Python/R programming languages for instruction and assignments.

AFN 524 Empirical Methods in Finance II (7.5 ECTS)

This course builds on and extends the material and scope of the first course in empirical methods in finance. It covers in more detail empirical tests of asset pricing models (such as the CAPM and multifactor models). It also covers term structure models and associated applications (e.g., fitting terms structure models to the data). Finally, it covers the key empirical methods used in assessing market quality including measurements of price discovery and liquidity (such as effective and realized spreads). The course utilizes key financial databases and uses the Python/R programming languages for instruction and assignments.

AFN 525 Options and Futures (7.5 ECTS)

This 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 is first developed, followed by the binomial-tree approach and the

Black-Scholes model. Various extensions and applications are provided, including (1) pricing options on stock indices, currencies and futures; (2) risk management; (3) pricing options embedded in corporate securities (e.g., equity, callable bonds, warrants and convertibles; (4) fixed-income (interest-rate) derivatives.

AFN 526/626 Financial and Integrated Reporting (7.5 ECTS)

This course covers a range of topics essential to understanding and applying financial and integrated reporting in today's business environment. Students will begin with an introduction to financial accounting, learning how to interpret core financial statements such as the balance sheet, income statement, and cash flow statement, along with key accounting principles. The course then explores financial statement analysis, focusing on tools like ratio analysis to assess a company's performance and financial health. A significant component of the course is the integrated reporting framework, which combines financial data with non-financial insights to present a holistic view of organizational value creation. Ethical considerations in financial reporting are examined, emphasizing the importance of transparency, integrity, and accountability. The course also introduces Environmental, Social, and Governance (ESG) factors and their growing importance in financial decision-making and reporting. Students will gain familiarity with leading sustainability reporting standards, including GRI, SASB, TCFD, and ISSB, and learn how to apply them in practice. Finally, the course highlights the role of corporate governance and effective stakeholder communication in supporting credible and meaningful integrated reports.

AFN 528 Blockchain and Decentralized Finance (6 ECTS)

This course aims at exposing students to the technology of blockchain and its financial applications. The course reflects the rapid integration of this technology into the financial system, including on-going discussions by government entities for issuing digital currencies. By the end of the course, students are expected to be able to elaborate on whether blockchain fundamentally changes the financial system, or not, and understand different perspectives on it.

AFN 530 Central Banking Policy (6 ECTS)

This course covers the key elements of central banking theory and practice. This includes the main objectives of most central banks, namely monetary and financial stability. The course describes how central banks try to achieve these objectives using their balance sheet and their ability to "print" money. As such, the course describes conventional and unconventional monetary policies, their implementation and the lender-of-last-resort function of central banks. The course also discusses in some detail the great financial crisis of 2008-09, the regulatory response to the crisis in the years after and the role of central banks in the new regulatory environment that has emerged since then.

AFN 533 Bank Financial Management (6 ECTS)

This course covers the methods and tools used by banks to measure and hedge their various risks including interest rate, credit, and currency risks. The course also studies 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)

The aim of this course is to illustrate the use of financial theory and applied statistics in measuring and managing risks that multinational corporations and financial institutions are currently facing. 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 536 Business Valuation (6 ECTS)

This course aims to teach students how to value a business both from a conceptual and a practical perspective. As such, the course first discusses the importance that managers should place on creating long-term value for their shareholders and discusses this in the context of the stock market. It then explains how to use the discounted cash flow (DCF) method to value a company. In this respect, the course teaches students how to analyze historical performance, forecast free cash flows, estimate the appropriate cost of capital, and critically interpret results. The course then covers firm valuation through "multiples" and discuss how this method can be used to "supplement" the DCF method. Finally, the course covers some specialized valuation topics such as the challenges associated with valuing private companies, high-growth companies, cyclical companies, banks and foreign companies. It also discusses valuation in the context of mergers and acquisitions and divestitures.

AFN 539 Insurance Risk Management (6 ECTS)

This course introduces students to some of the more technical aspects of insurance and how it is used as a fundamental risk mitigation tool for both individuals and businesses. Topics include an overview of different types of insurance and their use, an introduction to the theory of interest, present value of random variables for contingent annuities and insurance, their distributions and the principles underlying the determination of insurance fair values. The advantages and disadvantages of private and social insurance programs will be discussed along with their place in today's economies. References to the Basel II (Banks) and Solvency II (Insurance Companies) regulatory frameworks as well as rating agencies capital adequacy models will give the class a pragmatic approach to modern practices exercised by risk management professionals. The class provides a good foundation for students who also want to pursue professional credentials from International Risk Professional Associations (U.S.A. and U.K.) or an advanced degree in Risk Management and Insurance. The material to be covered by this course overlaps with some of the education requirements of SOA (Society of Actuaries, USA) and the Institute of Actuaries (UK).

DSC 532 Statistical Learning (7 ECTS)

Students will acquire the knowledge to conduct statistical analysis on a variety of data sets using a wide range of modern computerized methods. The students will learn how to recognize which tools are needed to analyze 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 will be discussed include linear simple and multiple regression, nearest neighbors methods, shrinkage methods (ridge, lasso), dimension reduction methods (principal components), logistic regression, linear discriminant analysis, tree-based methods, model selection algorithms and clustering. The focus of the course will be less on theory and more on providing the students with as much intuition as possible and acquainting them with as many methods as possible. The course will make substantial use of the R statistical programming language and its libraries.

ECO 673 Applied Microeconometrics (7 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 specialized 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.

RESEARCH INTERESTS OF THE ACADEMIC STAFF

Andreas Charitou, Professor

Capital markets research; International financial analysis; Corporate finance & investments; Credit analysis; Governance & executive compensation.

Irene Karamanou, Professor

The relation between capital markets and firm valuation with accounting disclosures; Investment banking; Financial analysts; Institutional ownership and regulation.

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.

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; The effect of corporate governance mechanisms and transparency in various business decisions.

Marios Panayides, Associate Professor

Market microstructure; Market efficiency; Econometric techniques and Industrial organization.

Dimitris Papadimitriou, Assistant Professor

Banking & Finance

Stylianos Papageorgiou, Assistant Professor

Banking theory; Institutional design; Political economy.

Costas Xiouros, Associate Professor

Asset Pricing; Equity Markets; Stocks, shares; Asset allocation; Derivatives; Financial economics; Financial systems; Investments; Macro-finance; Risk Management; Sovereign Wealth Fund &

Jiyuan Dai, Lecturer

ESG, corporate governance, banking supervision, regulation, enforcement

Contact Details

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Department of Business and Public Administration

www.ucy.ac.cy/bpa/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. 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. 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 is available for the 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

The Department of Business and Public Administration offers the following postgraduate programmes:

- Master in Data Science (M.Sc. in Data Science) (Interdepartmental)
- Master in Human Resource Management (M.Sc. in HRM)
- Ph.D. in Business Administration (Ph.D.)
- Master of Business Administration (MBA) (full-time study and part-time study) (Interdepartmental)
- Master in Design for Social Innovation (MA in Design for Social Innovation) (Interdepartmental) – On line

MASTER IN DATA SCIENCE (MDS)

The M.Sc. in Data Science brings together the expertise of three departments in the University of Cyprus i.e. 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 with 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, as well as to 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 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, transforming 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)
DSC 582	Data Science Toolbox (2 ECTS)
DSC 501	Python Crash Course (2 ECTS)

Business Analytics Track (Specialisation) (8 ECTS)

(Courses offered each year depend on student demand)

DSC 551	Data Visualisation
DSC 552	Complex Thinking and Reflective Judgment in Business Analytics
DSC 553	Data-driven Project Management
DSC 554	Information Networks
DSC 555	Prescriptive Analytics and Decision Making
DSC 556	Large Language Models (LLMs) in Business Analytics
DSC 557	Special Topics in Business Analytics
DSC 558	Financial Theory (Cross listed with AFN521.2)
DSC 559	Investments (Cross listed with AFN522.2)
DSC 575	Research Project – Business Analytics

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
DSC 574	Research Project – Computer Science

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
DSC 538	Special Topics in Statistics
DSC573	Research Project - Statistics

Indicative Programme of Studies

	ECTS
First Semester	
DSC 510 Introduction to Data Science and Analytics	8
DSC 530 Probability and Statistics for Data Science	8
DSC 531 Statistical Simulation and Data Analysis	8
One Elective Course, including courses offered by other programmes (e.g. M.Sc. in AI), or other entities of the University of Cyprus (e.g. Centre for Entrepreneurship etc.)	4
Second Semester	
DSC 511 Big Data Analytics	8
DSC 550 Business Analytics Applications	8
DSC 532 Statistical Learning	8
One Elective Course, including courses offered by other programs (e.g. M.Sc. in AI), or other entities of the University of Cyprus (e.g. Centre for Entrepreneurship etc.)	4
Summer Semester	
Capstone Project in Data Science (1st Phase)	5
Third Semester	
Computer Science Track/Statistics Track/Business Analytics Track Course	8
Computer Science Track/Statistics Track/Business Analytics Track Course	8
Computer Science Track/Statistics Track/Business Analytics Track Course	8
Capstone Project in Data Science (2nd Phase)	5

Course Descriptions

Compulsory Courses

DSC 510 Introduction to Data Science and Analytics (8 ECTS)

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 (8 ECTS)

The purpose of this course is the collection, modelling, and analysis of user data in large-scale online services, such as social networking, e-commerce, search, and advertisement. This class explores several of the key functions of such online services that have become ubiquitous over the past decade.

DSC 530 Probability and Statistics for Data Science (8 ECTS)

This is a theoretical course covering fundamentals topics of probability and statistics in the context of data science with its inherent challenges. This course will start with a review of

fundamental probability, covering topics like random variables, their distribution functions, expected values, conditioning on certain events and independence. The 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. The 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.

DSC 531 Statistical Simulation and Data Analysis (8 ECTS)

Students will be introduced to the R programming language, a programming language that was specifically developed for analysing data and, today, it is 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 (8 ECTS)

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 (8 ECTS)

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 analysis 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 (8 ECTS)

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 (8 ECTS)

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 (8 ECTS)

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 (8 ECTS)

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 551 Data Visualisation (8 ECTS)

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 (8 ECTS)

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 (4 ECTS)

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 (8 ECTS)

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 review 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 (8 ECTS)

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 (8 ECTS)

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 (8 ECTS)

The course studies topics from multivariate statistical analysis. Topics covered include random vectors, measures of centre and variation in multivariate moments. Multivariate normal distribution. Tests for normality. Estimation of the mean vector and the variance analysis, independence, multivariate-covariance matrix. Wishart and Hotelling distributions. Statistical inference. Union-Intersection Test. Confidence regions. Multivariate analysis of variance and multivariate regression analysis. Least squares method and Wilks distribution. Analysis of covariance. Principal components, Factor analysis, Discriminant analysis, Cluster analysis. The R statistical programming language will be used for applying the introduced methods in a range of Data Science problems.

DSC 536 Bayesian Statistics (8 ECTS)

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 (8 ECTS)

This course aims to provide an understanding of computational tools and algorithms for making statistical and numerical analyses. Topics covered include multiple regression, Cholesky decomposition, diagnostics and collinearity, principal components and eigenvalue problems. Nonlinear statistical methods: Maximum likelihood estimation, Newton-Raphson and related methods, multivariate data and the Newton Raphson method, optimisation techniques (unconditional and under constraints) EM algorithm. Numerical Integration and Approximation: Newton-Coates method, spline interpolation, Monte Carlo integration, general approximation methods. Probability Density Estimation: Histogram, linear and non-linear smoothing, splines. Bootstrap.

DSC 573 Research Project (8 ECTS)

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 Complex Thinking and Reflective Judgement in Business Analytics (8 ECTS)

- "Humanity's natural function is not simply to reason, but rather, reason well" Aristotle
- "Knowing a great deal is not the same as being smart; intelligence is not information alone but also judgment, the manner in which information is collected and used" Carl Sagan
- "All our knowledge brings us near to our ignorance, / All our ignorance brings us nearer to death, / But nearness to death, no nearer to God. / Where is the life we have lost in living? / Where is the wisdom we have lost in knowledge? / Where is the knowledge we have lost in information?" T.S. Eliot
- "Complicate yourself", Karl Weick

The purpose of this course is to introduce Business Analytics students to complex forms of thinking, which, ultimately, lead to reflective judgment, in the effort to cope effectively with real-world problems, especially ill-structured ones. The course will explore the features of complex thinking, provide the tools for developing it, and suggest ways in which complex thinking leads to reflective judgment.

Thinking becomes complex, when it embraces uncertainty, accommodates paradox and allows for the ineffable; is dynamic and flexible; holistic, critical and reflexive. Judgement becomes reflective when it is evidence-based and context-sensitive, while seeking unifying principles in the service of a good purpose. In this course, reflective judgment will be taken to be tantamount to practical wisdom (Aristotle's *phronesis*). Developing reflective judgement, one needs to cope with paradoxes; reduce noise; grow a holistic and dynamic understanding of problems; get a proper grasp of intuition and insight, heuristics and biases; be in tune with one's emotions' and sharpen critical thinking skills in ways that enable the disclosive framing of problems, namely, bringing to surface unspoken assumptions, hidden values, and the ethical dimension. Against a background of big data and AI, the course will explore the critical role of embodied knowledge, perception, and ethical clarity for reflective judgment.

DSC 553 Data-driven Project Management (8 ECTS)

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 (8 ECTS)

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 (8 ECTS)

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 Prescriptive Analytics for Decision Making (8 ECTS)

This course provides a framework for understanding and applying prescriptive analytics (primarily optimization modelling), in various practical settings, preparing students for advanced roles in data-driven and analytical decision-making

roles. Prescriptive analytics is the branch of data science that examines methods and tools for direct support in quantitative decision-making problems. It builds on insights from descriptive and exploratory analysis and utilizes forecasts from predictive analysis, to build integrative models that generate actionable recommendations to achieve desired goals. Thus, its emphasis is on identifying, among the set of feasible solutions (those conforming to functional requirements and constraints) those that optimize specific decision objectives. It is widely used in many application domains such as production, supply chain management, finance, healthcare, etc., to enhance decision-making effectiveness and improve operational efficiency. This course provides comprehensive exploration of different forms of optimization models and associated solution techniques, emphasizing their applications in practical cases.

DSC 556 Large Language Models (LLMs) in Business Analytics (8 ECTS)

This course aims to teach students how Large Language Models (LLMs) can improve data analytics and decision-making in different fields. The course covers the basics of LLMs, focusing on how LLMs like Transformer models work and their applications in real-world scenarios. Students will learn to use LLMs effectively, understand their benefits and challenges, and explore their ethical implications. Through case studies and discussions, the course helps students develop critical thinking skills to responsibly implement and evaluate LLMs in various business functions, including Marketing and Sales, Customer Service, and HR.

DSC 557 Special Topics in Business Analytics (8 ECTS)

This course explores advanced and emerging topics in the field of Statistics, providing students with an in-depth understanding of specialized areas not typically covered in standard statistical curricula. Each offering of the course will focus on a specific theme, which may vary depending on current trends, faculty expertise, and student interest.

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 organizations. 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 organizations 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 organizational 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/en.

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

1. Academic Criteria - A recognized Undergraduate Diploma with a minimum of 70% (7.0 out of 10) or equivalent (eg 2:1 based on the UK system). The thematic section of the degree is not critical. Qualification in terms of the degree may be in any field.
2. English Language Requirements - Proof of proficiency in the English language, equivalent at least to level C1 of the Common European Framework of Reference for Languages – CEFR (not applicable for applicants who have conducted their studies in English and have received their Degree from an internationally recognized University), e.g. one of the following certificates (but not limited):
 - IELTS: 7.0
 - Aptis Advanced: C1
 - IGCSE / GCE: A or B
 - C1 Advanced (Cambridge CAE)

3. Two (2) Recommendation Letters from academics and/or supervisors (at least one should be from an academic).
4. CV and a Statement of Purpose in English (max 500 words).
5. A Personal interview (in Greek and English).

Programme Curriculum

Term	Course Code	Course	ECTS	Contact Hours
September- October	HRM 530	Principles of Management and Work	3	14
	HRM 531	Advanced Organizational Behavior	6	28
	HRM 532	Human Resource Management and Strategic HR	6	28
	HRM 563	Strategic Management	3	14
November- December	HRM 565	Leading People	3	14
	HRM 533	Comparative & International Human Resource Management	3	14
	HRM 540	Quantitative and Qualitative Research Methods	9	42
January-February	HRM 534	Employee Selection and Succession Planning	6	28
	HRM 574	Workshop on Structures, Job Design and Workforce Planning	1	12
	HRM 576	Workshop on Psychometric Measurements	1	12
	HRM 538	Managing Change	3	14
	HRM 535	Employee Training and Development	6	28
March-April	HRM 573	Workshop on Human Resource Information Systems	1	12
	HRM 575	Workshop on HR Analytics and Evidence-Based HRM	1	12
	HRM 537	Compensation and Rewards Management	6	28
	HRM 536	Performance Management	3	14
	HRM 539	Entrepreneurship, Creativity, and Innovation	3	14
May-June	HRM 560	MNCs Employment Systems and Institutions	3	14
	HRM 561	The Regulatory Framework of HRM	3	14
	HRM 562	Managing Workforce Diversity, Theory and Practice	6	28
	HRM 577	Workshop on Negotiations and Conflict Resolution	1	12
July-August	HRM 595	Master Thesis I	5	–
September- October	HRM 564	Business Ethics and CSR	3	14
	HRM 578	Workshop on HR Business Partnering	1	8
	HRM 596	Master Thesis II	5	–
November- December	HRM 597	Master Thesis III	5	–
		TOTAL	96	418

Course Descriptions

M.Sc. in Human Resource Management

The courses of the interdepartmental programme are described on page 58.

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 organization as well as to develop the corresponding individual managerial skills. It provides an introduction into how individual, group and organizational factors influence employee behavior, work and in turn the performance of an organization. It is designed to give students a framework for understanding the way organizations function and the behavior of individuals and work groups within them. It also focuses on developing the business skills of students in this context.

HRM 531 Advanced Organizational Behavior and Work (6 ECTS)

Students study individual and group processes within organizations 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 behavior at the individual, group and organizational levels. The topics covered include psychological contract, employee engagement, commitment, job satisfaction and designing effective organizations.

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

The course introduces students to theory and practice of Human Resource Management (HRM) in a variety of organizational 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 organizational situations. Furthermore, the course emphasizes an international and comparative perspective on 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 the 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 utilization 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 people 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 organizations, ultimately contributing to the enhanced performance of organizations. The topics covered include assessment of learning needs at the individual, group and organizational levels; the design of training methodologies appropriate for different types of employees within different organizational contexts; and the evaluation of the effectiveness of training programmes. Other issues addressed in this course include critical perspectives on labor utilization, the changing nature of training in organizations 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 organizations. 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 organization'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 behaviors, 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 organizations can leverage as a competitive advantage. It aims at examining compensation and rewards in an organizational 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 organizational 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 organizations.

HRM 538 Managing Change (3 ECTS)

The course introduces students to the basic concepts, theories and frameworks related to organizational change management and explains their importance in human resource management. Most organizations 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, to ensure the people's effective transition to the new situation. 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, to explore how effective organizations 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 organizations, 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 organization.

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 emphasize the diversity of research, by discussing the concepts of original vs. applied and quantitative vs. qualitative research, 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 organized 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 analyzing data are also discussed.

HRM 560 MNCs, Employment Systems and Institutions (3 ECTS)

The course analyses how supra-organizational systems and social institutions affect the implementation and effectiveness of organizational HRM policies and practices in local and multinational enterprises. The course aims to provide students with knowledge of the theories, concepts and frameworks used to understand and analyze 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 to provide 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 organizations. 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 unionization, 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 to provide students with an understanding of the individual, societal and organizational dynamics related to managing, and being part of, a diverse workforce in contemporary organizations. It covers the main concepts and frameworks in order to familiarize students with the variety of human differences 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 organizations, 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 to provide 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 organizations that operate in complex and rapidly changing environments to understand how globalization, 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 organizational aims, environment, resources and capabilities, strategy formulation and implementation, assessment of corporate and business strategies, competitive advantage, and the links between organizational 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 behavior in organizations, 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 analyzed and the relationship between leaders, 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 organizations. 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 organizational structure and process, learning effective tools of design and implementation. The workshop provides the tools needed to analyze an organization's structure and its workforce and create a plan for talent management and retention. Attention is placed on the process of organizational and job design, emphasizing 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 organizational context. The value-added of the HRM function is often questioned, considered more of a rhetoric than a reality. However, using HR data, metrics and analytics, the HRM department of the organization can measure and assess the impact of specific practices and policies on measurable outcomes for the organization. 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 behavioral style. They are designed to measure a candidate's 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 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 aspects 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 organization, therefore having a say in strategic decisions. More importantly, it aims at critically analyzing the factors that may facilitate or impede the HR function from becoming a business partner, whether they relate to the organizational culture, the skills and experiences of HR specialists or the alignment of talent management with business objectives. These issues are analyzed 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 towards 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. Possession of a postgraduate degree of a Master level in a relevant subject from a recognised university (or submission of a certificate confirming that the Master level qualification will be obtained before the beginning of the Doctoral Programme).
3. Preparation and submission of a preliminary research proposal that outlines the proposed research topic. Specifically, the proposal must include: a) the research questions and their importance, b) the suggested research methodology that will be employed to address these questions, c) the essential literature on the specific topic, and d) the time schedule for implementing the research.
4. Submission of analytical transcripts for all programme of studies completed or currently attending.

5. At least two academic references in support of their application. In their application, the applicants must provide the names and contact details of the academics from whom they have asked letters of recommendation.
6. Submission of other certificates and relevant documents, such as samples of prior academic and/or professional experience (e.g., publications, articles, research, etc.).
7. Submission of evidence of very good knowledge of the English language.

Programme Structure

To obtain a Doctoral 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 refers to six courses representing 60 ECTS (i.e., 10 ECTS for each course). Specifically, there are three foundation courses, as well as three other elective courses.

Part II - It refers to the preparation and the successful completion of Comprehensive Exams focusing on three basic modules, representing altogether 10 ECTS.

Part III - It refers to conducting a research study, focusing on contemporary issues relating to business administration, representing 120 ECTS.

Part IV - It refers to the writing stage of the doctoral dissertation, which is credited with 50 ECTS. The doctoral dissertation could take the form of an extensive monograph or a combination of three related articles focusing on a specific research area. The research dissertation must be an original work that makes a significant contribution to the pertinent scientific field. The aim is to produce research results that are publishable in refereed international scientific journals.

Type of Courses Offered

The Programme includes courses which touch on matters of Epistemology, Methods of Quantitative Analysis, Methods of Qualitative Research, Management, Operations Management, and Marketing. The curriculum for each student is adjusted according to his/her scientific field of specialization. The courses offered are the following:

a) Compulsory Core Courses (three courses)

- PBA 660 Advanced Topics in Business Administration (10 ECTS)
- PBA 640 Research Methods in Business Administration I (Quantitative Methods) (10 ECTS). This course can be substituted with the cross-listed course EDU 683 - Education Statistics with Applications of Statistical Packages.
- PBA 631 Research Methods in Business Administration II (Qualitative Methods) (10 ECTS). This course can be substituted with the cross-listed course EDU 682 - Qualitative Research in Education.

b) Elective Courses (selection of three courses from the following list)

- PBA 633 Organisational Theory (10 ECTS)
- PBA 634 Entrepreneurship and Innovation (10 ECTS)
- PBA 635 Strategic Management (10 ECTS)
- PBA 636 Human Resource Management (10 ECTS)
- PBA 641 Operations Management (10 ECTS)
- PBA 642 Supply Chain Management (10 ECTS)
- PBA 643 Service Management (10 ECTS)
- PBA 644 Applied Optimisation Modelling (10 ECTS)
- PBA 645 Planning under Uncertainty (10 ECTS)
- PBA 651 Consumer Behaviour (10 ECTS)
- PBA 652 Marketing Models (10 ECTS)
- PBA 653 International Marketing (10 ECTS)
- PBA 654 Advanced Topics in Marketing (10 ECTS)
- PBA 655 Sales Management (10 ECTS)
- PBA 656 Marketing Management (10 ECTS)

Students can also take elective courses that are offered by the doctoral programmes of other departments of the University of Cyprus, such as those included in the following list:

- EDU 780 Use of Multilevel Modelling Analysis in Educational Research
- EEDU 788 Advanced Level Research Methods
- EPSY 640 Social Influence and Social Representations
- EPSY 713 Experimental Psychology
- EPSY 749 Qualitative Research Methods in Psychology
- EOIK 68 Applied Financial Econometrics

Students who hold a postgraduate degree with courses relevant to those of the Department's Doctoral Programme, can apply to be exempted for a maximum of two courses (compulsory and/or elective) referring to the Programme.

Course Descriptions

a) Compulsory Core Courses

BPA 660 Advanced Topics in Business Administration (10 ECTS)

The course covers advanced cutting-edge topics in various fields of business administration, such as management, marketing, operations management, service management, human resource management, organizational theory and strategic corporate social responsibility. The course includes: (a) lectures by experts in each field addressing significant topics related to the latest scientific developments in business administration; (b) presentations of key research articles/books to inform students about theoretical, methodological, and empirical aspects of business administration; and (c) guest lectures by academics who present their experiences and

knowledge on fundamental business administration topics. This course will help students gain a comprehensive understanding of advanced knowledge in business administration, become familiar with essential methodological tools for conducting research in this field, and stay informed on contemporary scientific issues related to business administration.

BPA 640 Research Methods in Business Administration I (Quantitative Methods) (10 ECTS)

The overall aim of the course is to provide econometric analytical tools to 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) (10 ECTS)

The course comprises three main components: a) it gives students hands-on knowledge on how to conduct a qualitative research, with a particular interest in how to collect and analyse qualitative-type data (e.g., visual methods, narratives, questionnaires, ethnography, biography, interviews), as well as 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.

b) Elective courses

BPA 630 Epistemology: Science Philosophy in Business Administration (10 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. The explicit aim of the course is to provide students with a deeper appreciation for theory building.

BPA 633 Organisational Theory (10 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 and Innovation (10 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 635 Strategic Management (10 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 636 Human Resource Management (10 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 641 Operations Management (10 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 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.

BPA 642 Supply Chain Management (10 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 (10 ECTS)

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 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 (10 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 the following: 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 (10 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 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 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 (10 ECTS)

The course examines fundamental principles, concepts and theories of consumer behaviour, emphasising both the psychological and 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 (10 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 (10 ECTS)

The course introduces the importance of international marketing and the need to adopt global business thinking. It particularly examines concepts, tools, and techniques, which are essential in making effective international marketing decisions. It explains issues pertaining to foreign buyer behavior, as well as the challenges faced by firms due to socio-

cultural, economic, and political differences across foreign markets. It highlights the process of targeting international markets and the alternative modes that the firm can use to enter them. It also analyzes the international marketing strategy, with particular emphasis on the standardization/adaptation issue. It finally examines various theoretical frameworks, analytical methods, and best practices relating to international marketing. Upon the completion of this course, students will acquire a thorough knowledge of international marketing literature and be exposed to cutting-edge issues on the subject. They will also become familiar with the various streams of international marketing research and the underlying theories behind them. The various research methodologies employed to understand international marketing phenomena will also be explained.

BPA 654 Advanced Topics in Marketing (10 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, and the diffusion of technological innovations.

BPA 655 Sales Management (10 ECTS)

The course presents the key topics that concern academic researchers in 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, and identify recent developments, and acknowledge the requirements for publishing in top-tier journals.

BPA 656 Marketing Management (10 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 effective marketing strategies.

RESEARCH INTERESTS OF ACADEMIC STAFF

Angelos Georghiou, Associate Professor

The development of tractable computational methods for the solution of stochastic and robust optimisation problems; The development of tractable computational methods for applications in operations management, healthcare and energy.

Demetris Hadjimichael, 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; Strategic marketing; Socially responsible marketing; Marketing in emerging economies.

Panos Markopoulos, Associate 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 Vladimirov, 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

GRADUATE STUDIES COMMITTEE

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

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Department of Economics

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The Department aims at producing scientific knowledge of an international standard and transferring 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's degree in Economic Analysis (MECA)
- Master's degree in Behavioural Economics (MBEHEC)
- Master's in Business Economics TIME MBE (Technology Innovation Management and Entrepreneurship, offered in collaboration with the University of Crete.)
- Ph.D. in Economics

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 must 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 our 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. Students 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 their research projects or theses. In this environment, our 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. (Paper-based) with a minimum score of 550, or T.O.E.F.L. (Computer-based) with a minimum score 213, 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.

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's 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's 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 Master 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's 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

(ECO 699 – 30 ECTS, MECA)

(ECO697 – 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's degree in Economic Analysis, the requirement is twelve courses or eight courses plus a Master's thesis.

	ECTS
First Semester	
ECO 601 Microeconomic Analysis I	7.5
ECO 602 Macroeconomic Analysis I	7.5
ECO 603 Statistics and Econometrics I	7.5
ECO 604 Analytical Methods in Economics	7.5
Second Semester	
ECO 651 Microeconomic Analysis II (ECO 601)	7.5
ECO 652 Macroeconomic Analysis II (ECO 602)	7.5
ECO 653 Statistics and Econometrics II (ECO 603)	7.5
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.	

MASTER'S IN BEHAVIOURAL ECONOMICS (MBEHEC)

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

	ECTS
Required Courses	
First Semester	
ECO 661 Microeconomics	7.5
ECO 665 Behavioural and Experimental Economics	7.5
One of the following four*:	
ECO 663 Econometrics	7.5
ECO 664 Analysis of Economic and Financial Data	7.5
PSY 604 Multivariate Statistics for the Behavioural Sciences	7.5
PSY 789 Applied Data Analysis I	7.5
One of the following two:	
PSY 713 Experimental Methods in Psychology	7.5
PSY 641 Epistemology and Research Design in the Social Sciences	7.5
Second Semester	
PSY 608 Attention and Perception	7.5
PSY 640 Social Influences and Social Representations	7.5
ECO 675 Behavioural Insights for Policy	7.5
One of the following two:	
PSY 731 Cognitive Neuroscience	7.5
PSY 719 Topics in Neuroscience	7.5
Third Semester	
Master's Thesis	30
* ECO 664 is typically be 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'S 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).

Required Courses	ECTS
First Semester	60
MBE 5101 Business Economics	4
MBE 5102 Economics of Innovation and R&D Spending	4
MBE 5103 Data Analytics and Quantitative Methods	4
MBE 5104 Behavioural Economics	4
MBE 5204 Financial Management for Innovative Firms	3
MBE 5206 Firm Performance Evaluation	4
MBE 5306 New Technology Ventures	3
Second Semester	
MBE 5201 Finance & Accounting for Decision Making	4
MBE 5202 Marketing & Management for Innovative Firms	4
MBE 5203 Competitive Decision Making and Negotiations	3
MBE 5205 Global Economic Challenges	4
MBE 5301 Strategy for R&D Intensive Firms	4
MBE 5302 Decision Making for Innovative Ventures	4
MBE 5303 Intellectual Property Rights and Technology Transfer	4
MBE 5304 Use of Innovation and Knowledge in R & D Intensive Firms	4
MBE 5305 Skills for Small Firm Development	3
Summer Semester	
MBE 5400 Internship	15
Third Semester	
MBE 5500 Master's Thesis	30

** ECO 664 is typically be 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.*

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".
 3. I.E.L.T.S. minimum average score 6.5.
 4. T.O.E.F.L. (Paper-based) with a minimum score of 550, or T.O.E.F.L. (Computer-based) with a minimum score 213, 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, the 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.

To be eligible for admission to take the comprehensive exam, a student needs to achieve an average grade of at least 6.5/10 in the 6 core courses of the first year of the curriculum (Microeconomics, Macroeconomics and Statistics and Econometrics) without failing any class. Students cannot repeat classes in order to improve their grades. However, the Department's Committee of Graduate Studies can, in exceptional circumstances, allow students who have failed one class to repeat it.

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, and for sure not later than the seventh semester of studies (as specified by the University of Cyprus rules).

The comprehensive exam consists of a written and an oral 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 should ensure that it takes place within the required time frame. The three-member committee is appointed by the Departmental Council after a suggestion from 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 on 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.

	ECTS
Compulsory Courses	
ECO 601 Microeconomic Analysis I	7.5
ECO 602 Macroeconomic Analysis I	7.5
ECO 603 Statistics and Econometrics I	7.5
ECO 604 Analytical Methods in Economics	7.5
ECO 651 Microeconomic Analysis II (Prerequisite ECO 651 - 7.5 ECTS)	7.5
ECO 652 Macroeconomic Analysis II (Prerequisite ECO 652 - 7.5 ECTS)	7.5
ECO 653 Statistics and Econometrics II (Prerequisite ECO 653 - 7.5 ECTS)	7.5
ECO 688 Current Topics in Economic Research I	7.5
ECO 788 Current Topics in Economic Research II	7.5
Elective Courses	
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 Micro Econometrics	7.5
ECO 680 Applied Financial Econometrics	7.5

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.
3. 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)

Probability theory. Random sample. Regression, prediction and related notions. The linear (normal) regression model: Estimation, hypothesis testing, misspecification testing. Generalized linear regression. Elements of time-series. Heteroskedasticity and autocorrelation. Dynamic linear regression. Nonlinear regression. Multivariate regression systems. The simultaneous-equation model. Generalized method of moments. Limited dependent variables. Panel data models.

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 understanding 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 663 Econometrics (7.5 ECTS)

Probability theory. Random sample. Regression, prediction and related notions. The linear (normal) regression model: Estimation, hypothesis testing, misspecification testing. Generalized linear regression. Elements of time-series. Heteroskedasticity and autocorrelation. Dynamic linear regression. Nonlinear regression. Multivariate regression systems. The simultaneous-equation model. Generalized method of moments. Limited dependent variables. Panel data models.

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 673 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 675 Behavioural 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 680 Applied Financial Econometrics (7.5 ECTS)

Financial time series and their characteristics; Conditional heteroskedastic models; Nonlinear models and their applications; Continuous-time models and their applications;

Risk management, extreme values, quantile estimation and value at risk; Estimation and tests of asset pricing models, multivariate volatility models; High-frequency data analysis and market microstructure.

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 and systematically analyse the relevant literature and produce the relevant reports.

ECO 691 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 and systematically 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 and 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 literally 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 Behavioural 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 want to be effective negotiators. It starts by describing and analyzing 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.

The course 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.
- Principles of International Financial Risk Management.

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 understanding 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, Assistant Professor

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 Flori – 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, Emeritus 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, Assistant Professor

Applied and quantitative macroeconomics; Econometrics.

Nikolaos Tsakas, Associate Professor

Microeconomic theory; Political economy; Experimental economics; Information economics; Networks; Industrial organisation.

Dimitrios Xefferis, 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.

Contact Details

DEPARTMENT SECRETARIAT

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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 it 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 monthly 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 Hernandes (Ph.D. in Economics, Cornell University, Neophyta Empora (Ph.D. in Economics, University of Cyprus), Chrystalla Kapetanidou (Ph.D. in Management, University of Kent), Georgia Katsifaraki (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 individual's 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 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 policymaking, 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.

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Elena Andreou, Professor

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JOINT DEGREE AND OTHER PROGRAMMES

MASTER IN BUSINESS ADMINISTRATION, MBA

(The MBA programme is currently under reconstruction by the Department. All changes regarding the Programme will be announced on its webpage www.ucy.ac.cy/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.

MASTER IN BUSINESS ADMINISTRATION, MBA

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

	ECTS
First Year	
August	
MBA 502 Introduction to Accounting*	1
MBA 503 Introduction to Statistics*	1
September - October	
MBA 544 Business Statistics	3.5
MBA 561 Leading and Managing Organisations	4
November - December	
MBA 511 Financial Accounting for Management Decisions	4
MBA 531 Business Economics	3.5
January - February	
MBA 521 Financial Management	4
MBA 542 Managing Operations	3.5
March - April	
MBA 522 Capital Markets and Investments	4
MBA 541 Methods for Management Decisions	3.5

May - June	
MBA 551 Marketing Management	4
MBA 543 Managing Information Systems	4
Second Year	
September - October	
MBA 566 Leadership	4
MBA 574 Principles of Business Communications	2
November - December	
MBA 512 Managerial Accounting	3.5
MBA 562 Corporate Social Responsibility and Ethics	2
January - February	
MBA 563 Entrepreneurship	4
March - April	
MBA 564 Strategic Management	3.5
Elective Courses	6
May - June	
Elective Courses	6
May - August	
MBA 590 Applied Business Project	21
Grand Total	90-92
* Preparatory course	

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.

Structure

	ECTS
August	
MBA 502 Introduction to Accounting*	1
MBA 503 Introduction to Statistics*	1
September – October	
MBA 544 Business Statistics	3.5
MBA 561 Leading and Managing Organisations	4
MBA 566 Leadership	4
MBA 574 Principles of Business Communications	2
November – December	
MBA 511 Financial Accounting for Management Decisions	4
MBA 531 Business Economics	3.5
MBA 551 Marketing Management	4
MBA 562 Corporate Social Responsibility and Ethics	2
January – February	
MBA 512 Managerial Accounting	3.5
MBA 521 Financial Management	4
MBA 542 Managing Operations	3.5
MBA 563 Entrepreneurship	4
March – April	
MBA 564 Strategic Management	3.5
MBA 541 Methods for Management Decisions	3.5
Elective Courses	6
May – June	
MBA 522 Capital Markets and Investments	4
MBA 543 Managing Information Systems	4
Elective Courses	6
May – August	
MBA 590 Applied Business Project	21
Grand Total	90-92
* Preparatory course	

Elective Courses for the MBA Programmes (part and full-time)

	ECTS
MBA 513 Corporations and Capital Markets	4
MBA 516 Corporate Governance	2
MBA 530 From Theory to Practice	2
MBA 535 Machine Learning in Management	2
MBA 536 Technology and Business Transformation	2
MBA 565 Human Resource Management	4
MBA 567 Managing Change	2
MBA 568 Negotiations	2
MBA 569 Crisis Management	2
MBA 570 Creativity and Innovation	2
MBA 573 Emotional Intelligence	2
MBA 576 Managing Diversity	2
MBA 577 Creativity and Organisations	2
MBA 552 Digital Marketing	4
MBA 557 Sales Management	2
MBA 558 Consumer Behaviour	2
MBA 545 Service Management	4

Core Course Descriptions

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. The 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 the following: 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.

M.A. in Design for Social Innovation

Jointly offered online by the University of Cyprus (UCY) and the Cyprus University of Technology (CUT), with the participation of three departments: the Department of Architecture (UCY), the Department of Business and Public Administration (UCY) and the Department of Multimedia and Graphic Design (CUT).

The Programme, which places an emphasis on practice-based teaching, is:

- Offered online
- Available for both fulltime and part time study
- Εστιάζει στη διδασκαλία μέσω πρακτικής εφαρμογής.
- Offered in English

Introduction

The last decades have revealed that the most complex and critical global challenges transverse disciplines and require support and knowledge that bridges higher education institutions, academic research and professional practice. Challenges that range from health crises, climate change, political and social unrest and economic crises. The United Nation 2030 Agenda for Sustainable Development setting out a 15-year plan to achieve goals to improve the lives of everyone, everywhere has encouraged actions across all sectors and levels towards achieving the 17 Goals adopted by UN Member States. According to a discussion paper from UNDP's Global Centre for Public Service Excellence, social innovations are "new solutions (products, services, models, markets, processes etc.) that simultaneously meet a social need more effectively than existing solutions and lead to new or improved capabilities and relationships and better use of assets and resources."

The M.A. Design for Social Innovation programme is designed for students with a Bachelor level of education, who have a strong interest in developing high-level competences rooted in social science and design theory and practice to build, improve, and evolve skills and capacities necessary for social innovation actions. The departments involved share an ethos of interdisciplinarity in design and innovation and strive to build links between academia and practice bringing to the forefront impactful and evidence-based theoretical and methodological knowledge.

This M.A. builds from the capacities of the institutions and academics involved and a new focus on the role of social innovation as a central component of the United Nations Sustainable Development Goals to address the key social issues that affect human society. The Department of Architecture, the Business and Public Administration department and the Multimedia and Graphic Design department, champion a human-centred strategic approach to empowering its graduates with necessary knowledge to tackle the most complex social challenges in a contextually relevant, impactful, and meaningful way.

The interdisciplinary nature of the Programme allows for knowledge that can be applied across a wide range of creative, social and design fields that benefit from critical design thinking, creative practice, human interaction, development, structure organisation and service systems development. Learners, a global audience, will bring case-studies, perspective, and contextual knowledge from a variety of backgrounds ranging from the global south to the global north creating links between the rich and diverse cohorts and the knowledge and information acquired during the programme. The courses offered aim to create links between academia and practice by offering perspectives from practitioners through case-studies and involvement in the teaching originating from a range of fields such as business, service design, social sciences, visual communication, design systems, social change, innovation, and sustainability.

Programme Aims

The M.A. aims to:

- Provide academic and practice-based knowledge in design, social innovation, and entrepreneurship bridging together theoretical and practical knowledge and experience.
- Develop creativity and innovation skills in the domain of Design and Social Innovation.
- Produce graduates ready to effectively enact real social change, lead multi-disciplinary teams and collaborate in the design and development of successful social innovation enterprises and activities.
- Support the development of new kinds of social innovation practitioners, the producers of social innovations as championed by the UN, through providing key design and leadership skills.

Programme Structure

The Programme offers a flexible admission system (during the spring or winter semester), either in the fall or spring, with a structure that includes three academic terms and a summer period. Students have the option to choose between a thesis or a practical project. They can also select courses that meet their needs.

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.

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 a number of courses, and the completion of either a Diploma Project or a Thesis. 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.

Course Structure

The course structure considers a dual entry point to the programme (on September-Term 1 or on January-Term 2).

	ECTS
Term 1 courses	
DSI 511 Introduction to Social Innovation	7.5
DSI 512 Collaborative Design	8
DSI 513 Social Inclusion and Design	7.5
DSI 514 Research by Design	8
TOTAL	31
Term 2 courses	
DSI 521 Ethnography for Designing Social Innovation	7.5
DSI 522 Sustainable Design Futures	8
DSI 523 Social Entrepreneurship	8
DSI 524 Experimental Design Practices	7.5
TOTAL	31
Summer Term: Offered every summer*	
DSI 531 Summer School Cyprus [elective]	4
Optional Summer School in Cyprus paired with MGA Diploma Project.	
Term 3: Offered every term	
DSI 532 Diploma Project [summer school prerequisite]	24
DSI 533 Master's Thesis	28
TOTAL	28

** Students can choose between a written thesis or a summer school in Cyprus and a linked design diploma project. Both universities are involved in the thesis and summer school & diploma project with the effort coordinated by one of the two in each case.*

Courses Description (Compulsory and Elective Courses)

DSI 511 Introduction to Social Innovation (7.5 ECTS)

This course aims to introduce students to Social Innovation and the dynamic processes underlying transformative social change. The course is designed to provide a comprehensive understanding of the multifaceted concept of Social Innovation, exploring its roots, principles, methodologies, and diverse applications across various sectors. Students will gain knowledge of strategies of change that include the innovative activities of social and political entrepreneurs, activists, organizations, and social movements.

DSI 512 Collaborative Design (8 ECTS)

This course aims at exposing students to methods of collaborative design in the fields of design, architecture, urban design and urban planning fields, through the combination of both active and reflective learning about collaborative practices and methods. The course is designed to provide students with the theoretical framework, the experience, tools, and methods needed to improve design processes in a collaborative, transdisciplinary manner.

DSI 513 Social Inclusion and Design (7.5 ECTS)

The purpose of this course is to introduce basic concepts related to social inclusion and provide practical application of this knowledge so that students develop the ability to create products and solutions that take social inclusion into account. Topics covered include: basic concepts of social inclusion and inclusive design, the value of inclusive design, user capabilities and product interaction, main phases of inclusive concept design, inclusive design practices and tools, auditing inclusive/exclusive design examples and documentation of social inclusion in design. Reference will be made to Sustainable Development Goals that relate with social inclusion -SDG 4, 8, 9, 11 and 16- and the implications of social exclusion, as well as how issues of social inclusion, and specifically issues of gender, affect communities and the society. The main task is the project work, which is carried out in small groups and will be connected to ongoing needs and challenges linked with SDGs.

DSI 514 Research by Design (8 ECTS)

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 design thinking — as a combination of written and design language — 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.

DSI 521 Ethnography for Designing Social Innovation (7.5 ECTS)

If you have ever thought 'this is too theoretical for me' or 'this theory doesn't have a practical application' while taking a course, during these 16 weeks you will be offered a learning opportunity to think creatively and critically on how various theories and methods have been applied by others and how you can adopt and adapt these to suit your practical needs through ethnographic reflection and observation. Moreover, you will get into the habit of being reflective of your own practices to improve your confidence and ability to shift between a reflective mode and rational problem solving. This course will help you apply ethnographic methodologies and theories of design in a broader set of problems in business and society by looking into concepts such as creativity, critical thinking, lateral thinking, divergent thinking, user-centred design, design thinking, framing and others. You will engage individually and in groups in a variety of activities that include writing, creating, peer-reviewing and applying methods in the field.

DSI 522 Sustainable Design Futures (8 ECTS)

Students will learn how to approach the formulation of strategic plans for interventions at the neighbourhood scale following themes introduced during lectures and seminars.

Subjects in this course will vary according to emerging students' needs or requests and the faculty's educational and research interests.

DSI 523 Social Entrepreneurship (8 ECTS)

The course provides the theoretical and practical framework for the study and analysis of social entrepreneurship and innovation. Topics covered include business plans, business modelling, funding sources, intellectual property protection, innovation process and management. Entrepreneurship refers to the process of identification, assessment and development of opportunities, regardless of the resources that we have available to us.

DSI 524 Experimental Design (7.5 ECTS)

This module concerns critical and experimental design practices that are largely research-driven, speculative, and non-solutionist. It zeroes in on a broad array of topics ranging from design as material exploration, post-optimal electronic instruments, design fiction, post-digital objecthood, ludic design, science fiction, "data-things", design as political critique, and others. These are scrutinised with respect to physical objects, software, electronic appliances, speculative fabulation, crafts, contemporary techno-scientific culture, and social activities. Students will review the history and theory behind a broad array of experimental design practices, will analyse and discuss a number of case studies, and, much more importantly, will actively design and selectively produce themselves (individually and in small workgroups) a number of physical, digital, fictional, or hybrid artefacts.

DSI 531 Summer School Cyprus [elective] (4 ECTS)

Optional Summer School in Cyprus paired with MGA Diploma Project.

DSI 532 Diploma Project [summer school prerequisite] (24 ECTS)

This course is a final milestone for the M.A. Design for Social Innovation. It's an elective course as students can choose the alternative final milestone route is the Master's Thesis. This course has as a prerequisite attendance and completion of a Summer School in Cyprus during the summer prior taking this course. The difference being that the Master's Thesis is a more theoretical approach to research in relation to Design for Social Innovation while the Summer School and Diploma Project takes a more practical approach. Both routes meet and align to the overall programme requirements albeit having a different emphasis on the balance between research and practice.

DSI 533 Master's Thesis (28 ECTS)

This course is a final milestone for the M.A. Design for Social Innovation. It's an elective course as students can choose the alternative final milestone route that consists of the Summer School and Diploma Project. The difference being that the Master's Thesis is a more theoretical approach to research in relation to Design for Social Innovation while the Summer School and Diploma Project takes a more practical approach. Both routes meet and align to the overall programme requirements albeit having a different emphasis on the balance between research and practice.

CONTACT DETAILS

For updated information, please refer to the website of the programme at <https://dsi.education/>.

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)

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Faculty of ENGINEERING





DEPARTMENTS

- ARCHITECTURE
- CIVIL AND ENVIRONMENTAL ENGINEERING
- ELECTRICAL AND COMPUTER ENGINEERING
- MECHANICAL AND MANUFACTURING ENGINEERING



Department of Architecture

www.ucy.ac.cy/arch/en

The Department of Architecture, in addition to the five-year Integrated Master in Architecture (M.Arch.), offers a postgraduate programme at doctorate level (Ph.D.) and four (4) Master's programmes (M.Eng., M.Sc., M.A.). Specifically, it offers the following postgraduate programmes:

- Master of Science (M.Sc.) in Advanced Architectural Studies (*starting 2026-27)
- Master of Science (M.Sc.) in Conservation and Restoration of Historic Buildings and Sites (Interdepartmental and Interdisciplinary postgraduate programme)
- Master of Science (M.Sc.) and Master of Engineering (M.Eng.) in Energy Technologies and Sustainable Design (Interdepartmental postgraduate programme)
- Master of Arts (M.A) in Design for Social Innovation (Interuniversity, interdepartmental distance learning postgraduate programme)
- Doctoral Programme (Ph.D.) in Architecture

Introduction

Architecture has many aspects which involve aesthetic, technological, social, cultural, economic and political issues defining the human environment. The Department of Architecture plays an important role in cultivating architectural skills and knowledge through research, and it provides high quality education to students and practitioners of architecture. The Department of Architecture at UCY also facilitates the much-needed dialogue among the various actors in society that are directly or indirectly involved in architectural production.

The aim of the Department of Architecture is the education of architects who can perform worldwide, but who also have the knowledge and sensitivity to respond positively to their local built environment and in Europe. To this end, the Department of Architecture provides degree programmes on a postgraduate level. These graduate programmes emphasise fundamental principles, preparing architects to address social challenges in a rapidly changing environment. Students collaborate with faculty, as well as research and professional actors to engage in research, planning and design in an academic environment.

The Department of Architecture offers four (4) Master's programmes (M.Eng., M.Sc., M.A.), in addition to its Integrated Master in Architecture (M.Arch.), and one programme at doctorate level (Ph.D.):

- **Master of Science (M.Sc.) in Advanced Architectural Studies**
A new programme supporting architectural research in multiple directions with a specific focus on architectural history and theory, architectural technology, architectural communication media, and urban design and planning.
- **Master of Science (M.Sc.) in Conservation and Restoration of Historic Buildings and Sites**
An interdisciplinary programme drawing on the collaboration of the Department of Architecture with

the Department of Civil and Environmental Engineering and the Department of History and Archaeology.

- **Master of Science (M.Sc.) and Master of Engineering (M.Eng.) in Energy Technologies and Sustainable Design**
An interdisciplinary programme offered by the four Departments of the School of Engineering (Department of Architecture, Civil and Environmental Engineering, Mechanical Engineering, and Electrical and Computer Engineering).
- **Master of Arts (M.A) in Design for Social Innovation**
A distance learning programme, offered by the University of Cyprus and the Cyprus University of Technology through the collaboration of three Departments (namely, the Department of Architecture, and the Department of Business and Public Administration of the University of Cyprus, and the Department of Multimedia and Graphic Arts, of the Cyprus University of Technology).
- **Doctoral Programme (Ph.D.) in Architecture**
A programme that supports in-depth research investigations in different directions of architectural design, history, theory, technology and practice.

Financial Support

The University of Cyprus supports many graduate students through teaching assistantships, the number of which fluctuates according to each year's programme of studies, and/or other opportunities of hourly part-time pay for administrative work. The University of Cyprus also announces scholarships for graduate studies and additional funding opportunities. Additionally, a number of students can be financially supported through research programmes.

MASTER OF SCIENCE PROGRAMME (M.Sc.) IN ADVANCED ARCHITECTURAL STUDIES

The Department of Architecture offers a Master of Science degree in Advanced Architectural Studies that aims to create a flexible research and design experimentation platform, based on (i) History, Theory, and Criticism in Architecture, (ii) Digital Technologies and Communication Media in Architecture, (iii) Construction Technology and Sustainable Design, and (iv) Urban Design and Planning. The Programme strengthens the culture of academic research, design experimentation, and research-by-design in ways that intersects all of the above areas, providing also an excellent basis for students who aim to further pursue a Doctoral degree.

Admission Requirements

Applicants to the Master of Science in Advanced Architectural Studies must possess a degree in a related field of study, including Urban Design or Planning, Landscape Architecture, Fine Arts, Art History, Engineering or Computer Science. All degrees must be accredited by KYSATS.

The admissions procedure involves two stages: (1) an online application form, and (2) a personal interview for shortlisted candidates. The positions are announced by the Graduate School and candidates must submit their online application to the Department of Architecture by the announced deadline. Additional documents that need to be submitted include: (a) previous accredited degrees; (b) evidence of qualifications and earlier relevant work; (c) two recommendation letters and Statement of Objectives; (d) a research proposal for the graduate programme.

Applications are evaluated by the Graduate Admissions Committee of the Department of Architecture, which makes suggestions to the Council of the Department for final approval. The following criteria are applied:

- Quality of the applicant's background in breadth and depth, and past performance in their undergraduate and, if applicable, graduate studies.
- Indications of ability for original and innovative research in the proposed area of study.
- Relevance of the proposal to the pedagogical and research directions of the department, the university, and the broader society.
- Availability of graduate positions in the postgraduate programme and the necessary infrastructure and resources to support the proposed postgraduate work.

The Department may also set additional criteria and quality indicators, such as (a) number of students' publications in scientific journals, (b) students' participation in seminars, symposia, research programmes, (c) presentations at conferences, (d) knowledge of foreign languages, (e) professional experience, among others.

Excellent knowledge of the English language is required for admission to the postgraduate programme.

For postgraduate students, up to 1 postgraduate course may be recognised.

Programme of Study

The programme of study leading to the Master of Science in Advanced Architectural Studies requires the completion of a minimum of 90 ECTS in graduate level courses and research work, as listed below:

- Graduate Courses (24 ECTS).
- Graduate constrained elective courses from a pool related to the selected focus of postgraduate study (32 ECTS).
- Postgraduate Thesis Research (34 ECTS).

Students must select, in consultation with their advisors, the courses that will help them in the completion of their postgraduate thesis.

The language of instruction is English

Postgraduate Thesis

A Master's degree thesis is a mandatory deliverable for the degree's completion. It should include a text of typically 10,000 words or a design proposal accompanied by a text of 3,000 words.

The quality standards of postgraduate theses must comply with the UCY general rules on postgraduate degrees as determined by the Department of Architecture. Master's degree theses are independently evaluated by at least two evaluators, and are qualitatively rated as Excellent, Very Good, Good, and Fail.

If the submitted thesis is unsuccessful, the student has the option to resubmit within a subsequent period of eight (8) semesters. The Department is responsible for procedural guidance in this case.

List of Courses

	ECTS
Compulsory Courses	
ARH 500 Research Methodologies	8
ARH 502 Design Research Methods	8
ARH 505 Graduate Colloquium	8
Constrained Elective Courses	
APH 504 Independent Study	8
Architectural History and Theory	
ARH 510 Theories of Architecture	8
ARH 511 Architecture and the Critical History of Ecology	8
ARH 512 Architecture in Philosophy	8
ARH 514 Theories of Architectural Design and Review of Design Applications	8
ARH 516 Buildings in History	8
ARH 517 History and Critical Analysis on Conservation	8
ARH 518 History, Historiography, and Criticism	8
ARH 519 Advanced Topics in Architectural Theory and History	8

Architectural Communication Media

ARH 520 Theoretical Investigations in Visual Communications	8
ARH 522 Advanced Computer-Aided Design Topics	8
ARH 524 Virtual Reality and the Built Environment	8
ARH 526 Perception and Cognition in Architecture	8
ARH 529 The Moving Image as Design Research Tool	8

Architectural Technology

ARH 530 Advanced Building Technology	8
ARH 532 Construction Design	8
ARH 534 Structural Building Design	8
ARH 536 Advanced Construction Materials Technology	8
ARH 538 Environmental Building Design	8
ARH 539 Advanced Topics in Architectural Technology	8
ARH 550 Special Topics on Recording and Documenting Buildings and Sites	8

Urban Planning / Urban Design

ARH 528 Architecture's social practices and their political agencies	8
ARH 540 Mediterranean Cities and Social Phenomena	8
ARH 542 Design and Urban Ecologies	8
ARH 544 Urbanism in History	8
ARH 546 Urban Design and Planning	8
ARH 548 Landscape Architecture and the Urban	8
ARH 549 Advanced Topics in Urban Planning	8

Research Courses

ARH 801 Graduate Dissertation - Research Stage I	6
ARH 802 Graduate Dissertation - Research Stage II	6
ARH 803 Graduate Dissertation - Research Stage III	6
ARH 805 Graduate Dissertation - Writing Stage I	16

INTER-DEPARTMENTAL PROGRAMMES AND OTHER INTERDISCIPLINARY PROGRAMME

Regarding the interdepartmental and other interdisciplinary graduate programmes, in which the Department of Architecture participates, you will find information as below, in the section Interdepartmental Programmes. More specifically, in this section you may be informed about the M.Sc. and M.Eng. in Energy Technologies and Sustainable Design, the M.Sc. in Conservation and Restoration of Historic Buildings and Sites, and the M.A. in Design for Social Innovation.

DOCTOR OF PHILOSOPHY DEGREE (Ph.D.)

The aim of the Ph.D. Programme in Architecture is to promote scholarly research leading to knowledge production and innovation according to international standards of excellence, in the broader discipline of Architecture. The Ph.D. degree is research oriented, with an international and interdisciplinary outlook, while allowing opportunities for interrogating local architectural particularities. The thematic content of the

specific courses offered each semester draws on the educational and research expertise of the faculty.

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. Dissertation. The minimum duration of the Ph.D. Programme in Architecture for full-time students is 6 semesters. The language of instruction is at this point Greek.

Research Areas

The Ph.D. programme in architecture supports the following directions:

- 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/el/staff/academic.

Admission Requirements

Applicants to the Programme must possess an Architecture Degree (5-year course of study, such as an M.Arch.), 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 before the announced deadline.

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.

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. Dissertation 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.

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 of the intended research area.

The CE is shaped by at least three professors and covers three subject areas related to the Ph.D. research. For the written examination, a grade of at least 50% in each of the three areas is required. The oral examination must be completed 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 Defense

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

For more information on the comprehensive examination, the dissertation proposal, the doctoral dissertation and the dissertation defense, 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.

List of Courses

	ECTS
Compulsory Courses	
ARH 500 Research Methodologies	8
Constrained Elective Courses	
ARH 502 Design Research Methods	8
ARH 504 Independent Study	8
Architectural History and Theory	
ARH 510 Theories of Architecture	8
ARH 511 Architecture and the Critical History of Ecology	8
ARH 512 Architecture in Philosophy	8
ARH 514 Theories of Architectural Design and Review of Design Applications	8
ARH 516 Buildings in History	8
ARH 517 History and Critical Analysis of Conservation	8
ARH 518 History, Historiography and Criticism	8
ARH 519 Advanced Topics in Architectural Theory and History	8
Architectural Communication Media	
ARH 520 Theoretical Investigations in Visual Communications	8
ARH 522 Advanced Computer Aided Design Topics	8
ARH 524 Virtual Reality and the Built Environment	8
ARH 526 Perception and Cognition in Architecture	8
ARH 529 The Moving Image as Design Research Tool	8
Architectural Technology	
ARH 530 Advanced Building Technology	8
ARH 532 Construction Design	8
ARH 534 Structural Building Design	8
ARH 536 Advanced Construction Materials Technology	8
ARH 538 Environmental Building Design	8
ARH 539 Advanced Topics in Architectural Technology	8
ARH 550 Special Topics on Recording and Documenting Buildings and Sites	8
Urban Planning / Urban Design	
ARH 528 Architecture's social practices and their political agencies	8
ARH 540 Mediterranean Cities and Social Phenomena	8
ARH 542 Design and Urban Ecologies	8
ARH 544 Urbanism in History	8
ARH 546 Urban Design and Planning	8
ARH 548 Landscape Architecture and the Urban	8
ARH 549 Advanced Topics in Urban Planning	8
Doctoral Research Courses	
ARH 602-609 Ph.D. Research	
ARH 610-611 Writing Stage	
ARH 613 Dissertation Proposal	0
ARH 700 Comprehensive Examination	0

Course 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.

Compulsory - Master of Science (M.Sc.) in Advanced Architectural Studies

Για το μεταπτυχιακό πρόγραμμα **Μάστερ Επιστήμης (M.Sc.) σε Προχωρημένες Σπουδές στην Αρχιτεκτονική**.

ARH 500 Research Methodologies (8 ECTS: 3-0-12)

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.

APH 502 Design Research Methods (8 ECTS: 3-10-2)

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.

** The course is offered as an elective in the Doctoral Programme (Ph.D) in Architecture*

ARH 505 Graduate Colloquium

This is a colloquium of invited guests geared to acquainting students with the various thematic concentrations offered by the programme, their spectrum of knowledge basis and relevant study and research tools and methodologies for investigation.

Compulsory - Doctoral Programme Ph.D. in Architecture

ARH 500 Research Methodologies (8 ECTS: 3-0-12)

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.

Constrained Elective Courses

Master of Science (M.Sc.) in Advanced Architectural Studies / Doctoral Programme (Ph.D) in Architecture

APH 504 Independent Study (8 ECTS)

Individual Independent Study or research supervised by academic staff.

Architectural History and Theory

ARH 510 Theories of Architecture (8 ECTS: 3-0-12)

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.

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 512 Architecture in Philosophy (8 ECTS: 3-0-12)

Consideration of the reciprocal relation between Architecture and Philosophy, throughout the historical and geographic spectrum of 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.

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/ornament, 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, plastics, 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 architects 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 Ph.D. 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.

Research Master's Courses

ARH 801 Graduate Dissertation - Research Stage I of the
Master's Degree (6 ECTS)

ARH 802 Graduate Dissertation - Research Stage II of the
Master's Degree (6 ECTS)

ARH 803 Graduate Dissertation - Research Stage III of the
Master's Degree (6 ECTS)

ARH 805 Graduate Dissertation – Writing Stage I of the
Master's Degree (6 ECTS)

All 8XX courses listed above are meant to allow advisors and advisees to set research goals in preparation of tackling a thesis research question and to devise a roadmap for addressing it. Their effect is expected to be cumulative culminating in the comprehensive submission of a graduate and research-oriented thesis.

RESEARCH INTERESTS OF THE ACADEMIC STAFF

Konstantinos Avraamides, Assistant Professor

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, Assistant Professor

Architecture and performance: Theory and practice; Architecture and the moving image; Communication media in architecture; Architectural design.

Odysseas Kontovourkis, Associate 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, Associate Professor

Energy and environmental design of buildings; Architectural technology; Integrated architectural design and technology; Advanced building envelope design; Innovative & sustainable construction components and materials.

Savia Palate, Lecturer

Architectural history, theory, and criticism; Media and methods of architectural historiography; Architecture and histories of colonialism; Contested and shared architectural heritage; Design-by-words.

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, Professor

Urban design and planning; Critical spatial practices; Research by design; Architecture as politics; Contested spaces and conflicts; Urban commons.

Contact Details

DEPARTMENT SECRETARIAT

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Department of Civil and Environmental Engineering

www.ucy.ac.cy/cee/en

The Department of Civil and Environmental Engineering (CEE) offers graduate studies programmes both at the level of Master (M.Eng., M.Sc.) and at the Doctoral level (Ph.D.). In particular, the CEE Department offers, in total, 6 postgraduate titles at 3 levels of study, Master of Engineering (M.Eng.), Master of Science (M.Sc.), and Doctor of Philosophy (Ph.D.):

- Master of Engineering (M.Eng.) in Civil Engineering
- Master of Engineering (M.Eng.) in Environmental Engineering
- Master of Science (M.Sc.) in Civil Engineering
- Master of Science (M.Sc.) in Environmental Engineering
- Master of Engineering (M.Eng.) in Natural Gas in Energy Transition
- Master of Science (M.Sc.) and Master of Engineering (M.Eng.) in Energy Technologies and Sustainable Design (Interdepartmental)
- Master of Science (M.Sc.) in Conservation and Restoration of Historic Buildings and Sites (Interdepartmental & Interdisciplinary)
- Doctor of Philosophy (Ph.D.) in Civil Engineering
- Doctor of Philosophy (Ph.D.) in Environmental Engineering

MASTER OF ENGINEERING / MASTER OF SCIENCE (M.ENG., M.SC.)

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, with the Master of Science focusing on research, having a small 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 (M.Sc. to M.Eng. or M.Eng. to M.Sc.) is allowed only after approval by the CEE Department's Council of a relevant application by the student. The Department's Council reserves the right for a mandatory transfer from the M.Sc. to the M.Eng., in case of unsatisfactory progress in the completion of the required research/ thesis.

Civil Engineering Master's Specializations

The Master of Engineering and Master of Science (M.Eng. and M.Sc., respectively) in Civil Engineering are offered in four (4) specializations as listed below; to specialize in any of these areas, the graduate must fulfill certain course and research work requirements:

1. Structural Analysis and Earthquake Engineering
2. Novel and Traditional Construction Materials
3. Geotechnical Engineering
4. Construction and Transport Infrastructure Management

More specifically, the Master of Engineering and Master of Science degrees (M.Eng. and M.Sc.) courses are grouped into four categories of courses (Annex-1), from which each student must successfully attend a specific number of courses in order to fulfill the requirements of the specialty thrust selected, as follows:

Categories	Description
A	Basic specialization graduate courses
B	Elective specialization graduate courses
C	CEE graduate courses other than those in categories A and B
D	UCY graduate courses

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:

Courses:	A	B	C	D
M.Eng.	≥5	≤5	≤1	≤1
M.Sc.	≥ 4	≤3	≤1	

Therefore, for 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 specialization. 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 specialization.

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 can be from outside of the course catalog for Environmental Engineering (Annex-3). After approval from the student's research supervisor, a second course from outside the catalog can be taken.

MASTER OF ENGINEERING IN CIVIL ENGINEERING AND MASTER OF ENGINEERING IN ENVIRONMENTAL ENGINEERING (M.Eng.)

The degree of Master of Engineering (M.Eng.) in Civil Engineering, or Master of Engineering (M.Eng.) in Environmental Engineering is awarded to graduate students of the Department of Civil and Environmental Engineering, upon successful completion of the M.Eng. Academic programme of studies.

The required workload for the Master of Engineering in either Civil or Environmental Engineering corresponds to the successful completion of 90 ECTS: 10 graduate courses (80 ECTS), a research project (CEE 689, 10 ECTS), as well as attendance at 8 Seminars for Postgraduate Students (CEE 610) offered by the CEE Department. Note that the Independent Study (CEE 650) cannot be counted towards fulfilling the required course load for the M.Eng. Degree.

Requirements for Master of Engineering (M.Eng.)

	ECTS
Postgraduate courses: (10 courses of 8 ECTS each)	80
CEE 610 Seminar for Postgraduate Students (8 attendances)	0
CEE 689 Research Project	10
Total	90

The maximum allowable duration of graduate studies toward the Master of Engineering degree is eight academic semesters.

The following table presents a sample academic programme of studies leading to an M.Eng. in Civil Engineering (in one of the four thrusts of specialization), or an M.Eng. in Environmental Engineering, which can be completed in 1.5 calendar years.

	ECTS
First Semester (Fall)	
4 Graduate Courses (4x8)	32
Total	32
Second Semester (Spring)	
3 Graduate Courses (3x8)	24
CEE 689 Research Project	5
Total	29
Summer	
Third Semester (Fall)	
3 graduate courses 3x8	24
CEE610 Graduate Seminar	0
CEE689 Research Project	5
Total	29

MASTER OF SCIENCE IN CIVIL ENGINEERING AND MASTER OF SCIENCE IN ENVIRONMENTAL ENGINEERING (M.Sc.)

The M.Sc. degree is awarded to a graduate student of the CEE Department, upon successful completion of the required number of courses, according to the graduate programme of studies, and upon authoring and successfully defending in public, an M.Sc. thesis. Depending on the scientific topic of the student's Thesis and the programme of graduate courses attended, the student is awarded either an M.Sc. in Civil Engineering (in one of the 4 specializations), or an M.Sc. in Environmental Engineering.

The required workload for the M.Sc. in Civil Engineering and the M.Sc. in Environmental Engineering corresponds to the successful completion of at least 110 ECTS: 7

graduate courses (56 ECTS), a research Thesis (CEE 680, 54 ECTS), as well as attendance at 8 sessions in the Postgraduate Student Seminar Series (CEE 610) offered by the CEE Department.

Requirements for the Master of Science (M.Sc.)

	ECTS
Graduate courses: (7 courses of 8 ECTS)	56
CEE 610 Seminar for Postgraduate Students (8 attendances)	0
CEE 680 Thesis Research	54
Total	110

The M.Sc. degree requires the successful completion of original research work and a corresponding M.Sc. Thesis (CEE 680), which should be successfully presented and examined. The topic of the student's research is chosen in consultation with the advisor (supervisor) of the thesis. The student must submit copies of the thesis to the members of the Thesis Committee at least 1 week prior to its defense. The thesis defense is open to the public and consists of a presentation by the candidate, which should 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 defense presentation, and in the event that these are deemed inadequate, the Committee will suggest the appropriate revisions to the thesis and a corresponding timeline for the candidate to make those revisions.

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

If the thesis is rejected, the candidate may request a second opportunity to defend their research. In that case, the time and terms for resubmission and defense 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.

The maximum allowable duration for obtaining a Master of Science Degree is eight academic semesters.

The following table presents a sample academic programme of studies leading to an M.Sc. in Civil Engineering (in one of the five thrusts of specialization), or an M.Sc. in Environmental Engineering. The Programme can be completed in 1.5 calendar year,

provided that the student will perform part of the research required during the summer months, between the 2nd and the 3rd academic semesters.

	ECTS
First Semester (Fall)	
4 Graduate Courses (4x8)	32
Total	32
Second Semester (Spring)	
3 Graduate Courses (3x8)	24
CEE680-683 M.Sc. Research	6
Total	29
Summer	
CEE680-683 M.Sc. Research	17
Total	17
Third Semester (Fall)	
CEE610 Graduate Seminar	0
CEE680-683 M.Sc. Research	31
Total	31

The course "Independent Study" (CEE 650) can be counted as one graduate course for the specializations 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 specialization as a course of group A or B. A student may be credited 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 up to 16 ECTS, provided that these courses have not been counted towards acquiring another postgraduate title.

Research Advisor (Supervisor)

After the M.Sc. student and her/his supervisor have mutually agreed to pursue their research collaboration, the student must submit to the Graduate Studies Committee a memorandum of understanding, signed by the academic advisor who has taken the student under their supervision. The academic advisor supervises the student's research or other work and offers the necessary guidance. The academic advisor is also responsible for recommending to the Department's Faculty Council for approval, through the Graduate Studies Committee, the suggested members of the student's Thesis 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.

MASTER OF ENGINEERING (M.ENG.) IN NATURAL GAS IN ENERGY TRANSITION

The self-funded Master of Engineering (M.Eng.) in Natural Gas in Energy Transition is specifically designed to address the upstream and mid-stream aspects of the natural gas and oil industry, in the context of transitioning towards a zero-emissions target by 2050. The Programme aims to prepare individuals for the emerging opportunities in the deep-water regions of the East Mediterranean, where the hydrocarbon industry is expected to expand. The program is offered in English, and tuition fees for Cypriot citizens are covered by the Ministry of Energy, Commerce, and Industry (Cyprus).

For more information please visit:

<https://www.ucy.ac.cy/nge/>

The Programme's strength lies in its holistic approach, covering various subjects such as exploration, development, and production. These subjects are taught by instructors who possess extensive experience in the Oil & Gas industry. By offering a complete understanding of the industry, the Programme equips students with the necessary knowledge and skills to meet the workforce demands of the hydrocarbon sector.

The duration of the Master in Natural Gas in Energy Transition is 18 months and includes 90 ECTS. It offers a comprehensive curriculum covering various aspects of the natural gas and oil industry. Students enrolled in this programme will delve into topics such as energy outlook, hydrocarbon exploration, drilling operations, reservoir engineering, and environmental assessment. They will gain a deep understanding of the industry's technical, legal, and economic dimensions, including hydrocarbon law, seismic data processing, well completions, and production facilities. The Programme also emphasizes the importance of health, safety, and environmental considerations in petroleum operations. Through a combination of theoretical courses, hands-on projects, and seminars by industry experts, students will acquire the knowledge and skills necessary to contribute to the energy transition while ensuring efficient and sustainable hydrocarbon production and utilization.

Throughout the Programme, the students will also gain practical skills, including teamwork, presentation, and negotiation. The assessment is based on written reports, group presentations, and participation in seminars. The program also provides access to advanced computer hardware and industry-standard software for project work.

Requirements for Master in Natural Gas in Energy Transition

	ECTS
Postgraduate courses:	72
Seminar for Postgraduate Students (8 attendances):	2
Field Development Plan (Project):	16
Total	90

The following table presents the full list of courses offered which are completed in 18 months.

Course No.	Course Title	ECTS
NGE 501	Natural Gas Production in Energy Transition	8
NGE 511	Petroleum Geology	8
NGE 513	Formation Evaluation	8
NGE 521	Drilling Operations	8
NGE 522	Well and Subsea Completions and Production Facilities	8
NGE 531	Reservoir Engineering	8
NGE 532	Natural Gas Production Engineering	8
NGE 502	Hydrocarbon Law & Economics	4
NGE 503	Health, Safety and Environmental Assessment and Control in Petroleum Operations	4
NGE 512	Applied Geophysics: Seismic Interpretation	4
NGE 541	Petroleum Geomechanics	4
NGE 551, NGE 552	Project in Hydrocarbon Exploration and Production -Part1, -Part2	16
NGE 561, NGE 562	Seminars related to Hydrocarbon and Energy	2

COURSE DESCRIPTIONS

NGE 501 Natural Gas Production in Energy Transition (8 ECTS)

Energy outlook, oil and gas industry, basic fluid mechanics, hydrocarbon origin and migration, nature of oil and gas reservoirs, petroleum exploration, drilling, formation evaluation, completion and production, reservoir engineering methods of oil resource estimation and optimization, surface facilities, enhanced oil recovery, technologies on energy transition.

NGE 502 Hydrocarbon Law & Economics (4 ECTS)

History and evolution of oil and gas law, Cyprus Hydrocarbon Law, regulatory agencies, production sharing agreements, joint operating agreements, unitization agreements, basics of contract law and marketing, case studies. Fiscal systems, cash flow and economic indicators, upstream petroleum economics, midstream and downstream petroleum economics, managing and mitigating uncertainty and risk, sensitivities, simulations and decision analysis, valuing petroleum assets, portfolios and companies

NGE 503 Health, Safety & Environmental Assessment and Control in Petroleum Operations (4 ECTS)

Impact of drilling, completion and production operations, environmental transport of petroleum wastes, planning for health, safety & environmental protection, waste treatment methods, waste disposal methods, remediation of contaminated sites, environmental regulations, sensitive habitats, emission control, Strategic Environmental Assessment (SEA) and Environmental Impact Assessment (EIA).

NGE 511 Petroleum Geology (8 ECTS)

Basics of petroleum geology, geological time, plate tectonics, structural types and stratigraphies, rock type characteristics and identification, age determination, paleontology, engineering geology. Basin analysis, prospect generation based on a model system, source rocks, oil generation and maturation, migration of fluids, trapped structures and seal. Seismic and log correlation, risk assessment, analysis, modeling and simulation.

NGE 512 Applied Geophysics: Processing, Imaging and Interpretation (4 ECTS)

Principles of geophysics: Potential and imaging techniques, gravitational, electromagnetic and seismic data acquisition including instrumentation for land and marine surveys. Processing of seismic reflection data: Wave equation, Fourier analysis, deconvolution, velocity analysis and statics correction, stacking, migration. Advanced topics: full-waveform inversion and seismic anisotropy. Seismic interpretation: Stratigraphic and structural systems. Marine sedimentological systems, sedimentary sequences, and unconformities in time and space, time evolution of buried channels. Identification of faulting systems, faults reactivation. BSR and gas hydrates, sedimentary structure of continental margins, transform basins. Practical training in 2D and 3D seismic data.

NGE 513 Formation Evaluation (8 ECTS)

Essential formation evaluation measurements, Resistivity measurements, Nuclear measurements, Log Evaluation Procedure, Clean formation evaluation, Shaly sands, NMR Measurements, Sonic measurements, Carbonates, complex lithology, Probabilistic, evaluation, Geochemical Measurements, Wireline formation testing, Permeability evaluation, Dipmeter and imaging measurements, Fractured reservoirs evaluation.

NGE 521 Drilling Operations (8 ECTS)

Introduction to drilling engineering and operations, budgeting, equipment, rig design, drilling risers, wellheads and blow-out prevention (BOP), string design, drilling bits, drilling hydraulics, fluid systems, drilling fluids, casing design, pore pressure and fracture pressure prediction, mud-density, basic well control, horizontal drilling, multilateral drilling, drilling measurements. Deep water platforms, floating drilling vessels, types of motion, station keeping, motion compensation, special problems in floating drilling, shallow water flows, drilling deep water, high pressure risers, deep water casing design and running procedures, deep water cementing, deep water well control.

NGE 522 Well and Subsea Completions and Production Facilities (8 ECTS)

Well completions: inflow and outflow performance, production analysis of subsurface systems, well completion methods and procedures, perforating techniques, formation damage, flow restrictions, fracturing process, sand control methods, producing bottom hole pressure (BHP), tubing selection, design, and installation, single and multi-phase flow in piping, gas lift, electrical submersible pump (ESP), hydraulic pumping, cavity pumping (PCP), plunger lift. Subsea completions and production facilities: offshore production, design and building blocks of subsea engineering, different types of subsea completions, flow assurance, subsea production systems and equipment, production control systems, costs of subsea equipment, operations, maintenance and integrity of subsea systems, advanced and new subsea technologies, Most

Efficient Rate (MER), choke design, productions systems, gas and oil measurement, control systems, safety systems, production systems, optimization of operations. Design and codes, construction, corrosion, maintenance, regulations, decommissioning

NGE 531 Reservoir Engineering (8 ECTS)

Material balance concepts, phase behavior, fluid saturations, compressibility, wettability and capillary, permeability and relative permeability, porosity, Darcy's law, pressure drop, diffusivity, flow regimes, steady-state, pseudo-steady-state and transient flow, radial flow, well models, skin factors. Reservoir types, reservoir drive mechanisms, reserves determination, deterministic (volumetric & material balance) and probabilistic techniques, production forecast using decline analysis empirical methods, non-conventional gas reservoirs, well test design, planning and analysis, reservoir damage, fluid coning and water influx, secondary and tertiary recovery, schemes. Planning, predicting oil recovery and performance, reservoir monitoring, horizontal well application, enhanced oil recovery, water-flooding

NGE 532 Natural Gas Production Engineering (8 ECTS)

Gas reservoirs, properties of natural gases, PVT modeling, gas-wellbore performance, gas well test, gas-wellhead choke performance, deliverability of gas wells, horizontal wells, smart wells. Gas condensates, liquid separation process of natural gases, vertical lift, separation equipment, gas processing and treatment, CO₂ and H₂S removal, fractionation and adsorption, dehydration processes of natural gases, gas-metering techniques. Transportation and storage of natural gases, pipelines and compressed natural gas (CNG), compression and cooling of natural gases, thermodynamics of LNG processes, heat transfer, pumps, refrigeration, fractionation/ distillation, LNG liquefaction technologies. Gas to liquids (GTL), economics analysis of production.

NGE 541 Petroleum Geomechanics (4 ECTS)

Elasticity and plasticity theories and rock failure mechanisms, acoustic wave propagations in rocks, mechanical properties from laboratory tests and field data, stresses around wellbore and failure mechanisms. Applications: wellbore stability, sand prediction, fracturing, reservoir compaction, casing collapse, subsidence, CO₂ geological storage.

NGE 551, NGE 552 Project in Hydrocarbon Exploration and Production (16 ECTS)

The objective of the project is to integrate the topics studied in the courses. Groups of about 8-10 students are provided with field data available to the contractor before the field development decision. The team will describe the exploration and development of the prospect, followed by a production plan. The team must create the plan of the infrastructure to produce, transport and market the hydrocarbons.

During the project period students will attend a series of technical lectures on major work processes and technical decisions involved in exploration, development and operation of hydrocarbon fields. The lectures will review the life cycle of a field from prospect identification, exploration and production access rights and license, discovery, appraisal, commerciality decision, planning and design, project development, commissioning and production startup, production plateau period, production decline, production shutdown, field abandonment and facilities decommissioning.

The project students will have access to state-of-the-art computer hardware and industry standard software. The total project deliverables will include a written report with references to the geology, field development engineering, production processes and project economic. The student will be exposed to a range of transferable skills such as teamwork, presentation and negotiation. The assessment will be based on the written report and to group presentation.

NGE 561 Fall Semester Seminars on Hydrocarbon Production and Energy Transition (1 ECTS)

During the fall semester, the students registered in the Programme must attend a number of seminars given by academic and professional experts in the field of exploration and exploitation of hydrocarbons and energy transition.

NGE 562 Spring Semester Seminars on Hydrocarbon Production and Energy Transition (1 ECTS)

During the spring semester, the students registered in the programme must attend a number of seminars given by academic and professional experts in the field of exploration and exploitation of hydrocarbons and energy transition.

DOCTOR OF PHILOSOPHY (Ph.D.)

A graduate student (Ph.D. candidate) is awarded by the CEE Department a Doctorate (also referred to as a Degree of Doctor of Philosophy, Ph.D.) upon successful completion of the required number of courses, according to the graduate programme of studies, successful completion of a qualifying examination, as well as authoring and successfully defending a Ph.D. Thesis in public, as described in detail below. Depending on the research area of the student's Thesis, the student is awarded either a Ph.D. in Civil Engineering or a Ph.D. in Environmental Engineering.

Research Advisor (Supervisor)

The doctoral student must find a thesis advisor at the latest within the first semester of studies after admission to the program. Once the doctoral student and their academic advisor have come to a mutual understanding regarding their collaboration in research, the doctoral student must submit to the Graduate Studies Committee a memorandum of understanding, signed by the academic advisor who has taken the student under their supervision. The research/thesis advisor is responsible for monitoring the research work of the Ph.D. candidate and for providing the necessary guidance for the completion of the doctoral research.

Programme of Study

The minimum length of study for the degree, for full-time students in the CEE Department is six academic semesters and the maximum allowable length of study is eight academic years. The required workload for the Ph.D. in Civil Engineering and the Ph.D. in Environmental Engineering corresponds to the successful completion of at least 240 ECTS: 10 graduate courses (80 ECTS), a

research Thesis (CEE 690, 160 ECTS), as well as attendance at 16 sessions of the Departmental Seminar Series offered for Postgraduate Students (CEE 610) by the CEE Department.

Requirements for Doctor of Philosophy (Ph.D.)

	ECTS
Graduate courses: (10 courses of 8 ECTS: 80 ECTS in total)	
• Graduate CEE courses related to the Ph.D. research	48
• Graduate courses in/outside CEE programmes	32
CEE 610 Seminar for Postgraduate Students (16 attendances)	0
CEE 690 Thesis Research	160
Total	240

Graduate CEE courses related to the Ph.D. research should all be from the list of courses relevant to the degree sought (civil engineering or environmental engineering), as listed in Annex 2 or 3, respectively.

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 after approval from 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 they have already attended successfully. These 56 ECTS count towards fulfillment 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 fulfillment of the required 80 ECTS coursework, the student must choose and successfully attend courses that are not the same or similar to those credited from previous studies.

Students should 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 approved by his/her advisor. For the selected courses to count towards the requirements of the Ph.D. programme, the

CEE Graduate Studies Committee must approve the petition before the student registers for the respective courses.

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.

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 specialized knowledge and understanding of the intended research area.

The topics in the qualifying examination cover three areas of study and are given by at least three faculty members, with an equal score weight (1/3) for each topic. The weight per member of the Qualifying Exam Committee in 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 Department's 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 should ensure that the topics per examination area and student are of uniform depth and level of difficulty at each examination period. The qualifying exam has a duration of 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 has the right to be examined only 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. Hence, the student has the right to transfer to the re-examination those scores that are $\geq 50\%$ from the first examination in one or two of the areas examined, provided that all three scores obtained in the first examination were $\geq 40\%$.

The qualifying examination must be taken within the first 4 academic semesters from the candidate's entry into the Ph.D. programme. The exam is given at 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, in-depth awareness of the relevant literature and the research methodology to be employed. The proposal presents the work done on the topic by the student up to that stage, 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 for 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 to each candidate by the Department's Council, upon recommendation from 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 a research center. The oral presentation given to the three-member Doctoral Examination Committee should not exceed 30 minutes and is followed by a discussion with the Committee members. If the Committee members have concerns about either the substance of the proposal or the students' understanding of the topic, then the student will 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

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 satisfaction of basic conditions, as these are stated by the University's Senate (Rules of Study and Student Issues of the University Cyprus and Graduate Studies Regulations). It is therefore imperative that all doctoral students study this guideline carefully.

Dissertation Defence

Each doctoral candidate is required to defend the originality and quality of research during an oral dissertation defense, which is administered by the Examination Committee, consisting of at least 5 members. This Committee is assigned by the Department's Council, upon recommendation of the Department's Graduate Studies Committee in consultation with the candidate's academic advisor. The Examination Committee includes 3 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 defense, 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 defense and must also arrange for the issuance of a public notification of the upcoming defense by the CEE Graduate Studies Committee.

A thesis defense 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 defense, the Examination Committee submits in writing to the CEE Chairperson its justified recommendation together with possible comments on the candidate's Thesis. The Chairperson forwards the Committee's recommendation to the University Senate for approval. In the event that 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 defense one more time. In this case, the terms for resubmission of the dissertation must be set out in writing by the Examination Committee.

APPENDIX 1 COURSE CATEGORIES FOR CIVIL ENGINEERING SPECIALIZATIONS

1. Structural Analysis and Earthquake Engineering

Category-A (Basic Courses)

CEE 501	Advanced Computer-Aided Structural Analysis
CEE 521	Structural Dynamics and Earthquake Engineering
CEE 523	Passive and Active Control of Structural Systems
CEE 526	Finite Element Methods
CEE 528	Advanced Topics in Structural Analysis
CEE 531	Seismic Behavior and Assessment of Reinforced Concrete Structures
CEE 537	Repair and Strengthening of Structures
CEE 540	Behavior and Design of Reinforced Concrete Structures
CEE 541	Structural Stability
CEE 545	Nonlinear Structural Analysis
CEE 555	Soil Dynamics and Engineering Seismology

Category-B (Relevant Courses)

CEE 500	Engineering Applications with Software Development
CEE 512	Risk Analysis in Civil and Environmental Engineering
CEE 517	Operations Research in Civil and Environmental Engineering
CEE 532	Advanced Technology of Materials
CEE 533	Local and Traditional Building Materials
CEE 535	Plasticity Theory
CEE 538	Experimental Methods in Structural Engineering
CEE 547	Masonry Structures
CEE 556	Advanced Foundation Engineering

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

2. Novel and Traditional Construction Materials

Category-A (Basic Courses)

CEE 532	Advanced Technology of Materials
CEE 533	Local and Traditional Building Materials
CEE 534	Physical Properties and Related Durability Problems of Construction Materials
CEE 535	Plasticity Theory
CEE 538	Experimental Methods in Structural Engineering
CEE 539	Advanced Topics in Novel and Traditional Construction Materials
CEE 546	Physics of the Built Environment
CEE 547	Masonry Structures
CEE 562	Asphalt Materials

Category-B (Relevant Courses)

CEE 526 Finite Element Methods
CEE 531 Seismic Behavior and Assessment of Reinforced Concrete Structures
CEE 536 Energy Efficiency of Buildings
CEE 537 Repair and Strengthening of Structures
CEE 540 Behavior and Design of Reinforced Concrete Structures
CEE 586 Sustainable Built Environment

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

3. Geotechnical Engineering

Category-A (Basic Courses)

CEE 509 Computational Mechanics
CEE 52 Finite Element Methods
CEE 535 Plasticity Theory
CEE 555 Soil Dynamics and Engineering Seismology
CEE 556 Advanced Foundation Engineering
CEE 557 Coastal and Offshore Geotechnical Engineering
CEE 558 Advanced Topics in Geotechnical Engineering
CEE 574 Environmental Geotechnics

Category-B (Relevant Courses)

CEE 500 Engineering Applications with Software Development
CEE 534 Physical Properties and Related Durability Problems of Construction Materials
CEE 511 Construction Engineering and Management
CEE 512 Risk Analysis in Civil and Environmental Engineering
CEE 521 Structural Dynamics and Earthquake Engineering
CEE 562 Asphalt Materials

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

4. Construction and Transport Infrastructure Management

Category-A (Basic Courses)

CEE 511 Construction Engineering and Management
CEE 512 Risk Analysis in Civil and Environmental Engineering
CEE 513 Specifications and Conditions of Construction Contracts
CEE 514 Data Science and Machine Learning for Civil and Environmental Engineering
CEE 516 Building Information Models
CEE 517 Operations Research in Civil and Environmental Engineering
CEE 560 Sustainable Transport Planning
CEE 561 Highway Design and Road Safety
CEE 563 Advanced Topics in Traffic Engineering and Intelligent Transport Systems-ITS
CEE 564 Civil/Transport Economics and Finance
CEE 565 Combined Transport Systems and “Green Logistics”
CEE 566 Transit Systems

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

Category-B (Relevant Courses)

CEE 515 Advanced Topics in Construction Management
CEE 533 Local and Traditional Building Materials
CEE 537 Repair and Strengthening of Structures
CEE 562 Asphalt Materials
CEE 567 Advanced Topics in Transport Infrastructure
CEE 581 Environmental Risk Assessment

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

APPENDIX 2 CIVIL ENGINEERING COURSES

CEE 500 Engineering Applications with Software Development
CEE 501 Advanced Computer-Aided Structural Analysis
CEE 509 Computational Mechanics
CEE 511 Construction Engineering and Management
CEE 512 Risk Analysis in Civil and Environmental Engineering
CEE 513 Specifications and Conditions of Construction Contracts
CEE 514 Data Science and Machine Learning for Civil and Environmental Engineering
CEE 515 Advanced Topics in Construction Management
CEE 516 Building Information Models
CEE 517 Operations Research in Civil and Environmental Engineering
CEE 521 Structural Dynamics and Earthquake Engineering
CEE 522 Advanced Topics in Earthquake Engineering
CEE 523 Passive and Active Control of Structural Systems
CEE 526 Finite Element Methods
CEE 528 Advanced Topics in Structural Analysis
CEE 531 Seismic Behavior and Assessment of Reinforced Concrete Structures
CEE 532 Advanced Technology of Materials
CEE 533 Local and Traditional Building Materials
CEE 534 Physical Properties and Related Durability Problems of Construction Materials
CEE 535 Plasticity Theory
CEE 536 Energy Efficiency of Buildings
CEE 537 Repair and Strengthening of Structures
CEE 538 Experimental Methods in Structural Engineering
CEE 539 Advanced Topics in Novel and Traditional Construction Materials
CEE 540 Behavior and Design of Reinforced Concrete Structures
CEE 541 Structural Stability
CEE 545 Nonlinear Structural Analysis
CEE 546 Physics of the Built Environment
CEE 547 Masonry Structures
CEE 555 Soil Dynamics and Engineering Seismology

CEE 556 Advanced Foundation Engineering
 CEE 557 Coastal and Offshore Geotechnical Engineering
 CEE 558 Advanced Topics in Geotechnical Engineering
 CEE 560 Sustainable Transport Planning
 CEE 561 Highway Design and Road Safety
 CEE 562 Asphalt Materials
 CEE 563 Advanced Topics in Traffic Engineering and Intelligent Transport Systems-ITS
 CEE 564 Civil/Transport Economics and Finance
 CEE 565 Combined Transport Systems and "Green Logistics"
 CEE 566 Transit Systems
 CEE 567 Advanced Topics in Transport Infrastructure
 CEE 574 Environmental Geotechnics
 CEE 586 Sustainable Built Environment
 CEE 650 Independent Study

APPENDIX 3 ENVIRONMENTAL ENGINEERING COURSES

CEE 500 Engineering Applications with Software Development
 CEE 512 Risk Analysis in Civil and Environmental Engineering
 CEE 517 Operations Research in Civil and Environmental Engineering
 CEE 534 Physical properties and related durability problems of construction materials
 CEE 536 Energy Efficiency of Buildings
 CEE 546 Physics of the Built Environment
 CEE 571 Computational Hydraulics
 CEE 572 Groundwater Hydrology
 CEE 574 Environmental Geotechnics
 CEE 576 Environmental Fluid Mechanics
 CEE 580 Dynamics of the Atmosphere and Air Pollution Dispersion
 CEE 581 Environmental Risk Assessment
 CEE 582 Solid and Hazardous Waste Management
 CEE 583 Physicochemical and Biological Processes for the Treatment of Wastewater
 CEE 584 Advanced Topics in Environmental Engineering
 CEE 585 Experimental Methods in Water and Wastewater Analysis and Treatment
 CEE 586 Sustainable Built Environment
 CEE 587 Coastal Zone Engineering and Management
 CEE 596 Marine and Wind Energy
 CEE 597 Environmental Biotechnology
 CEE 598 Biotechnological Production of Biofuels and Bioenergy

APPENDIX 4 CEE GRADUATE COURSE DESCRIPTIONS

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. 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)

Computational simulation of planar and spatial structures with modern structural analysis software (GT-Strudl, SAP2000 or/and ETABS). Direct stiffness method based on the principle of virtual work and its software implementation. Substructures and static condensation. Numerical methods for eigenvalues analysis, numerical integration of single and multi-degree of freedom systems, modal superposition and direct integration of equations of motion for the computation of time-history response. Construction of response and design spectrum. Programming numerical methods for structural analysis (using Matlab) Finite element methods for both static and dynamic analysis based on the displacement method. Single- and multi-degree of freedom experiments using a small-scale shake-table. Seismic isolation and simulation of seismically isolated structures. Simulation of inelastic structural response.

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)

Construction engineering and project management. Project, schedule and cost control; resource management; sustainability; construction productivity; construction law; conflict resolution; health and safety in construction. Information systems in construction management and use of specialized software.

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, multifactorial analysis, decision trees, artificial neural networks, 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 514 Data Science and Machine Learning for Civil and Environmental Engineering (8 ECTS)

Data science and informatics in the context of the life-cycle phases of civil infrastructure and tackling of modern civil and environmental engineering challenges using large datasets, machine learning, statistical inference, machine vision and visualization techniques. Database design; data processing, aggregation, machine learning, and visualization using the Python programming language and several of its code repositories; development of web-based python-driven collaborative environments for the delivery of interactive informatics content. Case-study projects: water distribution networks, urban bus transport system, roadway pavements condition assessment and monitoring, national transport observatory, national meteorology observatory, smart cities, building information models.

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 takeoff, costing, scheduling, resource productivity and management, structural analysis, and energy efficiency of buildings; from smart buildings to smart cities. Use of specialized BIM software (e.g., Revit, Navisworks, Dynamo, Ecotect; Primavera, SQL/ODBC ODBC; ifcOwl, CityGML). BIM-driven contemporary topics on blockchain contracts, ontologies, machine vision, etc.

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

Operations research and optimization for civil and environmental engineering. Linear programming: Mathematical formulation of problems, graphical solution, simplex algorithm, sensitivity analysis and duality. Integer programming. Non-linear programming: Fundamental concepts, classical and Heuristic optimization methods, single- and multi-objective optimization. Dynamic programming. Network analysis. Graph theory. Queuing theory and Markov chains. Civil and environmental engineering examples (structural analysis and design, construction management and scheduling, transportation, environmental, etc.) and practical applications with software usage (Matlab/Python, GIS).

CEE 521 Structural Dynamics and Earthquake Engineering (8 ECTS)

Elements of analytical dynamics. Lagrange's equations. Dynamic response of discrete single- and multi-degree-of-freedom systems. Vibration isolation. Modeling of damping in structures. Numerical evaluation of dynamic response.

Earthquake response analysis. Frequency-domain method of response analysis. Dynamic response of continuous systems. Rayleigh's method. Dynamic response of seismically isolated structures.

CEE 522 Advanced Topics in Earthquake Engineering (8 ECTS)

This course has not a specific course material, but it is offered circumstantially by specialists in the particular specification visiting faculty or special scientist, covering special topics in earthquake engineering.

CEE 523 Passive Control of Structural Systems (8 ECTS)

Introduction, seismic isolation principles, history. Seismic isolation systems (elastomeric, sliding, rocking, etc.). Elastomeric isolation systems LRB, HRB (Low-damping, High-damping Rubber Bearings). Linear theory of base isolation. Sliding isolation systems. Energy dissipation systems. Theoretical and practical considerations.

CEE 526 Finite Element Methods (8 ECTS)

The concept of numerical simulation. The direct stiffness method. Truss/frame Finite Elements (FEs). Plane stress and strain FEs (triangular, quadrilateral). Isoparametric FEs. Solid FEs. Higher order FEs. Estimation of discretization error - adaptive FEs. Solution of FE equilibrium equations. Basic principles of FE programming. Substructuring methods. Special topics. Learning and usage of FE software.

CEE 528 Advanced Topics in Structural Analysis (8 ECTS)

This course does not have a specific course material, but it is offered circumstantially by specialists in the particular specification visiting faculty or special scientist, covering special topics in structural analysis.

CEE 531 Seismic Behavior 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. ADRS 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)

Concrete components, microstructure, and properties of portland cement. Heat of hydration and thermal stress development in concrete. Strength, fatigue, failure mechanisms (fracture mechanics), creep, shrinkage, and durability of hardened concrete. Special concretes: self-compacting, high performance, recycled concrete and ultra-high performance. Fiber reinforced concrete. Behavior and mechanical properties. Mechanics of fiber reinforced concrete. Fiber reinforced polymer composites. High performance materials. Sustainability. Experimental investigation.

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 crystallization, Rising damp.

CEE 535 Plasticity Theory (8 ECTS)

Stresses and strains. Elasticity. Non-linearity. Yield surface. Elastic - perfectly plastic behavior. Hardening and softening. Constitutive modeling. Numerical integration of constitutive models. The constitutive models in the finite element method. Limit analysis. Upper and lower bounds. The method of characteristics.

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, pre-requisites 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, organizations etc.).

CEE 537 Repair and Strengthening of Structures (8 ECTS)

Repair strategy and methods of intervention. Particular emphasis is placed on detailing of interventions with FRPs in the context of EC8 – III and the Greek Retrofit Code 2010. Assessment of the structural implications of corrosion particularly with reference to earthquake resistance. Use of FRPs in corrosion repairs. Required global and local interventions for earthquake resistance of old, lightly reinforced construction. Strength implications for foundation redesigning Reinforced Concrete Jackets. Addition of walls, infills, diagonal braces. Detailing of retrofit. Other repair and strengthening methods. Injections of grouts, metallic nets. Local interventions with composites. Debonding. Strengthening for flexure using Externally bonded plates and Near-Surface mounted reinforcement. Confinement, shear strengthening, strengthening of anchorages. Clamping action. Assessment and retrofit against torsional eccentricities in structures. Unreinforced masonry structures: repair and retrofit with advanced composites. Historical constructions, assessment and strengthening.

CEE 538 Experimental Methods in Structural Engineering (8 ECTS)

Introduction to experimental mechanics. Structural Models. Dimensional Analysis-Similitude Laws. Static and Dynamic Modeling. Design of an experimental setup. Strain Gage Instrumentation. Force-Displacements-Velocity-Acceleration-Pressure-Temperature Transducers. Non-destructive testing. Data Acquisition Systems. Accuracy-Reliability-Statistical Analysis of Experimental Data. Experimental testing.

CEE 539 Advanced Topics in Novel and Traditional Construction Materials (8 ECTS)

This course does not have a specific course material, but it is offered circumstantially by specialists in the particular specification, with visiting faculty or specialists covering scientific topics in novel and traditional construction materials.

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

Confined concrete models. Optimal design of reinforced and prestressed concrete members. Plasticity theorems for concrete design. Design of deep beams, corbels and footings using strut-and-tie models. Compressive-field and compressive-path theories for shear. Concrete and steel behavior under multiaxial and cyclic loading and material constitutive modeling. Analysis of bond strength.

CEE 541 Structural Stability (8 ECTS)

Analysis of basic concepts in structural stability and development of solid understanding of the effect of buckling phenomena. Development of quantitative and qualitative skills for the analysis of nonlinear structural behavior. Application of the fundamental concepts of nonlinear structural behavior for the design of steel structures according to Eurocode 3. Failure modes in structural elements. Practical examples of structures demonstrating nonlinear behavior. Energy methods for the study of structural stability. Equilibrium and stability criteria. Application of energy methods for the analysis of different types of single degree of freedom systems. Influence of initial imperfections. Instabilities in compression members. Euler buckling, Perry-Robertson concept, influence of support conditions, Timoshenko, and Rayleigh-Ritz methods. Instabilities in beams. Instabilities in plates.

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, plane 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 Physics of the Built Environment (8 ECTS)

Advanced theoretical and applied topics in Physics of the Built Environment: transfer of heat and moisture, air flow indoors and outdoors, natural ventilation mechanisms for the built environment. The course focuses on the design of buildings and the built environment for optimal coverage of needs in issues of heat transfer for energy saving, issues of microclimate for thermal comfort as well as safety, moisture transfer and indoor air quality.

CEE 547 Masonry Structures (8 ECTS)

Masonry materials (stone, adobe/earth-based brick, mortar, timber) and their mechanical behavior. Masonry types and construction techniques (unreinforced, reinforced, tier-laced, confined-masonry). Mechanical behavior of masonry in compression, tension, bending, shear due to in/out-of-plane

actions (as a result mainly of gravitational and seismic loads). Behavior 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 555 Soil Dynamics and Engineering Seismology (8 ECTS)

Strong ground motion characteristics. Seismic hazard analysis. Soil behavior under cyclic loading. Seismic wave propagation, reflection, and refraction. The Viscous Dashpot Analogue. Ground response analysis. Soil liquefaction due to earthquakes. Stability of slopes and retaining walls under seismic conditions. Bearing capacity of foundations subjected to earthquake loading. Basic principles of soil-structure interaction.

CEE 556 Advanced Foundation Engineering (8 ECTS)

Analysis of beam and mat foundations using computer software. Computation of pile and pile group settlements. Dynamic analysis of pile driving. Piles and pile groups subjected to lateral loading: lateral bearing capacity and deformations. Seismic Soil-foundation-structure Interaction. Caisson-type foundations. Analysis and Design of foundations on expansive soils.

CEE 557 Coastal and Offshore Geotechnical Engineering (8 ECTS)

Introduction. Coastal and offshore construction. Underwater site investigation. Types, physical properties, and mechanical behavior of seabed soils. Piled Foundations. Shallow Foundations. Mobile jack-up platforms. Anchoring systems. Geotechnics of pipelines and subsea installations. Geotechnical analysis of quay walls, breakwaters, and cofferdams. Marine landslides and other geohazards.

CEE 558 Advanced Topics in Geotechnical Engineering (8 ECTS)

This course has not a specific course material, but it is offered circumstantially by specialists in the particular specification visiting faculty or special scientist, covering special topics in geotechnical engineering.

CEE 560 Sustainable Transport Planning (8 ECTS)

This is a course that examines the complex relationship between transportation, land use and urban form, and the alternative 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 sustainable mobility 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 related to data collection and using methods from statistics and econometrics, spatial analysis, Artificial Intelligence, "Big Data" analysis and optimization. Ultimately, students are familiarized in using analytical results for supporting decisions related to sustainable transport.

CEE 561 Highway Design and Road Safety (8 ECTS)

This course aims on the advanced concepts, tools and technologies concerning the design of roadways. An emphasis is given on the geometric design as well as on the equipment that is used in contemporary highway design. Moreover, the elements of risk and safety is 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 characterization, quality control, equipment and construction, behavior 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)

This course aims on deepening the understanding on the traffic flow phenomenon and the analytical models that are used in this area. The perspective of the course will guide 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 environment. 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 technology discussions, this 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 of concern to 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 be also included, covering issues of loans, bonds, public-private partnerships and concessions and other methods of financing transport investment.

CEE 565 Combined Transport Systems and “Green Logistics” (8 ECTS)

This course covers 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 the overall performance and reduce the total cost and environmental footprint of the 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 analyze 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 found in 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 the 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 analyzed. Competitiveness and complementarity among means of transport is also covered, while new organization schemes (e.g., Demand Responsive Systems, dedicated transit systems, taxi market organization) are discussed. Special care for paratransit systems is taken. The course balances the theoretical and practical aspects of transit systems, with an emphasis on modeling 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 several other related but 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)

Significance of groundwater hydrology. Physico-chemical properties of groundwater. Fundamentals of groundwater flow. Measurement of flow parameters. Design and Analysis of control pump. Contaminant transport in groundwater. Computational models for simulation of subsurface flow and contaminant transport in groundwater. Soil remediation methods and protection of aquifers, e.g., risk assessment remediation from accidental leaks of toxic substances.

CEE 574 Environmental Geotechnics (8 ECTS)

Introduction. Sources of contamination and acceptable limits. Hydrogeology. Interaction of contaminants with soil. Mechanisms of contaminant mobility. Ground investigation. Waste disposal by landfill. Ground remediation and protection of soil and groundwater. Risk assessment of failure of large construction structures.

CEE 576 Environmental Fluid Mechanics (8 ECTS)

Introduction to environmental flows. Basic transport mechanisms in the water and the atmosphere (convection, molecular and turbulent diffusion, dispersion). Mixing and dispersion in 2-D systems. Analytical solutions. Retention times. Stratified flows: Boussinesq approximation, momentum jets, buoyant plumes, influence of environmental conditions. Elements of geophysical fluid mechanics: large scale flows, effect of earth's rotation (Coriolis effect), Ekman layer.

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

Meteorology and Structure of the Atmosphere. Meteorological events as events of atmospheric dynamics: weather-climate-climate change, wind, tornadoes and hurricanes, dust storms, El Nino phenomenon, rain, storms. Atmospheric Pollution Dispersion: Sources and Transport Mechanisms. Turbulent atmospheric flows. Jets and Plumes in the atmosphere. Atmospheric chemistry. Research and Operational air pollution dispersion models.

CEE 581 Environmental Risk Assessment (8 ECTS)

Introduction to risk assessment, definitions, methodology (problem formulation, hazard identification, exposure assessment, exposure-response assessment, risk characterization), 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, Raoult's law, Henry's law, Le Chatelier's principle), sorption, adsorption, evaporation, hydrolysis, photochemical transformations, biological transformations, bioconcentration, bioaccumulation, uncertainties in risk assessment, case studies. The course covers topics relating 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 characterization, classification, and labeling). 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)

Introduction to the wastewater treatment (terminology, legislative framework). Characterization of the wastewater (sampling methods, principles of the analytical methods, physical – chemical and biological parameters, toxicity tests, TOC, BOD5, COD). Description of the various types of reactors. Physical processes (screening, solid reduction/removal, grit removal, flow equalization, fat and grease removal, primary sedimentation, clarification, floatation, aeration). Chemical processes (chemical precipitation and coagulation, removal of P, N, and heavy metals, chemical oxidation). Basic principles of biological processes (kinetic of microbial growth, suspended growth biological treatment processes, attached growth and combined biological treatment processes, anaerobic suspended and attached growth biological treatment processes). Advanced wastewater treatment (membranes, adsorption, gas stripping, ion-exchange, advanced oxidation technology). Disinfection processes (basic principles, disinfection by-products, chlorination, ozonation, UV). Treatment, reuse and disposal of sludge (dewatering, stabilization, aerobic – anaerobic digestion, composting, drying). Management of odors.

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 characterization (fresh water / potable water / industrial wastewater / urban wastewater). Treatability of wastewater (e.g., sedimentation, coagulation-flocculation (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 footprint 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. Analyzing 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 utilization 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 bioeconomy. Students will be trained on the analysis, design, control, and optimization 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 for the production of energy and fuels aiming at the reduction of environmental pollution. The course aims at understanding the basic processing of microbial fuel cells, biofuels production (biogas, hydrogen, bioethanol, biodiesel, bio-electricity generation) and the biotechnological processing of waste towards that direction. The students will be trained on analysis, design, control, and optimization of bioprocesses for biofuels and bioenergy production, as well as (bio) processing of waste.

CEE 610 Seminars for Graduate Students (0 π.μ.)

Graduate seminars organized by the CEE Department, on contemporary research issues of local and international interest. The list of seminars is announced at the start 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.

CEE 650 Independent Study (8 ECTS)

Individual study, research, or laboratory investigations under faculty supervision.

CEE 653 Independent Study (3 ECTS)

Individual study, research, or laboratory investigations under faculty supervision, available only as a supplement to another course with less than 8 ECTS.

CEE 680-683 M.Sc. Research (ECTS units assigned by the thesis advisor)

Programme of graduate research leading to the defense and writing of an M.Sc. thesis.

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 (ECTS units assigned by the thesis advisor)

Authoring of the Ph.D. thesis. These courses are only taken upon completion of all ECTS units required under the "PhD Research" course-codes.

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.

***Note:** The graduate courses are not necessarily offered every academic year, but in most cases, depending on the availability of the faculty and the student demand, they are offered every alternate year.*

RESEARCH INTERESTS OF THE ACADEMIC STAFF

Athanasios Paschalis, Assistant Professor

Ecohydrological and ecosystem modelling with emphasis on ecosystem responses to climate change; Soil plant atmosphere interactions; Sustainable water resources management; Risk management and stochastic modelling for water resources.

Dimos C. Charmpis, Associate Professor

Computational mechanics; Finite element analysis; Reliability/Robustness; Assessment of structures and systems; Lifecycle performance of deteriorating structures; Masonry structures; Optimization applications; Building thermal performance.

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

Novel and traditional building materials; Weathering and protection of building materials with applications in historic structures, ancient monuments and archaeological sites; Studies of water movement in porous construction materials and associated problems of material durability.

Loukas Dimitriou, Associate Professor

Design and analysis of civil and transportation infrastructure; The use of advanced methods and techniques for optimizing systems' design and performance and for developing frameworks for supporting decisions in his fields.

Despo Fatta-Kassinou, Professor

Micropollutants in environmental matrices; Chromatographic methods and biological toxicity testing; Antimicrobial resistance and urban wastewater; Design and application of advanced treatment technologies for the removal of micropollutants and antimicrobial resistance determinants from wastewater; Reuse of urban wastewater.

Nicolas Hadjipantelis, Assistant Professor

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) methods.

Petros Komodromos, Associate Professor

Modern earthquake resistant design and seismic isolation; Computer-aided structural analysis; Utilization of information technology and software development in special topics of earthquake engineering.

Dimitrios Loukidis, Associate Professor

Foundation engineering; Computational geomechanics; Constitutive modelling; Geotechnical earthquake engineering; Expansive ground; Landslides.

Marios Mavros, Assistant Professor

Earthquake engineering; Finite element modelling; Reinforced concrete and masonry structures; Development of constitutive laws for reinforced concrete and masonry materials; Nonlinear analysis of structures.

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, Assistant Professor

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, Assistant Professor

Environmental biotechnology; Bioremediation; Waste and wastewater biodegradation; Formation and characterization of high added-value products by bioprocesses; Metabolomics and transcriptomics.

Contact Details**DEPARTMENT SECRETARIAT**

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GRADUATE STUDIES COMMITTEE

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GRADUATE STUDIES COORDINATOR

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www.ucy.ac.cy/cee/en

Department of Electrical and Computer Engineering

www.ucy.ac.cy/ece/en

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 of Science (M.Sc.) and Master of Engineering (M.Eng.) in Electrical Engineering
- Master of Science (M.Sc.) and Master of Engineering (M.Eng.) in Computer Engineering
- Master of Science in Intelligent Critical Infrastructure Systems (in English)
- Master of Science (M.Sc.) and Master of Engineering (M.Eng.) in Energy Technologies and Sustainable Design (Interdepartmental Programme of the Faculty of Engineering)
- Master of Science (M.Sc.) in Artificial Intelligence (Interdepartmental Programme of the Department of Electrical and Computer Engineering and the Department of Computer Science)
- Doctor of Philosophy (Ph.D.) in Electrical Engineering
- Doctor of Philosophy (Ph.D.) in Computer Engineering

Introduction

The Department offers degree programmes in Electrical Engineering and Computer Engineering at both undergraduate and postgraduate levels. These programmes emphasise fundamental principles that prepare students for leadership roles in a challenging and rapidly changing technological world. Research and innovation are ensured in an environment that fosters cooperation among faculty, students, industry and research organisations. The Faculty of the Department of Electrical and Computer Engineering comprises experienced academics, who are leaders in their fields of expertise. In addition, several academic faculty members of the Department have been active in founding and participating in highly successful research centres of the University, including the KIOS Research and Innovation Centre of Excellence (www.kios.ucy.ac.cy), the "EMPHASIS" (Electronics, Microwaves, Photonics and Sensors) Research Centre (www.emphasis.ucy.ac.cy), and the FOSS Research Centre for Sustainable Energy (www.foss.ucy.ac.cy).

For detailed information regarding the Department and its postgraduate level degrees, please refer to the Department's detailed Postgraduate Studies Guide and the Department's website.

Admission to Postgraduate Programmes

The Department admits new postgraduate students each year, at the Master and Doctoral levels. The number of new admissions fluctuates each year and depends on the needs of the Department and the quality of the candidates.

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

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 in Electrical Engineering or Computer Engineering, these credits 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 enroll in graduate courses offered by another department in the University of Cyprus or any other accredited university. Credits outside the Department must be approved by the Graduate

Studies Committee and they must not 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 in Electrical Engineering or Computer Engineering, 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. Credits outside the Department must be approved by the Graduate Studies Committee and they must not 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.

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.

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.

Interdepartmental Master's Programme in Science (M.Sc.) and Engineering (M.Eng.) "Energy Technologies and Sustainable Design" (IMP-ETSD)

Information about the Interdepartmental Master's Programme in Science (M.Sc.) and Engineering (M.Eng.) "Energy Technologies and Sustainable Design" can be found in the section Interdepartmental Programmes below and at:

https://www.ucy.ac.cy/ece/programmes-of-study/postgraduate_programmes/programmes/master-of-science/energy-technologies-and-sustainable-design-m-sc/

Interdepartmental Master of Science Programme in "Artificial Intelligence"

Information about the Interdepartmental Master of Science Programme in Artificial Intelligence can be found in the section Interdepartmental Programmes below and at:

<https://www.cs.ucy.ac.cy/index.php/el/education/postgrad/master-in-artificial-intelligence-gr>

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), seminar (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 each), Ph.D. research courses (ECE 765-768, 15 ECTS each) and/or Ph.D. writing stages (ECE 771-773, 30 ECTS 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.
6. Defence of the Dissertation. Students must defend their dissertation before the Doctoral Dissertation Committee.
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/her 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 Studies Guide 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

	ECTS
ECE 601 Supplementary Autonomous Study for Master Students	2
ECE 621 Random Processes	8
ECE 622 Information Theory	8
ECE 623 Digital Signal Processing	8
ECE 624 Principles of Digital Communications	8
ECE 625 Wireless Communication Networks I	8
ECE 626 Image Processing	8
ECE 627 Machine Vision	8
ECE 628 Advanced Communication Systems	8
ECE 629 Fibre Optic Communication Systems and Networks	8
ECE 630 Advanced Optical Networks	8
ECE 631 Systems Theory	8
ECE 633 Security of Computer Systems and Networks	8
ECE 634 Introduction to Computational Intelligence	8
ECE 635 Optimisation Theory and Applications	8
ECE 636 Systems Identification	8
ECE 643 Radio and Microwave Wireless Systems	8
ECE 644 Intelligent Control Systems	8
ECE 645 Optics and Photonics	8
ECE 646 Advanced Antenna Theory	8
ECE 647 Autonomous Mobile Robots	8
ECE 649 Electromagnetic Waves and Antenna Theory	8
ECE 650 Machine Learning	8
ECE 651 Advanced Iterative Methods	8
ECE 653 Advanced Embedded and Real-Time Systems	8
ECE 654 Advanced Computer Networks	8
ECE 655 Advanced Operating Systems	8
ECE 656 Advanced Computer Architecture	8
ECE 657 Computer-Aided Design for VLSI	8
ECE 658 Computer Systems' Performance Evaluation and Simulation	8
ECE 660 VLSI Test	8
ECE 661 Deep Learning	8
ECE 663 Advanced Distributed Systems	8
ECE 664 Digital Design with FPGAs	8
ECE 665 Instrumentation and Sensors	8
ECE 667 Microwave Circuits	8
ECE 671 Neurophysiology and Senses	8
ECE 680 Power System Analysis	8

ECE 681	Power System Operation and Control	8
ECE 682	Renewable Sources of Energy - Photovoltaics	8
ECE 683	Power Electronics	8
ECE 685	Power System Plant and Operation	8
ECE 686	Power System Modelling	8
ECE 687	Building Integration of Photovoltaic (PV): Towards nearly zero energy buildings (NZEB)	8
ECE 690	Fault Tolerant Systems	8
ECE 701-704	Graduate Seminar M.Sc. and Ph.D.	4
ECE 705	Graduate Seminar for M.Eng. Students	2
ECE 711	Directed Study for M.Sc. Students	8
ECE 713-714	Independent Study for M.Sc. Students I and II	4
ECE 721-722	M.Sc. Thesis I and II	15
ECE 723-724	Individual Study for M.Eng. Students	8
ECE 731-732	Ph.D. Comprehensive Examination I and II	0
ECE 751-752	Directed Study for Ph.D. Students I and II	8
ECE 753-754	Independent Study for Ph.D. Students I and II	4
ECE 761-764	Research Stages of Ph.D. Dissertation IA-IVA	30
ECE 765-768	Research Course of Ph.D. Dissertation IB-IVB	15
ECE 771-776	Writing Stages of Ph.D. Dissertation I-VI	30
ECE 777-782	Writing Stages VII-XII	30
ECE 783	Ph.D. Research Proposal Examination	0
ECE 795	Pattern Recognition	8
ECE 798/799	Special Topics in Electrical and Computer Engineering	8

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 Queuing theory: Little's theorem, the M/M/1 and M/M/k/k queues.

ECE 622 Information Theory (8 ECTS)

Shannon's reliable data transmission block diagram. Entropy and relations to reliable communication: Source and channel models. Data compression: Lossless source coding (prefix codes, Ziv-Lempel algorithm), performance limits for channel codes, performance limits. Channel capacity: Additive Gaussian channels, finite-state channels. Rate distortion: Quantisation, compression subject to fidelity criterion. Network information theory: multiple access channel, broadcast channel, relay channel, interference channel. The effect of uncertainty on Shannon's reliable data transmission blocks.

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 analogy and digital communication systems in the presence of noise; advanced multicarrier 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)

Review of optical fibre transmission, ray optics, dispersion, attenuation, optical transmitters and optical receivers, noise and receiver sensitivity. Non-linear impairments, optical amplifiers (Raman, EDFA, SOA), optical system design and performance, dispersion compensation, multichannel optical systems. Coherent optical systems. Advanced modulation techniques for optical communications (QPSK, m-QAM, OFDM), multi-carriers (O-OFDM, Nyquist-WDM), system analysis and evaluation. Advanced digital signal processing techniques for optical communications systems. Photonic integrated circuits. Fibre-optic networks, network architectures, optical node and optical switch architectures.

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 633 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)

Fundamental antenna parameters: System aspects. Fundamental electromagnetic theorems: Reciprocity, duality, radiation integral. Wire and mobile communications antennas: Dipoles, loops, ground-effects. Phased arrays I: Linear & circular, base station antennas. Phased arrays II: 2D-arrays, infinite-array model, multimedia satellite front ends. Self-impedance: Integral equations and moment methods. Mutual impedance: Induced EMF method. Aperture antennas I: Equivalent currents, rectangular apertures, horn-antennas. Aperture antennas II: Plane-wave expansion, slot antennas, Babinet's principle. Broadband antennas: Self-complementarity, spirals, log-periodic, Yagi-Uda. Integrated-circuit antennas: Patch and micromachined antennas, miniaturisation. Beam forming and adaptive arrays: Butler matrix, adaptive algorithms.

ECE 647 Autonomous Mobile Robots (8 ECTS)

As Robotics and automation dominate technological advancements, the course aims to outline the basics required to develop autonomous mobile robots and systems, studying key techniques from the state of the art. The course places emphasis on robotic perception towards scene understanding, and probabilistic environment modelling, localisation, and mapping towards automating robot navigation. Students will have the opportunity to put the theory into practice through exercises.

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 towers, TV and FM antennas, satellite arrays. Antenna 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 653 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

underlying 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 queueing 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 at 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 FPGAs 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, induction, capacitive, piezoelectric, thermoelectric, 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 667 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, synaptic 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)

Introduction to renewable energy sources with main emphasis on photovoltaic (PV) energy conversion. Current state in Cyprus and potential. Types of photovoltaic systems. History of photovoltaic technology development. Current Status: Technology, policy, markets. Solar insolation. Short review of semiconductor properties. Generation, recombination and the basic equations of device physics. Efficiency limits, losses, and measurements. Physics of photovoltaic systems, including basic operating principles, design and technology, and performance of individual solar cells and solar cells systems. Current fabrication technologies. Design of cells and modules. Other materials. Applications.

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 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 IA, IIA,
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 IB, IIB, IIIB 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 (8 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.

RESEARCH INTERESTS OF THE ACADEMIC STAFF

Chrysafis Andreou, Assistant Professor

Nanotechnology and nanomedicine; Biomedical and molecular imaging; Chemical detection; Microfluidic devices; Biofluid analysis.

Themistoklis Charalambous, Assistant Professor

Networked control systems, combining theory and applications from control theory, communications, networks, and distributed optimisation.

Charalambos A. Charalambous, Professor

High and low frequency transient phenomena in the power network; Power system plant modelling and visualization (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

Robotic perception; Autonomous navigation; Unmanned aerial systems; Computer vision; Machine learning; 3D scene understanding; Path planning.

Georgios Ellinas, Professor

Optical networks; Fault detection; Fault identification/isolation; Fault protection/restoration; Routing; Switch fabric architectures; Optical access networks; Optical network security; Multicasting; Traffic grooming; Optical control plane design; WDM and EON network architectures; IoT; Critical infrastructure systems.

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 analogy 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-photonics packaging; Light wave measurements; All-optical microwave filters.

Ioannis Krikidis, Professor

Communication theory; Wireless communications; MIMO communications; Cooperative networks; Relay channel; Green radio; Energy harvesting; RF energy transfer; Cognitive radio; Physical-layer security; Resource allocation; Convex optimization; Queuing theory; Probability theory; Performance analysis; High order statistics; Information theory; Reconfigurability.

Angelos Marnerides, Assistant Professor

Cyber-Physical systems security; Cyber security; Network and system resilience; Programmable security.

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 Nicopoulos, Associate Professor

Multi/many-core 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; 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 Pitris, Professor

Optics 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 Timotheou, 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.

Christoforos Panteli, Lecturer

Chemical and physical sensors and integrated circuits; Applications of these sensors and their integration with electronic circuits with a focus on the analysis of breath; Monitoring of exhalation (gas and liquid) and chest movement; Using smart fabrics, gas and chemical sensors, and electronic circuits with algorithms to monitor breathing for the purpose of early diagnosis of patients with asthma, chronic respiratory disease, Parkinson's etc.

Contact Details**DEPARTMENT SECRETARIAT**

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Department of Mechanical and Manufacturing Engineering

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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 research areas are: i) Energy Systems, ii) Materials Science and Technology, iii) Mechanical Systems Modelling and Controls, iv) Design, Manufacture, Automation and Robotics, v) Micro- and Nanotechnology, vi) Biomedical Engineering and vii) Computational mechanics of solids and fluids.

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.

Mechanical and Manufacturing Engineering

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, power production, along with education, research, and professional employment of young people.

Advanced Materials and Nanotechnology

Materials Technology studies the fundamental physical and chemical basis for the controlled combination of atoms to form new compounds, phases, and micro-structures, 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 level, as a broad interdisciplinary 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 on 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:

	ECTS
First Semester	
MME 531 Continuum Mechanics	8
MME 541 Manufacturing Process Automation	8
MME 518 Theory + Applications of Incompressible Newtonian and Non-Newtonian Fluids	8
MME705 Thesis Research I	6
Second Semester	
MME 512 Advanced Engineering Thermodynamics	8
MME 524 Modelling and Analysis of Dynamic Systems	8
Technical Elective Course 1	8
MME 706 Thesis Research II	6
Third Semester	
MME 707 Thesis Research III	14
Technical Elective Course 2	8
Technical Elective Course 3	8
Fourth Semester	
MME 708 Thesis Research IV	20

Technical Electives

	ECTS
MME 505 Independent Study I	8
MME 506 Independent Study II	8
MME 516 Renewable Energy Technology	8
MME 517 Solar Energy Systems	8
MME 523 Signal Processing	8
MME 525 Analysis and Control of Robotic and Autonomous Systems	8
MME 532 Biomaterials in Tissue Engineering and Regenerative Medicine	8
MME 551 Nonlinear Mechanics of Solids and Structures	8
MME 553 Surface Engineering	8
MME 554 Materials Characterization Techniques	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 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

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 120 ECTS in graduate level and research work distributed as follows:

	ECTS
First Semester	
MME 557 Polymer Nanocomposites	8
MME 563 Materials Physics	8
MME 566 Advanced Semiconductor Materials and Nanodevices	8
MM 709 Thesis Research I	6
Second Semester	
MME 553 Surface Engineering	8
MME 554 Materials Characterization Techniques	8
Elective Course 1	8
MME 710 Thesis Research II	6
Third Semester	
MME 711 Thesis Research III 1	14
MME 508 Research Methodology	8
Elective Course 2	8
Fourth Semester	
MME 712 Thesis Research IV	30

Technical Electives

ELECTIVE COURSES	ECTS
MME 505 Independent Study I	8
MME 506 Independent Study II	8
MME 539 Nonlinear Mechanics & Modelling of Solids	8
MME 555 Polymers in Medical Applications	8
MME 558 Fundamentals of Ceramics I	8
MME 559 Fundamentals of Ceramics II	8
MME 562 Semiconductor Processing Technology	8
MME 565 Physical Principles, Design and Fabrication of MEMS	8
MME 567 Materials for Energy Production, Storage and Conversion	8
MME 512 Advanced Engineering Thermodynamics	8
MME 516 Renewable Energy Technology	8
MME517- Solar Energy Systems	8
MME 518 Theory and Applications of Incompressible Newtonian and Non-Newtonian Fluids	8
MME 523 Signal Processing	8
MME 524 Modelling and Analysis of Dynamic Systems	8
MME525 Analysis and Control of Robotic and Autonomous Systems	8
MME 532 Biomaterials in Tissue Engineering and Regenerative Medicine	8
MME 541 Manufacturing Process Automations	8
MME 551 Nonlinear Mechanics of Solids and Structures	8

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 fulfil 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 comprehensive examination.

In the 4th semester of studies, the student must participate in a comprehensive examination. For the purposes of the examination, the student submits a written report (up to 30 pages) containing the following information regarding the Dissertation project:

- Start date and estimated completion date.
- Bibliographic review.
- Aim and originality of the research project.
- Brief description of research methods and tools.
- Brief description of expected results.
- Expertise/skills acquired up to that time point and expected expertise/skills to be acquired by the completion of the project.

Following submission of the report, the student makes a presentation based on it in front of the 3 internal

members of his/her committee. The two external members, if they have been already assigned, can participate as well.

The Committee proceeds with an in-depth evaluation of the candidate through questions, that are consistent with the research field of the dissertation, and submits an evaluation report along with the report of the candidate to the Graduate Committee of the Department.

- If successful, the graduate student upgrades to Ph.D. candidate.
- If not successful, the student has the right to be re-examined one more time up to the 7th semester.
- If the student fails for a second time, he/she cannot continue to the Ph.D. programme but he/she can join the Master programme, instead.

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

underrepresented 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.

Structure of the Programme

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's degree) and research work, distributed as follows:

	ECTS
First Semester	
MME 518 Theory + Applications of Incompressible Newtonian and non-Newtonian fluids	8
MME 523 Signal Processing	8
MME 531 Continuum Mechanics	8
MME 805 Thesis Research I	6
Second Semester	
MME 512 Advanced Engineering Thermodynamics	8
MME 524 Modelling and Analysis of Dynamic Systems	8
MME 551 Nonlinear Mechanics of Solids and Structures	8
MME 806 Thesis Research II	6
Third Semester	
MME 541 Manufacturing Process Automation	8
Technical Elective 1	8
Technical Elective 2	8
MME 807 Thesis Research III	6
Fourth Semester	
Thesis Research IV (3X10) (MME 830 + MME 831 + MME 832)	30
Fifth Semester	
Thesis Research V (3X10) (MME 820 + MME 821 + MME 822)	30
Sixth Semester	
Thesis Research VI (3X10) (MME 823 + MME 824 + MME 825)	30
Seventh Semester	
Thesis Research VII (2X10) (MME 826 + MME 827)	20
MME 809 Thesis Writing I	10
Eighth Semester	
Thesis Research VIII (2X10) (MME 828 + MME 829)	20
MME 810 Thesis Writing II	10

Technical Electives

	ECTS
MME 605 Independent Study I	8
MME 606 Independent Study II	8
MME 516 Renewable Energy Technology	8
MME517- Solar Energy Systems	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 Materials Characterization Techniques	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 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:

	ECTS
First Semester	
MME 557 Polymer Nanocomposites	8
MME 563 Materials Physics	8
MME 566 Advanced Semiconductor Materials and Nanodevices	8
MME 840 Thesis Research I	6
Second Semester	
MME 553 Surface Engineering	8
MME 554 Materials Characterization Techniques	8
Elective Course 1	8
MME 841 Thesis Research II	6
Third Semester	
MME 855 Thesis Research III	6
MME 508 Research Methodology 8	
Elective Course 2	8
Elective Course 3	8
Fourth Semester	
Thesis Research IV (MME 843 + MME 844)	22
Elective Course	8
Fifth Semester	
Thesis Research V (MME 845 + MME 846 + MME 847)	30
Sixth Semester	
Thesis Research VI (MME 848 + MME 849 + MME 850)	30
Seventh Semester	
Thesis Research VII (MME 851 + MME 852)	20
MME 809 Thesis Writing I	10
Eight Semester	
Thesis Research VIII (MME 853 + MME 854)	20
MME 810 Thesis Writing II	10

Constrained Electives

	ECTS
MME 605 Independent Study I	8
MME 606 Independent Study II	8
MME 555 Polymers in Medical Applications	8
MME 558 Fundamentals of Ceramics I	8
MME 559 Fundamentals of Ceramics II	8
MME 562 Semiconductor Processing Technology	8
MME 565 Physical Principles, Design and Fabrication of MEMS	8
MME 567 Materials for Energy Production, Storage and Conversion	8
MME 512 Advanced Engineering Thermodynamics	8
MME 516 Renewable Energy Technology	8
MME517 Solar Energy Systems	8
MME 518 Theory and Applications of Incompressible Newtonian and Non-Newtonian Fluids	8
MME 523 Signal Processing	8
MME 524 Modelling and Analysis of Dynamic Systems	8
MME 525 Analysis and Control of Robotic and Autonomous Systems	8
MME 532 Biomaterials in Tissue Engineering and Regenerative Medicine	8
MME 541 Manufacturing Process Automations	8
MME 551 Nonlinear Mechanics of Solids and Structures	8

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)

MMK 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)

MMK 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)

Defence and writing of Ph.D. thesis. Open to Ph.D. students of Mechanical and Manufacturing Engineering Programme.

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)

Thermodynamic analysis of engineering systems, emphasising systematic methodology for application of basic principles. Introduction to availability analysis. Thermodynamics of gas mixtures and air-conditioning applications. Modern computational equations of state. Thermodynamic design software. The thermodynamics of biological systems. Introduction to compressible flow.

MME 516 Renewable Energy Technology (8 ECTS)

The energy problem: "consumption" and "sources" of energy. Mineral resources and conventional technologies: nuclear, oil, gas and coal combustion. Historical development & current status of energy generation and storage technologies worldwide, in Europe and locally. RES technologies: Towards a sustainable energy future, short and long-term prospects.

Methods to predict the potential and annual energy yield. Wind potential, wind turbines and performance. Solar geometry and solar potential. Solar-thermal and photovoltaic systems. Passive and active solar-thermal systems. Bio-climatic architecture. Hydroelectric power. Biomass systems. Geothermal potential and technologies. "Blue" energy systems: potential estimation, energy from tides, waves and currents. Hydrogen and fuel cells.

MME517- Solar Energy Systems (8 ECTS)

The course content includes lectures on the following thematic areas:

- Solar radiation (basic concepts and features, angles, direct and diffuse radiation in horizontal - inclined - moving levels, measurement of solar radiation).
- Passive and Active Solar Systems (basic concepts, typology, features and capabilities, modes of exploitation and optimization of systems).
- Thermal production of solar collector technologies (typology, thermal analysis, temperature distribution in the absorber, efficiency factor, thermal gain, flow, efficiency, performance measurement).

- Solar installations of thermal energy (calculation methods, curves f , F - f curves, storage and rate of solar energy use).
- Financial assessment and sustainability features.

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), and 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)

Cell biology: Gene expression regulation, receptors, signal transduction, cell-cell interactions, extracellular matrix, cell-matrix interactions, diffusible molecules (cytokines, growth factors, hormones). Cell culture: Isolation, growth and quantification. Stem cells: kinds, differentiation, induced stem cells. Biomaterials: Types, fabrication, characterisation. Instrumentation and experimentation: Fluorescence microscopy, fluorescence proteins. Tissue constructs: bioreactors, microfluidic devices, 3D cell culture, organoids, tissue-on-a-chip systems. In vitro applications of tissue constructs: Biological research, systems biology, drug discovery. Wound healing: Injury irreversibility, inflammation, foreign body response, wound contraction, induced regeneration. Tissue constructs in regenerative medicine: Animal models, grafts, case studies (skin, nervous system, cartilage). Clinical translation.

MME 541 Manufacturing Process Automation (8 ECTS)

In-depth study of 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 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.

MME508-Research Methodology (8 ECTS)

Introduction to Research Methodology (importance and purpose of scientific research, research approaches and interdisciplinarity); Literature review and methods of carrying it out; Data collection and data analysis methods (statistical methods, statistical error determination, uncertainty analysis);Field Research Design;Design of Laboratory Experiments and experimental layouts; Design of computational experiments; Research through Design;Social and human-centered approaches to research;Ethical Issues in

Research and Publications; Oral presentation and presentation of research projects in poster format; Preparation of scientific publications: Structure and elements of publications, the art of scientific writing, preparation of figures and tables, citations, selection of journals, manuscript submission, reviewing and publication process; Introduction to Machine learning and AI – The role of AI & ML in scientific research

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 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 technologies and surface treatments (e.g. vapour deposition) which have benefited from recent innovations. Integrating theory with lab practice in the course ensures a greater understanding and appreciation of the concepts for application.

MME 554 Materials Characterization Techniques (8 ECTS)

The course aims to develop an understanding of materials characterisation techniques used in materials science and engineering. Diffraction techniques: X-ray, electron and neutron diffraction. Microscopic techniques: Optical, Electron, Atomic Force Microscopy. Spectroscopic techniques: Vibrational, Visible and Ultraviolet, Nuclear Magnetic Resonance, Electron Spin Resonance, X-ray, Electron spectroscopies. Other techniques: thermal, electrical, mechanical, magnetic characterisation. The course includes demonstrations and/or lab experiments.

MME 555 Polymers in Medical Applications (8 ECTS)

Polymers – introduction. Polysiloxanes in biomedical applications. Biodegradable polymers. Polymers in dental and maxillofacial applications. Medical applications of hydrogels. Polymers in therapeutic applications. Polymeric nanofibers in biomedical and biotechnological applications. Polymer-stabilized superparamagnetic iron oxide nanoparticles. Polymers in artificial joints. Blood contacting polymers. Polymer-carbon nanotube composites in medical applications.

MME 557 Polymer Nanocomposites (8 ECTS)

Introduction to polymer nanostructured materials. Overview of different types of nanoparticles introduced within polymer matrices. Selecting the proper polymer-nanoparticle system for specific applications. Synthetic methods towards the fabrication of polymer-based nanocomposites. Characterisation of polymer nanomaterials. Properties of polymer nanocomposites/polymer nanostructured materials. Current nanotechnology commercial applications and future directions

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)

Semiconducting 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, multilevel dielectrics, metallic interconnects, interlevel dielectrics, multilevel metals, reliability.

MME 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).

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 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.

RESEARCH INTERESTS OF THE ACADEMIC STAFF

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).

Eftychios Christoforou, Associate 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; Thermoelectricity 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; Thermoelectric 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, Assistant Professor

Development and optimisation of manufacturing processes: Forging & sheet metal forming; Computer Aided Design (CAD); Finite Element Simulation (FEA); Materials modelling and prototype testing.

Claus G. Rebholz, 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, Assistant Professor

Non-Newtonian fluid mechanics and rheology; Constitutive modelling of complex fluids; Computational Fluid Dynamics (CFD) with finite volume and finite element methods.

Vasileios Vavourakis, Associate Professor

Linear and non-linear mechanics of solids and structures; Numerical methods in applied mechanics and biomechanics; In-silico modelling in multiphysics and multiscale problems; Mathematical biology and mathematical modelling; High-performance computing.

Matthew Zervos, Associate Professor

Synthesis, structural, optical, electrical characterization of semiconductor nanowires and device fabrication for energy related applications.

Contact**DEPARTMENT SECRETARIAT**

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JOINT DEGREES AND OTHER PROGRAMMES

Energy Technologies And Sustainable Design (Ipp-ETSD)

The interdepartmental postgraduate programme in Energy Technologies and Sustainable Design (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 interdepartmental postgraduate programme in Energy Technologies and Sustainable Design of the Faculty of Engineering at the University of Cyprus offers the possibility of joining one of the following Master programmes of studies:

- Master of Engineering (M.Eng.), a professional Master's degree, where emphasis is placed on courses, seminars and a project focused mostly on practical applications.
- Master of Science (M.Sc.), a Master's focusing on courses, seminars and projects that mainly emphasize research and innovative design.

Introduction

The Programme offers specialization in the field of Energy Technologies, within the framework of Sustainable Design. The interdisciplinary nature of the Master's programme provides students the opportunity to engage with subjects from a wide range of scientific backgrounds, and collaborate with fellow students of different disciplines to develop synergies and complementarities in achieving common objectives. Graduates of the programme can thus gain a comprehensive and multidisciplinary training in a diverse subject area such as Energy.

The Programme is offered in English and the total tuition fee is 5,125 euro.

Feasibility and Goals

The key objectives of the IPP-ETSD programme are:

- To properly prepare the engineering-scientists graduates, so that they can successfully address current local and global-energy challenges and demands.
- To offer a unified interdisciplinary scientific training and understanding in a wide range of energy topics, through the framework of sustainable design.

Through the multi-faceted education offered to students, the concept of Energy, as well as the ways of its distribution and utilisation are studied in a way that is

consistent with contemporary conceptualizations of notions such as sustainability and energy saving.

Moreover, students have the opportunity to work as members of a multidisciplinary team for the development of a complex large-scale project, that requires collaboration across multiple disciplines, reflecting the background of the four Departments of the Faculty of Engineering. This activity will help students develop a shared foundation essential for implementing projects in real-world conditions, where an understanding of fundamental principles across 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

Candidates for admission to the Programme must hold at least 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 (KY.S.A.T.S), in a relevant field of Science or Engineering. The candidates must submit a formal request to one or more Departments through the Graduate School, within specified deadlines. Applications are evaluated and approved by the Departmental Council to which the application was submitted. Beyond the basic admission criteria, student

selection is also based on the following:

- The quality of the candidate's academic background, both in depth and in breadth, as well as past achievements undergraduate or graduate studies.
- Evidence of the candidate's ability to implement existing technologies and develop innovative ones in the proposed area of study.

Moreover, for admission to the M.Sc. Programme, candidates must demonstrate their ability to conduct substantial 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 support throughout their studies. The advisory programme consists of:

Academic Supervisor: Upon admission to the Programme and before the first day of registration, every student is assigned an academic supervisor, who is the representative of his/her Department in the Interdepartmental Committee of the Programme. The academic supervisor meets with the student before the first registration, to plan the first semester of studies, assist in course selection and he/she oversees academic progress through regular meetings at the beginning, end and/or during the semester. The first meeting takes place at the "New Student Introductory Day", held during the week of registration, where all student academic advisors are present.

Research Advisor: (this applied for students who are admitted to M.Sc. Programme) To carry out their thesis research, students must select a research advisor who may be different from their academic advisor. It is advisable that the selection of a research advisor is the result of consultation between students and a faculty member, whose research interests are focused on energy. The Research Advisor may come from any Department within the Faculty, regardless of the students' Department of enrollment. In collaboration with the research advisor, a suitable and specific thesis topic must be determined. Following the submission and approval of the thesis proposal, the student, in collaboration with the research advisor, must form the thesis committee.

MASTER OF ENGINEERING PROGRAMME (M.Eng.)

To be awarded the Master's Degree M.Eng., students are required to successfully complete the Programme of studies, as outlined 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, in accordance with the University of Cyprus Regulations. The advanced project Capstone Design & Research Project begins only every September and ends in July.

Programme of Studies

The workload required to obtain the Master's degree (M.Eng.), involves the completion of at least 90 ECTS, derived from a combination of graduate courses, seminars and lab courses as follows:

	ECTS
6 Specialisation Courses	66
POL 500 Basic Principles of Interdisciplinary Engineering (Prerequisite)	1
POL 800 Research Methodologies	8
ARH 538 Environmental Building Design	8
ECE 687 Building Integration of Photovoltaic (PV): Towards nearly zero energy buildings (NZEB)	8
MME 516 Renewable Energy Sources Technology	8
CEE 536 Energy Efficiency of Buildings	8
Advanced Project: Capstone Design & Research Project	24
POL 700 Engagement with Practice and Industry	1
General Elective Courses	24
3 Elective Courses	
Grand Total	90

The choice of the appropriate course combinations, research and seminars for each semester will be carried out by the students, in coordination with their academic advisor. The following table presents an indicative example of a M.Eng. degree programme with admission in September, provided that a student is a full-time student.

Example: Indicative Programme (admission in September)

	ECTS
First Semester (Fall)	
MME 516 (compulsory)	8
CEE 536 (compulsory)	8
POL 800 (compulsory)	8
POL 604 Advanced Project I	6
POL 500 (Prerequisite) ¹	1
Total	31
Second Semester (Spring)	
ARH 538 (compulsory)	8
ECE 687 (compulsory)	8
POL 704 Advanced Project II	8
POL 700 (compulsory)	1
Total	25
Summer Semester	
POL 804 Advanced Project III	10
Total	10
Third Semester (Fall)	
3 Elective Courses 3 X 8 =	24
Total	24

¹ Students will be notified before the beginning of each academic year, for the dates and hours.

MASTER OF SCIENCE PROGRAMME (M.Sc.)

To be awarded the Master M.Sc. degree, students are required to successfully complete the programme of studies as well as the Thesis Research and the Advanced Project, as outlined in detail below. The minimum duration of the Master of Science (M.Sc.) 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 of Cyprus Regulations. The Advanced Project «Capstone Design & Research Project» begins only every September and ends in July.

Programme of Studies

The workload required to obtain the Master's (M.Sc.) degree involves the completion of at least 96 ECTS credits derived from a combination of graduate courses, seminars, advanced project and thesis research as follows:

	ECTS
Specialisation Courses (Compulsory)	
POL 500 Basic Principles of Interdisciplinary Engineering	1
Prerequisite²	
POL 800 Research Methodologies	8
ARH 538 Environmental Building Design	8
ECE 687 Building Integration of Photovoltaic (PV): Towards nearly zero energy buildings (NZEB)	8
MME 516 Renewable Energy Sources Technology	8
CEE 536 Energy Efficiency of Buildings	8
Advanced Project: Capstone Design and Research Project	24
POL 700 Engagement with Practice and Industry	1
Master Thesis Research	30
Grand Total	96

²Students will be notified before the beginning of each academic year, for the dates and hours.

The selection of appropriate courses, research and seminars for each semester will be carried out by the students in coordination with their academic advisors. The following table presents an indicative example of an M.Sc. degree program which can be completed within three academic semesters with admission in September, provided that a student is a full-time student.

Example: Indicative Programme (admission in September)

	ECTS
First Semester (Fall)	
MMK 516 (compulsory)	8
CEE 536 (compulsory)	8
POL 800 (compulsory)	8
POL 604 Advanced Project I	6
POL 500 Prerequisite	1
Total	31
Second Semester (Spring)	
ARC 538 (compulsory)	8
ECE 687 (compulsory)	8
POL 704 Advanced Project II	8
POL 700 (compulsory)	1
Master Thesis Research I	6
Total	31
Summer Semester	
Advanced Project III	10
Total	10
Third Semester (Fall)	
Master Thesis Research II	8
Master Thesis Research III	8
Master Thesis Research IV	8
Total	24

SPECIALISATION COURSES

A student must successfully complete a number of postgraduate specialization courses from those available in the Interdepartmental Postgraduate Programme of Studies, securing the minimum number of ECTS credits required by each programme. Below is a list of specialization courses typically offered over time (not all courses are available in the same semester or year). An indicative timetable for the current semester is posted on the ETSD Programme website. Note that, due to broad and varied course offerings within the interdepartmental programme, part-time students should be aware that a limited number of courses are offered during the morning and midday hours.

List of Specialisation Courses (Compulsory)

DEPARTMENT	ECTS
Architecture	
ARH 538 Environmental Building Design	8
Electrical and Computer Engineering	
ECE 687 Building Integration of Photovoltaic (PV): Towards nearly zero energy buildings (NZEB)	8
Mechanical and Manufacturing Engineering	
MME 516 Renewable Energy Sources Technology	8
Civil and Environmental Engineering	
CEE 536 Energy Efficiency of Buildings	8

Interdepartmental Postgraduate Programme (ETSD)

POL 500	Basic Principles of Interdisciplinary Engineering (Prerequisite)	1
POL 604	Advanced Project: Capstone Design & Research Project I	6
POL 700	Engagement with Practice and Industry	1
POL 704	Advanced Project: Capstone Design & Research Project II	8
POL 800	Research Methodologies	8
POL 804	Advanced Project: Capstone Design & Research Project III	10

List of Elective Courses

DEPARTMENT	ECTS
Architecture	
ARH 539	Advanced Topics in Architectural Technology 8
ARH 549	Advanced Topics in Urban Planning 8
ARH 550	Special Topics of Recording and Documenting Building and Sites 8
Electrical and Computer Engineering	
ECE 680	Power System Analysis 8
ECE 681	Power System Operation and Control 8
ECE 685	Power System Plant and Operation 8
ECE 686	Power System Modelling 8
ECE 688	Operation and Economics of Sustainable Power Systems 8
Mechanical and Manufacturing Engineering	
MME 512	Advanced Engineering Thermodynamics 8
MME 517	Solar Energy Systems 8
MME 566	Advanced Semiconductor Materials and Nanodevices 8
Civil and Environmental Engineering	
CEE 580	Dynamics of Atmosphere and Air Pollution Dispersion 8
CEE 586	Sustainable Built Environment 8
CEE 596	Marine and Wind Energy 8
CEE 598	Biotechnological production of biofuels and bioenergy 8

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 covered in this course may vary based on emerging student needs, 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 covers fundamental and advanced concepts of power system analysis, focusing on developing students skills towards performing power systems analysis. Students will learn to 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)

The course covers the fundamental principles of power generation and control in power systems. Including economic dispatch, unit commitment, and automatic generation control. It introduces linear and dynamic programming techniques for problem-solving and explores topics such as steam and hydro unit operation, fuel scheduling, production costing, observability, state estimation, power flow analysis, and neoliberal deregulation in the energy sector.

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 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, and environmental conditions are included, as well as case studies of smart meter projects.

ECE 688 Operation and Economics of Sustainable Power Systems (8 ECTS)

This course introduces students to fundamental principles governing the economic, secure, and reliable operation of sustainable power systems and electricity markets with significant integration of variable and uncertain renewable

energy sources. It revolves around the concept of the "affordability-sustainability-security" energy trilemma, which aims to obtain a balance between operating power systems at low cost (affordability), meeting environmental targets (sustainability), and ensuring grid reliability (security). To analyze this trilemma within a competitive market context, the course covers key topics such as economics fundamentals, electricity market operations, optimal bidding strategies for various market participants, economics of transmission and distribution networks, and the roles of emerging technologies and commercial entities like energy storage and aggregators.

MME 512 Advanced Engineering Thermodynamics (8 ECTS)

The course covers topics related to the thermodynamic analysis of engineering systems, emphasising systematic methodology for application of basic principles. Introduction to availability analysis. Thermodynamics of gas mixtures and air-conditioning applications. Modern computational equations of state. Thermodynamic design software. Thermodynamics of biological systems. Introduction to compressible flow.

MME 516 Renewable Energy Sources Technology (8 ECTS)

The energy problem: "consumption" and "sources" of energy. Mineral resources and conventional technologies: nuclear, oil, gas and coal combustion. Historical development & current status of energy generation and storage technologies worldwide, in Europe and locally. RES technologies: Towards a sustainable energy future, short and long-term prospects. Methods to predict the potential and annual energy yield. Wind potential, wind turbines and performance. Solar geometry and solar potential. Solar-thermal and photovoltaic systems. Passive and active solar-thermal systems. Bio-climatic architecture. Hydroelectric power. Biomass systems. Geothermal potential and technologies. "Blue" energy systems: potential estimation, energy from tides, waves and currents. Hydrogen and fuel cells.

MME 517 Solar Energy Systems (8 ECTS)

This course will provide students an insight of the most used solar energy technologies (photovoltaics, solar collectors, flat plate collectors, parabolic trough collectors etc). The purpose of the course is the acquisition of knowledge and techniques to analyse solar thermal systems and their characteristics. Emphasis is given on the solar characteristics of Cyprus as well as on the passive and thermal methods of exploiting solar radiation.

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.

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

The course aims to develop a fundamental understanding of air pollution dispersion particularly in the urban atmosphere and enable students to apply the fluid mechanical principles both in research and operational contexts. The course will cover: sources, sinks and receptors of air pollution, causes and consequences, meteorology and climatology, density-stratified fluid mechanics, internal waves, flow over topography, air quality, atmospheric chemistry, turbulence, turbulent flows including reacting flows, turbulence modeling.

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 Footprint 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 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, 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 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 800 Research Methodologies (8 ECTS)

The course introduces students to both qualitative and quantitative research methodologies, focusing on the principles of simulation and the application of basic data collection, statistical analysis, and organization methods. It also covers experimental laboratory and field methodologies, as well as computational approaches. Students will learn about basic

analysis of error and uncertainty, gaining essential tools for efficiently executing and presenting their completed master thesis. Additionally, the course prepares students for academic journal publications, poster presentation at conferences and other academic dissemination formats.

GRADUATE SEMINARS

POL 500 Basic Principles of Interdisciplinary Engineering (1 ECTS)

The course introduces students to basic engineering principles and concepts, fostering a shared, foundational, interdisciplinary background in Engineering. This enables students from different departments within the Engineering Faculty to take classes across these departments, through the ETSD postgraduate program, and be introduced to the program's interdisciplinary nature. The course will be offered before the start of the academic year and will have a duration of 12 hours.

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, among others.

ADVANCED PROJECT: CAPSTONE DESIGN AND RESEARCH PROJECT (24 ECTS)

For the Master's degree students are required to carry out an Advanced Project, specifically a "Capstone Design & Research Project", which will be prepared and presented in collaboration with fellow students from various specialties. the "Capstone Design & Research Project" addresses topics that reflect the interdepartmental nature of the Programme and emphasizes the importance of collaboration under real-world conditions.

Students are divided into groups and tasked with designing a project based on predetermined requirements. This project is intended to integrate the learning outcomes from the Research Methodologies course, allowing students to apply knowledge gained from the various courses they completed throughout the Program to their project. The collaborative nature of the workload of the Advanced Project, encourages knowledge exchange among team members and presents students with the opportunity to translate theory into practical application. In this way, students are better prepared to apply their theoretical knowledge into practical scenarios and gain experience working in a larger team, where each member is required to contribute both individually, and collaboratively towards the common objective of the Design & Research Project integration. In case of failure of one of the three chain courses, the student must register for the project again, starting from module I (POL 604).

POL 604 Capstone Design Project I (6 ECTS)

Design Project in collaboration with students of other disciplines under the supervision of academic staff.

POL 704 Capstone Design Project II (8 ECTS)

Design Project in collaboration with students of other disciplines under the supervision of academic staff.

POL 804 Capstone Design & Research Project III (10 ECTS)

Design Project in collaboration with students of other disciplines under the supervision of academic staff.

THESIS RESEARCH (M.Sc.) (30 ECTS)

The following courses comprise the different stages of postgraduate research, leading to the completion and defense of the Master thesis (M.Sc.).

POL 718 Master Thesis Research I (6 ECTS)

POL 719 Master Thesis Research II (8 ECTS)

POL 720 Master Thesis Research III (8 ECTS)

POL 721 Master Thesis Research IV (8 ECTS)

The selection of a research advisor is recommended to be the result of consultation between students and a faculty member, whose research interests focus on energy. The student's research topic is chosen in coordination with their research supervisor preferably before the end of the first semester. Registration takes place in the Banner audience of the respective professors supervising the thesis. Before starting the thesis, it is recommended to sign a Cooperation Agreement.

Students must submit in writing to the interdepartmental committee a single-page summary of the thesis explaining its relevance to the field and Programme, no later than six months prior to its defense. 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: the research supervisor as Chair of the Committee and (at least) one faculty member from another department of the interdepartmental programme. The members of the Committee must be selected based on their scientific background to ensure they are able to support the students' work. If the defence of the research is satisfactory, the Examination Committee approves its successful completion. The thesis is accredited as Excellent, Very Well, or Well. In case of rejection, the student is entitled to resubmit it once. The resubmission must be done within eight semesters, which is the maximum duration of study for a Master's student.

Upon successful completion of the thesis, students must submit a digital version of their work with a graphic abstract to the central Secretariat of the Programme and the Library. For specifications and instructions on the preparation, writing and submission of the Master's thesis, students can visit the Graduate School website.

GENERAL ELECTIVE COURSES

According to the Postgraduate Studies Rules, postgraduate students may replace a general elective course (corresponding to 8 ECTS credits), with up to one advanced undergraduate course. The list of advanced undergraduate courses that would be particularly helpful for postgraduate specialization courses in the ETSD Programme is given below. Note that the ECTS credits for each undergraduate course may vary and graduate students may need additional credits to fulfill the required amount for completing the ETSD programme of studies. Students must obtain approval from the Academic Committee of IPP-ETSD to register. Additionally, students who hold a degree in the same field of study and have already attended courses on a relevant subject are not allowed to credit advanced undergraduate courses.

List of Undergraduate General Elective Courses

DEPARTMENT	ECTS
Architecture	
ARH 412 Architecture and the Critical History of Ecology	5
Electrical and Computer Engineering	
ECE 340 Power Engineering	6
ECE 447 Renewable Energy Sources: Photovoltaics	6
Mechanical and Manufacturing Engineering	
MME 217 Heat Transfer	5
Civil and Environmental Engineering	
CEE 483 Transport Processes in Environmental Engineering	5

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, as well as their theoretical dimensions.

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 Department of Electrical and Computer Engineering 90 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, uninterruptible power supplies (UPS).

ECE 447 Renewable Energy: Photovoltaics (6 ECTS)

Introduction to renewable energy sources with main emphasis on photovoltaic (PV) energy conversion. Current state in Cyprus and potential. Types of photovoltaic systems. History of photovoltaic technology development. Current status: Technology, Policy, Markets. Solar insolation. Short review of semiconductor properties. Generation, recombination and the basic equations of device physics. Efficiency limits, losses, and measurements. Physics of photovoltaic systems, including basic operating principles, design and technology, and performance of individual solar cells and solar cells systems. Current fabrication technologies. Design of cells and modules.

MME 217 Heat Transfer (5 ECTS)

Thermal expansion and coefficients of conductivity and diffusivity. Mechanisms of Heat Transfer (HT Electrical analog of HT, thermal resistance, equivalent thermal circuits. Steady conduction with or without internal heat sources, analytical solutions of flat walls, cylinders and spheres. Steady conduction in two dimensions, shape factors and numerical solutions. HT from finned surfaces. Transient HT, dimensional analysis, lumped capacitance method, forced and natural convection, boiling and condensation, and sheath exchangers. The course includes laboratory exercises.

CEE 483 Transport Processes in Environmental Engineering (5 ECTS)

Fundamentals of Pollutant Transport Mechanisms (advection, diffusion, dispersion) related to air, water and ground media. Gaussian Plume Dispersion Models, Lagrangian diffusion, Taylor's dispersion. Air/Water Quality assessment; environmental design and Mitigation Strategies. Heat transfer and energy considerations for building design.

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Interdepartmental & Interdisciplinary Postgraduate Master of Science (M.Sc.) Conservation and Restoration of Historic Buildings and Sites

The Postgraduate Programme Conservation and Restoration of Historic Buildings and Sites is being offered by the University of Cyprus since September 2017. Three departments from two different faculties (Faculty of Engineering and Faculty of Letters) of the University of Cyprus are involved in this programme.

- Department of Architecture
- Department of Civil and Environmental Engineering
- Department of History and Archaeology

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. The language of instruction is English.

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 to 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:

	ECTS
3 Compulsory Core Courses	26
ARH 517 History and Critical Analysis of Conservation	8
CCE 533 Local and Traditional Building Materials	8
ARCH 652 Introduction to Building Archaeology	10
Specialisation Courses (elective)	32
4 Elective Courses from the list of the Programme courses	
2 Graduate courses from the host department	16
2 Graduate courses from the other two departments	16
Capstone Design Project	20
Research Independent Study	16
Grand Total	94

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 co-operate 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.

	ECTS
1st Semester (Fall)	
3 core courses	26
Total	26
2nd Semester (Spring)	
3 Elective Specialisation Courses	24
Capstone Design Project CON 500A	5
Total	29
Summer Semester	
1 Elective Specialisation Course	8
Capstone Design Project CON 500B	5
Total	13
3rd Semester (Fall)	
Capstone Design Project CON 500C	10
Independent Study CON 510	16
Grand Total	26

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

DEPARTMENT	ECTS
Architecture	
ARH 517 History and Critical Analysis of Conservation	8
History and Archaeology	
ARCH 652 Introduction to Building Archaeology	10
Civil and Environmental Engineering	
CCE 533 Local and Traditional Building Materials	8

List of Core Courses offered by all three Departments

	ECTS
CON 500 A-C Capstone Design Project	20
CON 510 Independent Study	16

List of Elective Specialisation Courses

DEPARTMENT	ECTS
Architecture	
ARH 511 Architecture and the Critical History of Ecology	8
ARH 538 Environmental Building Design	8
ARH 540 Mediterranean Cities and Social Phenomena	8
ARH 546 Urban Design and Planning	8
ARH 549 Advanced Topics in Urban Planning	8
ARH 550 Special Topics on Recording and Documenting Buildings and Sites	8

History and Archaeology

ARCH 650	Settlement and Landscape Archaeology	10
ARCH 653	Introduction to GIS Technologies in Archaeology	10
ARCH 659	The interdisciplinary Study of Ancient Materials	10
ARCH 663	Introduction to Cultural Heritage Management	10
ARCH 664	Global Issues and Special Cases in Cultural Heritage Management	10
ARCH 665	Cultural Heritage Management (CHM) in Conflict Areas	10
ARCH 671	Computational and Analytic Techniques in the Humanities and Social Sciences	10

Civil and Environmental Engineering

CEE 532	Advanced Technology of Materials	8
CEE 534	Physical Properties and Related Durability Problems of Construction Materials	8
CEE 537	Rehabilitation and Strengthening of Structures	8
CEE 538	Experimental Methods in Structural Engineering	8
CEE 547	Masonry Structures	8

List of Elective Courses offered by all three Departments

	ECTS
CON 520 Conservation Practice	8

Courses Description (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 (10 ECTS: 3-0-16)

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 (10 ECTS: 3-0-16)

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 (10 ECTS: 3-0-16)

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 (a) protect cultural heritage in wartime and (b) reconstruct it after the end of the conflict.

ARCH 671 Computational and Analytic Techniques in the Humanities and Social Sciences (10 ECTS: 3-0-16)

The course aims to give students of History and Archaeology a theoretical base and practical training in topics concerning the application of information technologies and computational methods in the Humanities. The course will focus on familiarizing students with specific software dealing with the analysis, processing, and visualization of data which may manage in the future, either in their working or academic environment. The goal of this course is to provide practical knowledge and training for the statistical analysis of measurements, creation of charts and thematic maps, the visualization of spatial-temporal associations and networks, the analysis of digital texts and literature, etc.

CEE 532 Advanced Technology of Materials (8 ECTS: 3-0-12)

Concrete components, microstructure and properties of Portland cement. Heat of hydration and thermal stress development in concrete. Strength, fatigue, failure mechanisms (fracture mechanics), creep, shrinkage and durability of hardened concrete. Special concretes: Self-compacting, high performance, recycled concrete and ultra-high performance. Fibre reinforced concrete. Behaviour and mechanical properties. Mechanics of fibre reinforced concrete. Fibre reinforced polymer composites. High performance materials. Sustainability. Experimental investigation.

CEE 533 Local and Traditional Building Materials (8 ECTS: 3-0-12)

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: 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.

CEE 537 Rehabilitation and Strengthening of Structures (8 ECTS: 3-0-12)

Rehabilitation strategy and methods of intervention. Emphasis is placed on the detailing of interventions with FRPs in the context of EC8 – III and the Greek Retrofit Code 2010. Assessment of the structural implications of corrosion, particularly with reference to earthquake resistance. Use of FRPs in corrosion repairs. Required global and local interventions for earthquake resistance of old, lightly reinforced construction. Strength implications for foundation redesign and reinforced concrete jackets. Addition of walls, infills, diagonal braces. Detailing of retrofit. Other repair and strengthening methods. Injections of grouts, metallic nets. Local interventions with composites. Debonding. Strengthening for flexure using externally bonded plates and near-surface mounted reinforcement. Confinement, shear strengthening, strengthening of anchorages. Clamping action. Assessment and retrofit against torsional eccentricities in structures. Unreinforced masonry structures: repair and retrofit with advanced composites. Historical constructions, assessment and strengthening.

CEE 538 Experimental Methods in Structural Engineering (8 ECTS: 3-0-12)

Introduction to experimental mechanics. Structural models. Dimensional analysis-similitude laws. Static and dynamic modelling. Design of an experimental setup. Strain gage instrumentation. Force-displacements-velocity-acceleration-pressure-temperature transducers. Non-destructive testing. Data acquisition systems. Accuracy-reliability-statistical analysis of experimental data. Experimental testing.

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: 3-0-12)

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.

CONTACT DETAILS

For updated information, students are advised to have a look at the website of the programme at <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.

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For specific information regarding the Programme, students may contact the Coordinating Committee of the Programme.

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M.A. in Design for Social Innovation

Jointly offered online by the University of Cyprus (UCY) and the Cyprus University of Technology (CUT), with the participation of three departments: the Department of Architecture (UCY), the Department of Business and Public Administration (UCY) and the Department of Multimedia and Graphic Design (CUT).

The Programme, which places an emphasis on practice-based teaching, is:

- Offered online.
- Available for both fulltime and part time study.
- Offered in English.

Introduction

The last decades have revealed that the most complex and critical global challenges transverse disciplines and require support and knowledge that bridges higher education institutions, academic research and professional practice. Challenges that range from health crises, climate change, political and social unrest and economic crises. The United Nation 2030 Agenda for Sustainable Development setting out a 15-year plan to achieve goals to improve the lives of everyone, everywhere has encouraged actions across all sectors and levels towards achieving the 17 Goals adopted by UN Member States. According to a discussion paper from UNDP's Global Centre for Public Service Excellence, social innovations are "new solutions (products, services, models, markets, processes etc.) that simultaneously meet a social need more effectively than existing solutions and lead to new or improved capabilities and relationships and better use of assets and resources."

The M.A. Design for Social Innovation programme is designed for students with a Bachelor level of education, who have a strong interest in developing high-level competences rooted in social science and design theory and practice to build, improve, and evolve skills and capacities necessary for social innovation actions. The departments involved share an ethos of interdisciplinarity in design and innovation and strive to build links between academia and practice bringing to the forefront impactful and evidence-based theoretical and methodological knowledge.

This M.A. builds from the capacities of the institutions and academics involved and a new focus on the role of social innovation as a central component of the United Nations Sustainable Development Goals to address the key social issues that affect human society. The Department of Architecture, the Business and Public Administration department and the Multimedia and Graphic Design department, champion a human-centred strategic approach to empowering its graduates with

necessary knowledge to tackle the most complex social challenges in a contextually relevant, impactful, and meaningful way.

The interdisciplinary nature of the Programme allows for knowledge that can be applied across a wide range of creative, social and design fields that benefit from critical design thinking, creative practice, human interaction, development, structure organisation and service systems development. Learners, a global audience, will bring case-studies, perspective, and contextual knowledge from a variety of backgrounds ranging from the global south to the global north creating links between the rich and diverse cohorts and the knowledge and information acquired during the programme. The courses offered aim to create links between academia and practice by offering perspectives from practitioners through case-studies and involvement in the teaching originating from a range of fields such as business, service design, social sciences, visual communication, design systems, social change, innovation, and sustainability.

Programme Aims

The M.A. aims to:

- Provide academic and practice-based knowledge in design, social innovation, and entrepreneurship bridging together theoretical and practical knowledge and experience.
- Develop creativity and innovation skills in the domain of Design and Social Innovation.
- Produce graduates ready to effectively enact real social change, lead multi-disciplinary teams and collaborate in the design and development of successful social innovation enterprises and activities.
- Support the development of new kinds of social innovation practitioners, the producers of social innovations as championed by the UN, through providing key design and leadership skills.

Programme Structure

The Programme offers a flexible admission system (during the spring or winter semester), either in the fall or spring, with a structure that includes three academic terms and a summer period. Students have the option to choose between a thesis or a practical project. They can also select courses that meet their needs.

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.

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 a number of courses, and the completion of either a Diploma Project or a Thesis. 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.

Course Structure

The course structure considers a dual entry point to the programme (on September - Term 1 or on January - Term 2).

	ECTS
Term 1 courses	
DSI511 Introduction to Social Innovation	7.5
DSI512 Collaborative Design	8
DSI513 Social Inclusion and Design	7.5
DSI514 Research by Design	8
TOTAL:	31

Term 2 courses

DSI521	Ethnography for Designing Social Innovation	7.5
DSI522	Sustainable Design Futures	8
DSI523	Social Entrepreneurship	8
DSI524	Experimental Design Practices	7.5
TOTAL:		31

Summer Term: Offered every summer*

DSI531	Summer School Cyprus [elective]	4
Optional Summer School in Cyprus paired with MGA Diploma Project.		

Term 3: Offered every term

DSI532	Diploma Project [summer school prerequisite] 24	
DSI533	Master's Thesis	28
TOTAL:		28

** Students can choose between a written thesis or a summer school in Cyprus and a linked design diploma project. Both universities are involved in the thesis and summer school & diploma project with the effort coordinated by one of the two in each case.*

COURSES DESCRIPTION (Compulsory and Elective Courses)

DSI511 Introduction to Social Innovation (7.5 ECTS)

This course aims to introduce students to Social Innovation and the dynamic processes underlying transformative social change. The course is designed to provide a comprehensive understanding of the multifaceted concept of Social Innovation, exploring its roots, principles, methodologies, and diverse applications across various sectors. Students will gain knowledge of strategies of change that include the innovative activities of social and political entrepreneurs, activists, organizations, and social movements.

DSI512 Collaborative Design (8 ECTS)

This course aims at exposing students to methods of collaborative design in the fields of design, architecture, urban design and urban planning fields, through the combination of both active and reflective learning about collaborative practices and methods. The course is designed to provide students with the theoretical framework, the experience, tools, and methods needed to improve design processes in a collaborative, transdisciplinary manner.

DSI513 Social Inclusion and Design (7.5 ECTS)

The purpose of this course is to introduce basic concepts related to social inclusion and provide practical application of this knowledge so that students develop the ability to create products and solutions that take social inclusion into account. Topics covered include: basic concepts of social inclusion and inclusive design, the value of inclusive design, user capabilities and product interaction, main phases of inclusive concept design, inclusive design practices and tools, auditing inclusive/exclusive design examples and documentation of social inclusion in design. Reference will be made to Sustainable Development Goals that relate with social inclusion -SDG 4, 8, 9, 11 and 16- and the implications of social exclusion,

as well as how issues of social inclusion, and specifically issues of gender, affect communities and the society. The main task is the project work, which is carried out in small groups and will be connected to ongoing needs and challenges linked with SDGs.

DSI514 Research by Design (8 ECTS)

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 design thinking — as a combination of written and design language — 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.

DSI521 Ethnography for Designing Social Innovation (7.5 ECTS)

If you have ever thought 'this is too theoretical for me' or 'this theory doesn't have a practical application' while taking a course, during these 16 weeks you will be offered a learning opportunity to think creatively and critically on how various theories and methods have been applied by others and how you can adopt and adapt these to suit your practical needs through ethnographic reflection and observation. Moreover, you will get into the habit of being reflective of your own practices to improve your confidence and ability to shift between a reflective mode and rational problem solving. This course will help you apply ethnographic methodologies and theories of design in a broader set of problems in business and society by looking into concepts such as creativity, critical thinking, lateral thinking, divergent thinking, user-centred design, design thinking, framing and others. You will engage individually and in groups in a variety of activities that include writing, creating, peer-reviewing and applying methods in the field.

DSI522 Sustainable Design Futures (8 ECTS)

Students will learn how to approach the formulation of strategic plans for interventions at the neighbourhood scale following themes introduced during lectures and seminars.

Subjects in this course will vary according to emerging students' needs or requests and the faculty's educational and research interests.

DSI523 Social Entrepreneurship (8 ECTS)

The course provides the theoretical and practical framework for the study and analysis of social entrepreneurship and innovation. Topics covered include business plans, business modelling, funding sources, intellectual property protection, innovation process and management. Entrepreneurship refers to the process of identification, assessment and development of opportunities, regardless of the resources that we have available to us.

DSI524 Experimental Design (7.5 ECTS)

This module concerns critical and experimental design practices that are largely research-driven, speculative, and non-solutionist. It zeroes in on a broad array of topics ranging from design as material exploration, post-optimal electronic instruments, design fiction, post-digital objecthood, ludic design, science fiction, "data-things", design as political critique, and others. These are scrutinised with respect to physical

objects, software, electronic appliances, speculative fabulation, crafts, contemporary techno-scientific culture, and social activities. Students will review the history and theory behind a broad array of experimental design practices, will analyse and discuss a number of case studies, and, much more importantly, will actively design and selectively produce themselves (individually and in small workgroups) a number of physical, digital, fictional, or hybrid artefacts.

DSI531 Summer School Cyprus [elective] (4 ECTS)

Optional Summer School in Cyprus paired with MGA Diploma Project.

DSI532 Diploma Project [summer school prerequisite] (24 ECTS)

This course is a final milestone for the M.A. Design for Social Innovation. It's an elective course as students can choose the alternative final milestone route is the Master's Thesis. This course has as a prerequisite attendance and completion of a Summer School in Cyprus during the summer prior taking this course. The difference being that the Master's Thesis is a more theoretical approach to research in relation to Design for Social Innovation while the Summer School and Diploma Project takes a more practical approach. Both routes meet and align to the overall programme requirements albeit having a different emphasis on the balance between research and practice.

DSI533 Master's Thesis (28 ECTS)

This course is a final milestone for the M.A. Design for Social Innovation. It's an elective course as students can choose the alternative final milestone route that consists of the Summer School and Diploma Project. The difference being that the Master's Thesis is a more theoretical approach to research in relation to Design for Social Innovation while the Summer School and Diploma Project takes a more practical approach. Both routes meet and align to the overall programme requirements albeit having a different emphasis on the balance between research and practice.

CONTACT DETAILS

For updated information, please refer to the website of the programme at <https://dsi.education/>.

For general information regarding the programme of study, registration, organisation and support, students are encouraged to contact the secretariat of their host Department.

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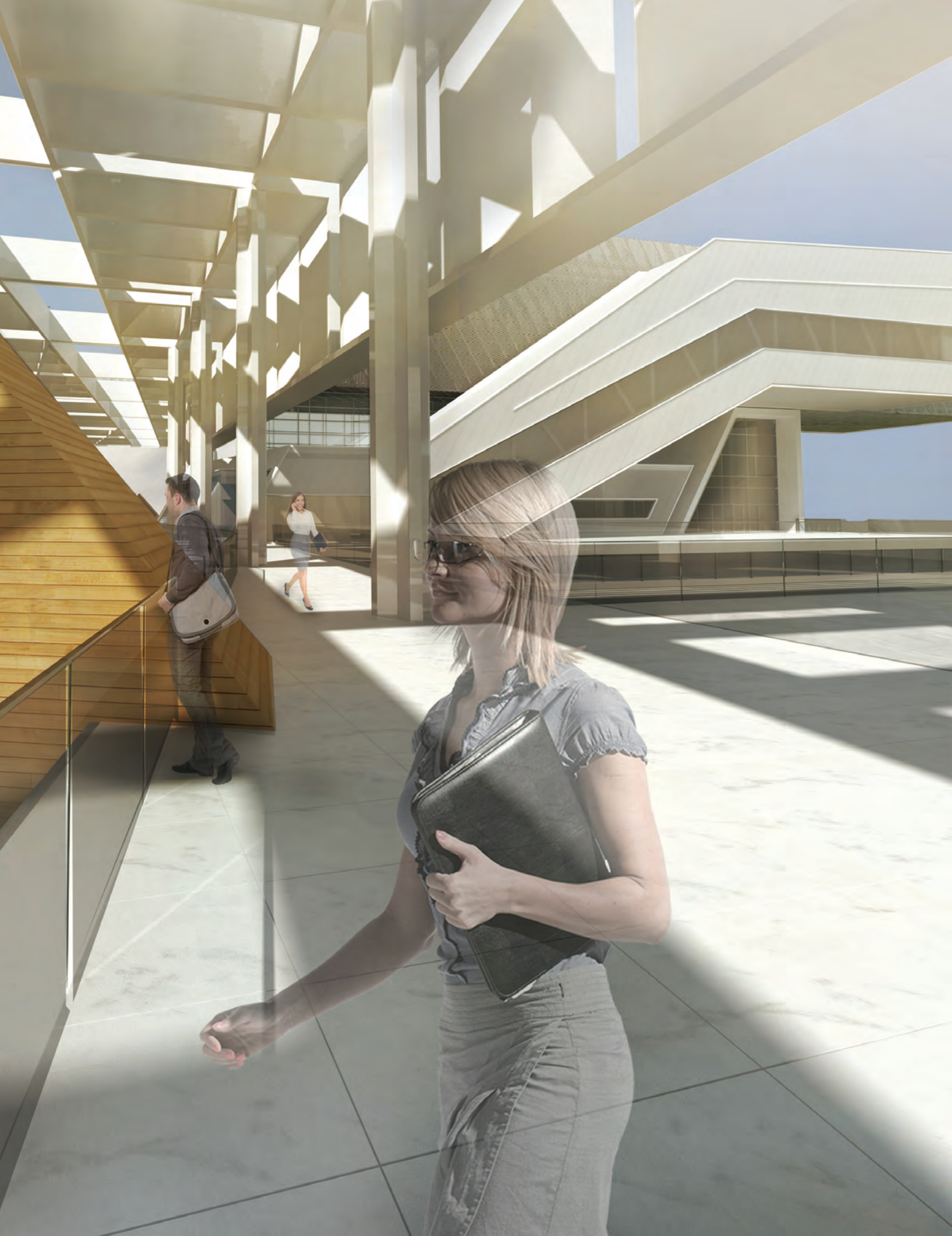
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GRADUATE School



GRADUATE School



Graduate School

www.ucy.ac.cy/graduateschool/en

The University of Cyprus anticipates further growth of its graduate education with the establishment of the Graduate School in 2012. The Graduate School provides support to more than 1800 postgraduate students from Cyprus and abroad. The Graduate School differs from other faculties of the University, since its components are not departments, but their postgraduate programmes. The Graduate School provides support for the development, evaluation and promotion of graduate education throughout the University.

The Graduate School provides administrative support to postgraduate programmes and ensures for academic excellence and integrity. In order to enhance the presence and contribution of UCY as a local higher education and research institution, the Graduate School adopts and implements effective policies, provides reliable information, enriches its postgraduate programmes by forming partnerships with local, state and other international bodies and develops programmes in international languages, other than the ones taught in Greek and Turkish language.

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.

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Graduate School

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Faculty of HUMANITIES





DEPARTMENTS

- ENGLISH STUDIES
- FRENCH AND EUROPEAN STUDIES
- TURKISH AND MIDDLE EASTERN STUDIES



Department of English Studies

www.ucy.ac.cy/eng/en

The Department of English Studies is dedicated to the promotion of research and knowledge in the areas of English Language and Culture. It offers undergraduate studies in English Language and Philology, with tracks in Linguistics, Literature, and Translation Studies.

The Department also offers the following Master's degrees:

- English Studies
- Teaching English to Speakers of Other Languages (TESOL)
- Theoretical and Applied Linguistics (TAAL)

The Department offers Ph.D. programmes in subjects related to all research areas of its academic faculty.

Research in the Department

The Department is involved in research in Anglophone and Comparative Literature, Linguistics, Translation 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:

- Internal research project entitled "Cypriot Heritage and Recording Maintenance (CHaRM): Forays into Cypriot Greek as a Heritage Language in the English-Speaking Diaspora" (UCY, 2023-2025).
- COST Action CA18123 entitled "The European Family Support Network. A bottom-up, evidence-based and multidisciplinary approach" (ESF 2019-2023).

- COST Action CA21114 entitled "CLIL Network for Languages in Education: Towards bi- and multilingual disciplinary literacies (CLILNetLE)" (ESF 2022-2026).
- COST Action CA21143 entitled "Transnational Family Dynamics in Europe (TraFaDy)" (ESF, 2022-2026).
- Research project entitled "Adaptations to Multilingualism (ATOM)" (Agencia Estatal de Investigación, PID2021-124399NA-I00, PI: Evelina Leivada, Universitat Autònoma de Barcelona, Spain).
- Marie Skłodowska-Curie Doctoral Networks, title of research project: "Storytelling as Pharmakon in Premodernity and Beyond: Training the New Generation of Researchers in Health Humanities" (StoryPharm). In collaboration with the department of Byzantine and Modern Greek Studies, UCY, the University of Bamberg, Lund University, the University of Salerno and Cardiff University (EU, September 2024 - September 2027).
- Horizon MSCA grant, title of research project: "Narrative and Embodied Temporality: Revisiting Performativity" (NETRePerform). PI: Dr Nikos Soueltzis (EU, September 2024 - September 2026).

Postgraduate Studies

The Department of English Studies offers postgraduate programmes at M.A. and Ph.D. levels. Both the M.A. Programme in TAAL and the M.A. in English Studies last four semesters (three semesters of coursework, followed by one semester for writing the M.A. dissertation), while the M.A. Programme 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 obtained their degree at the time of application, they must have obtained 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, you may refer to Admission and Attendance Regulations – Application Procedures or 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 Linguistics, this interdisciplinary, inter-generic programme balances theoretical, cultural, and practical concerns. Its main objectives are the following:

- 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 analyse the role of the interlingual and intercultural transfer of literary texts through translation and adaptation.
- To provide a solid background in the philosophy and usage 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 their own 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.

LIST OF RUBRICS

ECTS

I. Topics in Literary and Cultural History

ENG 700	Aesthetics & Literature: From Romanticism to Postmodernism	10
ENG 713	Gender, Sexuality & Subjectivity in Early Modern Literature & Culture	10
ENG 721	Nation and Narrative	10
ENG 723	Early Modern Literature and Political Theory	10
ENG 724	The Struggle for Shelter: Refugees, the Five Generations, 1935-2020	10
ENG 725	Writing the Anthropocene	10

II. Questions in Comparative Cultural Studies

ENG 705	The Animal in Literature and Philosophy	10
ENG 716	The Sublime	10
ENG 719	Space and Cultural Production	10
ENG 720	Seminar in Contemporary Feminist Theory: Debates on Aesthetics, Ethics and Politics	10
ENG 726	Advanced Seminar in Literary and Cultural Theory	10

III. Reception, Translation, Adaptation

ENG 709	Imagined Worlds: The Long Nineteenth Century	10
ENG 727	Reading, Re-reading, Failing to Read: Methodological Questions in Literary and Cultural Criticism	10
ENG 771	Shakespeare's Afterlives	10
ENG 772	Translation Criticism	10

IV. Language, Literature, Pedagogy

ENG 704	Critical Pedagogy and Shakespeare	10
ENG 740	Language Teaching and Learning	10
ENG 743	Principles of Linguistic Analysis I	10
ENG 748	Principles of Linguistic Analysis II	10
ENG 749	First and Second Language Acquisition	10
ENG 760	Philosophy of Language	10
ENG 761	Pragmatics: Utterance, Context, Communication	10

COURSE DISTRIBUTION PER SEMESTER

	ECTS
First Semester	
Compulsory course from rubrics 1-4	10
Compulsory course from rubrics 1-4	10
Advanced Research Skills I (Compulsory)	10
Second Semester	
Compulsory course from rubrics 1-4	10
Compulsory course from rubrics 1-4	10
Advanced Research Skills II (Compulsory)	10
Third Semester	
Compulsory course from rubrics 1-4	10
Compulsory course 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 TESOL as an academic field and has the following main objectives:

- To offer students a solid foundation in TESOL and to deepen their knowledge in the main areas of English grammar and the structure of language.
- To offer students a solid foundation and deepen their knowledge in the main areas of TESOL, from both a theoretical and a practical point of view.
- To acquaint students with new areas in the field (such as computer-assisted language learning, alternative assessment, English as a lingua franca).
- To engage students in research in the field of TESOL and consequently encourage them to further their studies.

The Programme is divided into two components: the taught component covers the main areas of TESOL and familiarises students with research methodology; the thesis component gives students the opportunity to undertake research in a specialised area of their interest.

COURSE DISTRIBUTION PER SEMESTER

	ECTS
First Semester	
ENG 740 Language Teaching and Learning	10
ENG 741 Trends in Applied Linguistics	10
ENG 742 Research Methodology	10
Second Semester	
ENG 753 Language Testing and Assessment	10
ENG 754 Materials Development and Course Design	10
ENG 75X Elective Course	10
Third Semester	
ENG 765 Master Thesis in TESOL	20
ENG 762 Teaching Portfolio Development	10
Grand Total	90

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 in Linguistics and deepen their knowledge in the main areas of English grammar and language structure.
- To acquaint students with different areas in the field (such as syntax, semantics, phonology, applied linguistics, etc.).
- To provide guidelines for students to conduct research in the field of Linguistics and 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 their interest.

COURSE DISTRIBUTION PER SEMESTER

	ECTS
First Semester	
ENG 741 Trends in Applied Linguistics	10
ENG 743 Principles of Linguistic Analysis I	10
ENG 766 Portfolio Development I	10
Second Semester	
ENG 748 Principles of Linguistic Analysis II	10
ENG 742 Research Methodology	10
ENG 767 Portfolio Development II	10
Third Semester	
ENG 749 First and Second Language Acquisition	10
ENG 750 Topics in Linguistics	10
ENG 768 Portfolio Development III	10
Fourth Semester	
ENG 769 Master Thesis in TAAL	30
Grand Total	120

RESEARCH INTERESTS OF THE ACADEMIC STAFF

Stella Achilleos, Associate Professor

Literature and the social and cultural history of the early modern period; 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); The literature of the English Revolution.

Spyros Armostis, Assistant Professor

Articulatory, acoustic, and perceptual phonetics; laboratory phonology; clinical linguistics (typical and atypical language development); variational sociolinguistics; grapholinguistics.

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

Theoretical and methodological aspects of translation and interpreting; Culture and translation, translation methodology, didactic aspects of translation & interpreting, translation ethics and politics; Secondary term formation and terminology in bilingual contexts, and the use of translation in other professional contexts; Text linguistics and discourse analysis (textual structure, genre theory and textual pragmatics).

Vasso Giannakopoulou, Assistant Professor

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

Biolinguistics, in particular theoretical linguistics, cognitive aspects of the human language faculty, and language acquisition. Syntactic theory, synchronic and diachronic study of grammar, and theoretical concerns in psycho- and neurolinguistics.

Sviatlana Karpava, Assistant Professor

Applied linguistics, syntax, semantics and pragmatics; First and second language acquisition, bilingualism, multilingualism and sociolinguistics; Teaching and Education; Heritage language use, maintenance and transmission, language loss, shift and attrition, family language policy and intercultural communication.

Konstantinos Kritsis, Assistant Professor

Interfaces between translation/ interpreting and theatre/information technology; 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; The use of digital tools in (community) interpreter training.

James Little, Assistant Professor

Change to: "Drama, theatre and performance; Irish writing; Genetic criticism; Cultural representations of coercive confinement; How the political dimensions of 20th- and 21st-century performance texts can be understood through manuscript analysis of their archival avant- and après-textes." Also, the terms avant- and après-textes should be in italics.

Maria Margaroni, Associate Professor

History and theory of literary criticism; Continental philosophy; Feminist and gender studies; Psychoanalysis; Trauma theory; Narrative medicine; Neurofiction; Contemporary anglophone literature.

Phoevos Panagiotidis, Professor

General linguistics, language typology and change, morphology, syntax and their acquisition; The syntax and acquisition of nominal phrases and syntactic edges; 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

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Department of French and European Studies

www.ucy.ac.cy/frml/en

The Department of French and European Studies offers the following postgraduate programmes:

- A Master's Programme (M.A) in Teaching French as a Foreign Language (FLE).
- A Doctoral Programme (Ph.D.) in French Studies.
- A Doctoral Programme (Ph.D.) in European Studies.

MASTER'S DEGREE IN TEACHING FRENCH AS A FOREIGN LANGUAGE

The Master's Programme in Teaching French as a Foreign Language (FLE) is both research-based and profession-oriented. It mainly aims to provide students with a) academic knowledge in Teaching French as a Foreign Language (theoretical knowledge, contemporary methodologies), and b) professional skills in teaching a language (practical training, school experience), as well as familiarize them with the educational process. Specifically, the Programme offers in-depth training that provides both the necessary tools for analyzing teaching situations and the practical tools that enable intervention in professional fields related to the teaching process.

The Programme provides an opportunity for teachers of French as a Foreign Language working in the public and private sectors in Cyprus, as well as for future teachers or specialists in Francophone studies who wish to work either in Cyprus or abroad, to pursue further specialization. It is also aimed at graduates of French Studies from the University of Cyprus, graduates from other departments of the University of Cyprus, as well as graduates of other universities in Cyprus and abroad, who wish to specialize in the field. Graduates acquire the necessary skills to successfully engage in these fields, contributing to the dissemination and promotion of the French language and culture.

It allows students with a degree or an equivalent diploma to specialize within one and a half years.

The Programme is offered as follows:

- **Distance learning:** online education with continuous supervision by the instructors.
- **Hybrid:** combining in-person or/and distance sessions.

At the pedagogical level, the hybrid and/or distance learning system allows:

- The implementation of innovative approaches using modern technology.
- The acquisition of interactive teaching and learning experience.
- Access to a variety of resources and materials that are difficult to obtain in traditional classroom settings.

- The ability to access rich learning materials (videos, lectures, digital books, etc.) at any time, enhancing autonomy in learning.
- Interactive learning and collaboration, which integrates tools that promote interaction, such as discussion forums, online workshops, and group activities, enhancing cooperation among students.
- Immediate feedback through digital tools, allowing students to track their progress and improve their performance.

At the organizational level, the hybrid and/or distance learning system offers:

- Greater flexibility regarding when and where learning takes place. Students can study at their own pace, almost anytime and anywhere they wish.
- The ability to continue their studies while balancing personal life and professional activities with their education.
- The opportunity to receive training without needing to take time off from their workplace.
- Reduced physical commuting to and from the university campus (for the hybrid programme).
- The opportunity to obtain a postgraduate degree for students who are not residing in the Republic of Cyprus (for the distance learning program).

For a more effective organization of all the courses in the Programme, the Department provides students with a common virtual learning environment (Blackboard Ultra), where all the information related to the courses will be available. Students will have easy access to all the tools, resources and activities they need for their learning.

From an academic perspective, the Programme aims to enhance the knowledge and skills of graduates in French Language and Literature or holders of other relevant degrees from French-speaking institutions. It is designed to meet contemporary requirements for Teaching French as a Foreign Language and address the needs of the labor market both in Cyprus and internationally. In particular, the Programme offers in-depth training over three semesters, including a total of eight courses delivered by the Department of French and European Studies, the Department of Education, and the Department of Psychology. It also includes the

preparation of a postgraduate thesis, which involves fieldwork. Therefore, it provides the opportunity for students with a degree or an equivalent qualification to specialize in one and a half years.

At the research level, upon completing the Programme, graduates will be qualified to pursue doctoral studies in the Department of French and European Studies or other departments at the University of Cyprus, with relevant research areas (e.g. the Department of Education or the Department of Psychology), as well as in universities abroad, with opportunities for academic research in this field.

The employment prospects for graduates of the Programme include various professional directions, such as:

- Teachers of French as a foreign language.
- Directors of French-speaking and foreign language private schools.
- Directors of language centers and tutoring centers.
- Inspectors of foreign languages and/or French as a foreign language.
- Special education trainers in pedagogical institutes.
- Authors of French-language textbooks.
- Consultants and officers in the field of language services.
- Consultants and officers for French-speaking programmes.
- Consultants specializing in Francophonie with activities in the Francophone world.
- Consultants specializing in multilingualism.
- Designers of French-language teaching programmes.
- Trainers of French as a foreign language.
- Consultants and officers in Language Planning and Policy Offices.
- Trainers for online education.

The minimum criteria for the evaluation and ranking of candidates are as follows:

1. Previous academic background in a related field and grades in relevant degrees.
2. At least two letters of recommendation.
3. Interview (if required by the Department's internal regulations).

The Department has the option to adopt additional criteria beyond those mentioned above, if stipulated by the Department's internal regulations or the postgraduate programme's guidelines.

Candidates for the postgraduate programme must hold a bachelor's degree in French Studies or in a field related to the Social and Human Sciences, by the specific date announced by the Department. Candidates must have achieved an average grade of 7/10 or an equivalent score in their degree, or demonstrate proven research aptitude and/or teaching experience. Candidates with a degree in a related field must be proficient in the French language, both in writing and speaking. In the case of graduates

from French universities, only the degree is required. The Department reserves the right, if deemed necessary, to request selected candidates to attend undergraduate courses that may be missing from their academic background (e.g. French Language and Research Methodology). These courses will be taken alongside the first year of the postgraduate programme. The credits from these courses will not affect the total number of ECTS required for the postgraduate programme. The grading for these courses will be in a Pass/Fail format, 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.
6. 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 videoconference. The Committee's list of selected candidates will be submitted, for a final approval, to 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 could apply. The deadline for submission of applications and the selection criteria will be announced on the Department's website.

Programme Duration

Moreover, through the ERASMUS+ student exchange programme, students could spend the maximum permitted time, according to the regulations of the University of Cyprus, at institutions abroad. The possibility of joint Master's dissertation supervision, as 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:

	ECTS
First Semester	
FES 730 Methodologies in Teaching French as a Foreign Language	7.5
FES 731 Information and Communication Technologies in the Teaching of French as a Foreign Language	7.5
FES or EDU or PSY Course from the Indicative List of the Department of French and European Studies or Department of Education or the Department of Psychology	7.5
FES or EDU or PSY Course from the Indicative List of the Department of French and European Studies or Department of Education or the Department of Psychology	7.5
Total	30
Second Semester	
FES 734 Didactics of the grammar of French as a Foreign Language	7.5
FES 740 Pedagogical and digital planning	7.5
FES or EDU or PSY Course from the Indicative List of the Department of French and European Studies or Department of Education or the Department of Psychology	7.5
FES or EDU or PSY Course from the Indicative List of the Department of French and European Studies or Department of Education or the Department of Psychology	7.5
Total	30
Third Semester	
FES 749 Master's Thesis DID	30
Total	30
Grand Total	90
Notes	
- 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 needs to 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 each. The courses in the Department of Psychology are credited with 7.5 ECTS each. - Conferences, workshops and lectures organized 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. - The student may, if desired, study for one semester at a university abroad, as part of the ERASMUS+ exchange programme, subject to coordination by the Department.	

Master's Thesis (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. Students must select their subject and supervisor(s) by the end of the second semester of their studies. The graduation project (20,000-24,000 or 60-80 pages, excluding appendices) is assessed by a committee assembled at the end of the Programme's third semester. The Committee consists of the supervisor and another member of the academic staff. According to the 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 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 must be written in French.

Course Descriptions (Indicative List)

FES 700 Research Experience (7.5 ECTS)

With the agreement of the supervising professor, students may undertake theoretical or applied research to gain substantial research experience. Students may conduct their research on a subject related to the Didactics of French as a Foreign Language, to European Studies, or in general on a subject related to the field of investigation of the Department of French and European Studies. The aim of the course is to familiarise the students with the research, production and promotion of new knowledge.

FES 701 Individual Independent Study (3 ECTS)

Students select a topic of their choice after agreement with the supervising professor, in order to adapt the research programme to their own needs and preferences. The first stage of the Individual Independent Study consists of a research proposal in which students describe the topic they are working on. The proposal is discussed with the professor in charge of supervising and evaluating the research. Students then submit a written research proposal and carry out the work individually. The aim of the course is to provide the students with an individual academic research experience.

FES 730 Methodologies in Didactics of French as a Foreign Language (7.5 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 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 (7.5 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 the 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 (7.5 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 (7.5 ECTS) (in-person)

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 familiarise and sensitise 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 (7.5 ECTS)

The course examines modern ways of teaching grammar. The way to teach grammatical structures and the rule of the French language is, especially at novice levels, inductive and starts with examples taken from texts (i.e. it is contextualized, 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 (7.5 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 francophone literary texts 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, from a literary perspective, data offers answers to the following questions: How can one include the literary discourse in the process of building 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 literacy texts?

FES 736 Strategies for Learning the French Language: Analysis and Evaluation of Errors (7.5 ECTS)

The course will help students analyze 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 analyzing 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 (7.5 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 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 reality of Francophone society. Students participate in a variety of activities such as research, observation, interviews, simulations, creative compositions, etc. Within this framework, the course seeks to enhance communication and cooperation between the learner and the teacher, to develop knowledge in francophone environments.

FES 739 Theatre and Film in the Teaching of French as a Foreign Language (7.5 ECTS)

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).

FES 740 Pedagogical and digital planning 7.5

The aim of this course is to introduce students to the design of online teaching sequences intended to complement a face-to-face FLE course (hybrid system). It focuses on the engineering

of language teaching using digital technology and deals with the engineering principles to be applied when designing teaching scenarios. Its aim is to define what an educational task/scenario is in language teaching/learning, and to acquire knowledge of related concepts (types of tasks, instructions, support, etc.).

FES 749 Master Thesis DID (30 ECTS)

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 independent research, to be able to draw conclusions that will have research and scientific interests.

FES 757 Philosophy of Education (7.5 ECTS) (in-person)

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.

Indicative List of Courses of the Department of Education (See Descriptions in the Department of Education)

- EDU 603 Comparative Education
- EDU 610 Evaluation of Educational Programmes
- EDU 617 Management in Education and Change Management
- EDU 620 Introductions to Educational Administration
- EDU 621 Exploitation and Development of Human Resources
- EDU 622 School Organization and Administration
- EDU 623 Observation and Evaluation of Teaching and Educational Personnel
- EDU 624 Planning and Decision Making in Education
- EDU 625 The Application of New Technologies in Educational Administration
- EDU 627 Introduction of Innovations in Education
- EDU 628 Political Aspects of Education
- EDU 629 Pedagogical Leadership
- EDU 630 Financial Aspects of Education
- EDU 631 Effectiveness and School Improvement
- EDU 635 Organizational Behaviour and Leadership
- EDU 642 Basic Principles of Measurement and Evaluation in Education
- EDU 649 Educational Management in Europe

Indicative List of Courses of the Department of Psychology (See descriptions in the Department of Psychology)

- PSY 605 Psychometrics
- PSY 610 Psychology in Education
- PSY 616 Mental Representations
- PSY 617 Counselling Psychology
- PSY 620 Learning and Cognition
- PSY 630 Contemporary Theories of Human Development
- PSY 637 Social Development and Social Settings
- PSY 701 Psychology of Instruction
- PSY 707 Family and Child Development
- PSY 712 Cognitive Science
- PSY 715 Language Development and Language Disorders

PH.D. PROGRAMME IN FRENCH STUDIES OR EUROPEAN STUDIES

The Programme provides students with a contemporary and specialized 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 practice academic teaching, public and private teaching, provide cultural and linguistic services, public services at international institutions, diplomatic bodies, translation centers, 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.

Structure of the Programme

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:

	ECTS
Master II	60
FES 650 Research Stage I	30
FES 651 Research Stage II	30
FES 652 Research Stage III	30
FES 653 Research Stage IV	30
FES 660 Comprehensive Exam	0
FES 661 Thesis Proposal	10
FES 670 Writing Stage I	15
FES 671 Writing Stage II	15
FES 680 Thesis Defence	20
Total	240

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 into 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 center, 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 organizes 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) academic staff. 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 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 Spanish.

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 center 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 center 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 the 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 of Study: 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 humor, integration of plurality and diversity.

Panagiotis Christias, Associate Professor

Fields of competence philosophy, politics and society; Ancient philosophy; Enlightenment and modernity; Philosophy and literature fields of specialization; Plato, Paul, and the theological political problem; Plato, Europe, and the social sciences; Classical political philosophy & modern political thought; History of philosophy; History of sociology; Economy and society; Liberalism.

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, 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 Christofi, Assistant Professor

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 and contrastive studies [Critical discourse analysis / social semiotics (translation, ideology and identity construction, translation of humour, slurs, irony, multimodal texts, translation of political and journalistic discourse, translation on social media platforms (Twitter), institutional translation (official and community translation), (EU texts), activist translation]; Lexical and text semantics, literary semiotics, comparative stylistics and translation of emotions; Rhetorical figures (metaphor and irony); Polysemy mainly in literary and theatrical translation; Translation pedagogy (translation errors, creativity, integration of machine translation into translation teaching, use of parallel texts).

Landry Digeon, Lecturer

European studies; French studies; Digital humanities; Intercultural communication; Film and TV series studies; Multimodality, media and communication; Artificial Intelligence; French cinema; Film production.

Dora Loizidou, Lecturer

Computer Mediated Communication (CMC); Distance learning and digital learning environments; Hybrid education (blended learning), synchronous and asynchronous; Learning and virtual exchange in foreign language learning; French language didactics and the use of ICTE (Information and Communication Technologies in Education); Multilingualism and languages in multicultural environment; French for academic and specific purposes.

María Victoria Soulé, Lecturer

Second language acquisition and multilingualism; Acquisition of Spanish as a foreign language; Processes and strategies in language learning; Collaborative learning; The use of Technology Enhanced Learning (TEL) and Computer-Assisted Language Learning (CALL); Design of language programmes and multilingual strategies and approaches; Development of language skills in populations participating in exchanges, such as ERASMUS+.

Contact Details

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Department of Turkish and Middle Eastern Studies

www.ucy.ac.cy/tms/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:

	ECTS
Three Introductory Courses (3x8)	24
Six Specialisation Courses (6x8)	48
Three Turkish Texts Courses Reading and Dialogue (3X3)	9
Attendance at Lectures and Seminars (4x1)	4
Participation in the Colloquium	2
Master's Thesis	33
Total	120

For workload equivalents, the General Rules of Postgraduate Studies of the University of Cyprus apply; one (1) ECTS represents 25 to 30 hours of student workload.

Programme of Studies

	ECTS
First Semester	
TUM 601 Modernity and Historical Evolution in Turkey	8
TUM 602 Issues in Turkish Linguistics	8
TUM 603 Turkish Literature and Social Issues after 1980	8
TUM 607 Turkish Texts – Reading and Dialogue I	3
TUM 801 Attendance at Lectures and Seminars I	1
Total	28
Second Semester	
Specialisation Course	8
Specialisation Course	8
Specialisation Course	8
TUM 608 Turkish Texts – Reading and Dialogue II	3
TUM 802 Attendance at Lectures and Seminars II	1
Total	28
Third Semester	
Specialization Course	8
Specialization Course	8
TUM 609 Turkish Texts – Reading and Dialogue III	3
TUM 803 Attendance at Lectures and Seminar III	1
TUM 805 Master Thesis Writing I	11
Total	31
Fourth Semester	
Specialization Course	8
TUM 804 Attendance at Lectures and Seminars IV	1
TUM 807 Participation in the Colloquium	2
TUM 806 Master Thesis Writing II	22
Total	33
Grand Total	120

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 on 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 Chroniclers 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 Selânikî, Kâtib 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. The 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 led 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 Çelebizade 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 Ömer Seyfeddin among others. The aim of the course is to study and discuss the role of contemporary Turkish literature in the emergence of the Turkish nation.

TUM 704 Non-Turkish Authors Writing in the Turkish Language (8 ECTS)

The course provides an overview of the history of the literature of non-Turkish and/or non-Muslim authors who write in Turkish. In the context of this course, students will read and analyse texts by Kurdish, Armenian, Greek and Jewish writers of the 19th, 20th and 21st centuries.

TUM 705 Culture of Memory in Turkish Literature (8 ECTS)

The course focuses on Turkish literature as a medium of cultural memory. In the context of the course, students will study and discuss Turkish texts from various literary genres and historical periods (as novels, autobiographical texts, poetry, theater plays) with regard to their qualities as formers, carriers and preservers of Turkish cultural memory. Every student will prepare a project (presentation in class and written paper) on a literary memory text of his or her choice. Works from Turkish and international memory studies will provide the theoretical framework of the course.

TUM 706 The Historical Novel in Turkish Literature (8 ECTS)

Over the last two decades, the historical novel ("tarihi roman"/"tarihsel roman") has been one of the main types of Turkish Literature. The course studies, analyses and discusses theoretical texts concerning the emergence of a "new historical novel" in Turkey and the ongoing discussion around the theme of "History and Literature". In the context of the course, historical novels from different periods are studied and analysed.

TUM 707 Generic and Thematic Characteristics of Turkish-Cypriot Literature (8 ECTS)

Literature written in the Turkish language has been produced in Cyprus since the 16th century. But only in the late 19th century did this literature begin to diverge significantly from the literary developments in (Ottoman, and later Republican) Turkey. In the seminar, the specific developments in Turkish-Cypriot literature since the British colonisation of the island in 1878 are examined. While they were first strongly influenced by the literary developments in Turkey (Tanzimat literature, national literature, poetry movements like "Garip" and the "Second New"), they eventually found entirely new themes and forms of expression (the "74 generation" and later developments).

LINGUISTICS COURSES [TUM 751-800]

TUM 751 Comparative Turkology (8 ECTS)

The seminar presents characteristic features of the Turkic language family/branch, with an emphasis on structural similarities, Intra-Turkic developments and contact-induced change from a comparative perspective, based on written or oral texts (or other media) in the target language, and on articles/sources reflecting current trends and discussions of these topics in the field of Turkology.

TUM 752 Historical Linguistic (8 ECTS)

The seminar deals with historical aspects of Turkic languages. The instructor chooses one of the following topics, or one topic across several thematic groups, such as: Older forms of the languages of the Oghuz group (Pre-Ottoman/Old Anatolian Turkic, Ottoman Turkish, Azeri etc.) or historical stages of the Turkish language used by minorities, as reflected in the Karamanlidika; the Turkish language reform and the making of the lexicon; historical grammar.

TUM 753 Methods in Analysing Spoken Language (8 ECTS)

The seminar deals with the analysis of spoken varieties of Turkish, such as regional varieties/dialects, or social varieties/registers. It offers a survey of current methods applied in dialectology, socio-linguistics and/or contact linguistics. Students learn how to collect data, how to handle instruments applying to the analysis of spoken varieties (such as acoustic phonetics/the reading of spectrograms, notations in the IPA-alphabet, inter-linear morpheme analysis), and how to interpret dialect markers, stigmatised features, and structural changes reflecting language contact influence. The regional focus is on Anatolian dialects and Cyprus Turkish, as well as constellations of Turkish in contact with Greek, Iranian, Slavic, Armenian, etc.

TUM 754 Didactics/Applied Grammar (8 ECTS)

The seminar provides an overview of the current trends and methods in the field of Language Teaching/Teaching Turkish as a Foreign Language, and didactics. It presents concepts of language teaching, applied grammar and didactics. The seminar makes use of teaching materials (textbooks, grammars, media) in class.

TUM 755 Turkish-Greek Literary Translation (8 ECTS)

From a linguistic point of view, translations from Turkish into Greek present various significant problems. These partly originate from different semantic fields in lexicon and idiomatic expressions, structural or typological differences between the underlying language systems, different systems of tense, aspect and mood, as well as diametrically opposed structures in syntax (hypotactic vs. paratactic structures). These differences will be discussed by comparing examples of Turkish literary texts and their translations into Greek.

TUM 756 Contemporary Turkic Languages and Literatures (8 ECTS)

The course provides an overview of developments in the modern Turkic literatures of Turkic-speaking peoples outside of Turkey, including types of oral literature and their formal characteristics. Using literary texts as a primary source, we analyse the various forms of language use, the development of independent national identities, and reflections of Islamic identity, as they appear in the national literatures of the "new" Turkic Republics, such as Azerbaijan, Uzbekistan and Turkmenistan. Since the early 1990s, most texts are available in a reformed Latin alphabet or in an alphabet based on the Latin alphabet of Turkey.

Doctoral Programme

The main purpose of the Programme is the research for, and composition of an original academic work on a subject which belongs to the general subject of Turkish Studies. In case the candidate has not obtained a Master's degree in a relevant subject, the Programme also offers taught classes at postgraduate level on the specific field of Turkish Studies in which the subject of the dissertation falls. If the candidate already possesses a Master's degree and the Department decides that this is sufficient for the proposed subject of the doctoral dissertation, then the student is exempted from the taught classes.

Taught classes are followed by the research stage of the dissertation and then by the writing stage. The credits are allocated as follows:

Analytical Programme for Master's Holders

Semester	Stage (research, etc.)	ECTS
	Master credit	60
1st	TUM 891 Research Level I	30
2nd	TUM 892 Research Level II	30
3rd	TUM 893 Research Level III	30
4th	TUM 894 Research Level IV	30
4th	TUM 500 Comprehensive Examination	0
5th	TUM 895 Writing Stage I	30
6th	TUM 896 Writing Stage II	30
6th	TUM 877 Presentation of Final Research Proposal	0
Total		240

Analytical Programme for Non Master's Holders

Semester	Stage (research, etc.)	ECTS
1st	Taught Classes	30
2nd	Taught Classes	30
3rd	TUM 891 Research Level I	30
4th	TUM 892 Research Level II	30
5th	TUM 893 Research Level III	30
6th	TUM 894 Research Level IV	30
6th	TUM 500 Comprehensive Examination	0
7th	TUM 895 Writing Stage I	30
7th	TUM 896 Writing Stage II	30
8th	TUM 877 Presentation of Final Research Proposal	0
Total		240

Students can graduate by the end of the 6th semester (for M.A. holders) or the 8th semester (for non-holders of a Master's degree) of their studies, if they complete the required credits (240 ECTS) and support their thesis in front of the Postgraduate Committee. Otherwise,

students will still have to be enrolled in the next Writing levels, until they are ready to submit their dissertation (the duration of studies must not exceed the 16 semesters).

Research Stage

The Research Stage consists of the following:

- Submission of a research proposal, which must include a description of the sources proposed and the methodology to be employed.
- Appointment of a supervisor for each student and Dissertation Committee by the Department.
- 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

- 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.
- 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.

RESEARCH INTERESTS OF THE ACADEMIC STAFF

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; 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.

Stylianos Irakleous, Lecturer

Karamanlidika; Historical linguistics; Ottoman language and literature; Sociolinguistics; Linguistic and cultural interactions in the Eastern Mediterranean.

Contact Details

PROGRAMME COORDINATOR

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DEPARTMENT SECRETARIAT

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Faculty of LETTERS





DEPARTMENTS

- BYZANTINE AND MODERN GREEK STUDIES
- CLASSICS AND PHILOSOPHY
- HISTORY AND ARCHAEOLOGY



Department of Byzantine and Modern Greek Studies

www.ucy.ac.cy/bmg/en

The Department of Byzantine and Modern Greek Studies covers the fields of Byzantine Philology, Modern Greek Studies, Comparative Literature, Theory of Literature and Linguistics.

The Department offers:

- A Postgraduate Programme in Modern Greek Studies
- A Postgraduate Programme in Byzantine Studies and the Latin East, in collaboration with the Department of 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 several 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. It has also signed exchange agreements with important departments in universities abroad.

INTERDEPARTMENTAL POSTGRADUATE PROGRAMME IN BYZANTINE STUDIES AND THE LATIN EAST

(Please 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.
4. Certificate of satisfactory knowledge of a foreign language.

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

	ECTS
First Semester	
Completion of two postgraduate Seminars	26
Colloquium I	4
Second Semester	
Completion of two postgraduate Seminars	26
Colloquium II	4
Third Semester	
Completion of two postgraduate Seminars	26
Colloquium III	4
Fourth Semester	
Writing of the M.A. dissertation under supervision and defending it before a three-member examination committee	30
Colloquium IV	0

Direction B

	ECTS
First Semester	
Completion of two postgraduate Seminars	26
Colloquium I	4
Second Semester	
Completion of two postgraduate Seminars	26
Colloquium II	4
Third Semester	
Completion of two postgraduate Seminars	26
Colloquium III	4
Fourth Semester	
Completion of two postgraduate Seminars	26
Colloquium IV	4

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. A degree in Modern Greek Philology or a related field of study (with a grade of at least "Very good" or equivalent).
2. A Master's degree in Modern Greek Philology or a related field of study (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.

Also, the following are positively considered (if 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, please 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.

RESEARCH INTERESTS OF THE ACADEMIC STAFF

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-World War II generation) with a focus on 19th and 20th-century literary production and criticism; 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; 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-World War II 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; Bibliography.

Stavroula Constantinou, Professor

Hagiography; Byzantine literary genres, poetics, 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 Karyolemou, 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.

Eirini Papadaki, Associate Professor

Early modern Greek literature; Comparative literature; Editing of early modern Greek texts; Cultural studies; History of books.

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.

Pantelis Voutouris, Emeritus Professor

Modern Greek literature and criticism of the 19th and 20th centuries.

Contact Details

COORDINATORS OF THE INTERDEPARTMENTAL PROGRAMME IN BYZANTINE STUDIES AND THE LATIN EAST

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Department of Classics and Philosophy

www.ucy.ac.cy/cph/en

The aim of the Programme is to study and offer solid specialisation in the following areas: Ancient Greek Philology and Latin Philology, Comparative Study of Classical Texts, Ancient Greek Dialectology and other pertinent disciplines such as Epigraphy, Papyrology and Greek and Latin Paleography. The second cycle (first postgraduate) lasts two years and leads to a Magister Artium (M.A.). The third cycle (second postgraduate) leads to a Doctor of Philosophy Degree (Ph.D.) and lasts three years.

General Principles and Characteristics of the Programme

The Department offers postgraduate programmes at M.A. and Ph.D. levels. 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 postgraduate students the opportunity to choose from a wide range of courses and methodology options. Their research is conducted in a supportive environment of high scholarly standards, lively debate, constructive criticism, and constant feedback.

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 application dossier.
 - B. Holders of a B.A. Degree in Classics with a grade of 7/10 and above are admitted on the basis of their application dossier.
 - C. Candidates who do not fall into categories A or B, may be invited by the Departmental Postgraduate Programmes Committee for an interview; alternatively, they may 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 academic 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 dossier, may invite the candidate to an interview.

M.A. (MAGISTER ARTIUM) PROGRAMME

In order to obtain a Magister Artium Degree, the following requirements must be met: full attendance at the Post-graduate Seminars offered by the Programme for a minimum period of three semesters and successful completion of at least 120 ECTS, including successful completion of a thesis. Between 60-100 pages (A4 paper size, 1.5 line spacing), the thesis should demonstrate the students' ability in methodical treatment of a given subject, judicious use of ancient sources as well as secondary literature, their originality of ideas and scholarly presentation of results.

Postgraduate Seminar Courses within the Programme

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 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 may choose the seminars corresponding to their research interests, in order to obtain the necessary guidance for completing their thesis successfully.

C. In special cases, one of the seminars of the Programme may be replaced by a seminar taught in the undergraduate programme of Classics from the same subject area. Furthermore, a number of ECTS can be obtained by participating successfully in postgraduate seminars at other recognised universities, within the framework of student exchange programmes.

Courses Offered

First Semester

3 Courses x 10 ECTS = 30 ECTS)

AGP I 6 . .

LAT I 6 . .

AGL I 6 . .

Second Semester

(3 Courses x 10 ECTS = 30 ECTS)

AGP II 6 . .

LAT II 6 . .

HIS ... / ARC ... / BMG ...

Third Semester

(2 Courses x 10 ECTS = 20 ECTS and preparation for the M.A. Thesis 10 ECTS, Total: 30 ECTS)

AGP 601 Papyrology

AGL II 6 . .

AGP 690 Bibliographical Research and Study, Preparation of M.A. Thesis Proposal (10 ECTS)

Fourth Semester

AGP 690 M.A. Thesis (30 ECTS)

Grand Total: 120 ECTS

(Credits from 8 three-hour long courses = 80 ECTS)

(Credits from M.A. Thesis = 40 ECTS)

Ph.D. PROGRAMME

Requirements

For the completion of the Doctoral programme, the following requirements must be met: successful completion of at least 240 ECTS from the Doctoral programme, including successful completion of the thesis.

The 240 ECTS workload that leads to completion of the Ph.D. consists of graduate level courses, participation in seminars and conferences organised by the Department, and 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.

Candidates are expected to contact the Department well before applying, in order to find a supervisor and to decide on a subject for their future research, at least in rough form.

Admission Procedure for the Doctoral Thesis

The proposal for a doctoral (Ph.D.) thesis must be presented before a three-member Committee, consisting of members of the Programme's teaching staff.

Successful applicants must subsequently write an original thesis, which must contribute substantially to the chosen field of research. The Degree is awarded following the successful defence of the thesis before a five-member Committee, consisting of internal (UCY) as well as external members.

RESEARCH INTERESTS OF THE ACADEMIC STAFF

Chrysanthos Chrysanthou, Assistant Professor

Ancient Greek literature (esp. epic, novel, biography and historiography); Ancient and modern literary criticism; Cognitive classics; Contemporary narrative theories.

Demokritos Kaltsas, Associate Professor

Papyrology; The ancient book; The Greek novel; Ancient tachygraphy; Koine and Atticism.

Margot Neger, Assistant Professor

Roman literature of the Imperial period; Roman epistolography; Ancient epigram; Late antique literature; Interaction of genres.

Alexander Nikolaev, Assistant Professor

Historical grammar, dialectology, and etymology of Ancient Greek; Archaic and Classical Greek poetry; Textual criticism; Poetic language; Greek religion and mythology; Reconstruction of Proto-Indo-European; Indo-European languages and texts.

Anna Panayotou - Triantaphyllopoulou, Professor Emerita

Syllabic scripts of the Greek-speaking world; Greek alphabets and dialects; Koine Greek; The Greek inscriptions of Macedonia and Cyprus; The Cypriot dialect (ancient, medieval and modern).

Antonios Tsakmakis, Associate Professor

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.

Spyridon Tzounakas, Associate Professor

Roman epic; Roman satire; Roman epistolography; Latin elegy; Cicero's orations; Latin historiography.

Georgios A. Xenis, Professor

Greek textual criticism; Editorial practice; Scholiasts and grammarians; Ancient literary criticism; History of classical scholarship; Teaching ancient Greek in secondary education: methodological issues.

Maria Ypsilanti, Associate Professor

Epigram; Poetry of the Hellenistic period and late antiquity; Tragedy, Textual criticism.

Contact Details

PROGRAMME COORDINATOR

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Department of History and Archaeology

www.ucy.ac.cy/hisarch/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 (ARU) 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 (Ph.D.)
- Ancient History (Master and Ph.D.)
- Modern and Contemporary History (19th-20th centuries) (Master and Ph.D.)
- Digital Heritage and Landscape Archaeology (Master and Ph.D.)
- 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 respectively: <https://www.ucy.ac.cy/hisarch/?lang=en>, <https://www.ucy.ac.cy/aru/?lang=en>.

PH.D. PROGRAMME IN MEDITERRANEAN ARCHAEOLOGY: FROM PREHISTORY TO LATE ANTIQUITY

The objective of the Programme is the study of the Archaeology, History and Culture of the Mediterranean region from Prehistory to Late Antiquity. The academic staff of the Department of History and Archaeology in the following specialisations participate in the Programme as academic advisors:

- Prehistoric and Protohistoric Archaeology
- Environmental Archaeology, Archaeometry
- Archaeology of the Geometric, Archaic and Classical Periods
- Hellenistic and Roman Archaeology
- Ancient History and Epigraphy
- Folk Art and Architecture

Prerequisites for Admission

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 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

George Papasavvas, Professor
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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 a 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 up to 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 and Philosophy 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 candidate's scholarly and research interests.
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 up to 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 PH.D.)

Theodoros Mavroyiannis, Professor

DEPARTMENT SECRETARIAT

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POSTGRADUATE PROGRAMME IN MODERN AND CONTEMPORARY HISTORY (19th-20th CENTURY)

Master's Degree

The aim of the Programme is to offer 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:

- Taught courses.
- Independent study, attendance and participation in the Colloquium.
- M.A. dissertation.

Students have to fulfil successfully all three elements of the Programme in order to obtain the Master's degree..

I. Courses

The taught element of the programme is organised around specific groups or categories 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, and 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:

	ECTS
Category A: History of the Mediterranean Area in the Modern and Contemporary Period	
HIS 740 National Movements, Revolutions, Irredentism and the "Great Idea" in Europe and the Mediterranean Basin (19th-20th C.)	9
HIS 750 Security, Foreign Policy and Diplomacy in Southeastern Europe (19th and 20th Centuries)	9
HIS 761 Navigation in the Mediterranean - Shipping Lanes of the Mediterranean	9
HIS 781 British Colonialism and the Eastern Mediterranean	9

Category B: History of Cyprus (19th-20th c.) – Cypriot Studies

HIS 742	Political Life and Conflicts in the Republic of Cyprus, 1960-1974	9
HIS 762	Plans for the Solution of the Cyprus Problem	9
HIS 763	Social and Economic History of Cyprus	9
HIS 782	The National Movement and Political Parties in Cyprus during the 20th C.	9
HIS 783	Press, Education and Intellectual Life in Cyprus	9
HIS 784	The Greek Cypriot Church and the "Enosis" Issue	9

Category C: Modern and Contemporary Greek and European History

HIS 744	"Hot" Conflicts during the Cold War: the Greek Civil War, the Korean War, the Vietnam War	9
HIS 740	National Movements, Revolutions, Irredentism and the "Great Idea" in Europe and the Mediterranean Basin (19th-20th C.)	9
HIS 750	Security, Foreign Policy and Diplomacy in Southeastern Europe (19th and 20th Centuries)	9
HIS 785	Authoritarian Regimes in Greece during the 20th C.	9

It may be that in the future new categories will be added or courses added/replaced within the existing categories.

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 an independent study (graded with Pass/Fail) and to participate in the Colloquium. The presentation of the independent study may take place during the first 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 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:

	ECTS
Taught courses (7 X 9)	63
Independent study (1 X 3)	3
Participation - Research Presentation	
Proposal at the Colloquium (1 X 3)	3
Preparation and writing of the dissertation I and Preparation and writing of the dissertation II (21 + 30)	51
Total	120

The Programme may be offered either on a full-time or a 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.

Suggested Programme of Studies

	ECTS
First Semester	
Three courses from two categories of courses X 9 ECTS (optionally: 3 courses from one category of courses X 9 ECTS)	27
Independent study and participation in the Colloquium	3
Total	30
Second Semester	
Three courses from two or three categories of courses X 9 ECTS (optionally: three courses from a different category than the one that has been followed during the previous semester X 9 ECTS)	27
Presentation of the research proposal/independent study at the Colloquium	3
Total	30
Third Semester	
1 course from the proposed categories of courses X 9 ECTS	9
M.A. dissertation I X 21 ECTS	21
Total	30
Fourth Semester	
M.A. Dissertation II X 30 ECTS	30
Total	30

Crediting ECTS from a Previous M.A. Degree

Applications are submitted to the coordinator of the postgraduate programme within the dates set by the University of Cyprus, 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. Reference letters from at least two academics.
7. Short statement (up to two pages) of the candidate's research interests and research proposal.

Calculation of the Workload (ECTS)

Credit is based on the calculation of the student workload during every semester. One ECTS unit is equivalent to 25-30 hours of work per semester.

Consequently, courses of 9 ECTS correspond to 225-270 hours of work, and are allocated as follows:

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 of 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 for the preparation of the independent study/research proposal (including the study and preparation for the presentations and the time allocated to archival and bibliographical research, necessary 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 extant 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 preliminary drafts 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.
- Research [indicatively: finding and reviewing the extant bibliography, selection and application of the research methodology, finding primary material in archives and private collections]. Photographing material, indexing. Documenting and cross-checking of information. Familiarisation with software programmes (when necessary): 271.
- Writing of the dissertation: 460.

Total working hours: 770.

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 for 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 fields 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 additional 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 in the context of this cycle of meetings.

Contact Details

PROGRAMME COORDINATOR

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INTERDEPARTMENTAL POSTGRADUATE PROGRAMME IN BYZANTINE STUDIES AND THE LATIN EAST

(see relevant pages)

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 courses.
- 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's 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 (10 ECTS)

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 digitisation 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 (10 ECTS)

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) (10 ECTS)

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 watershed analysis, least-cost paths analysis, and hydrological analysis that can be used for studying settlement patterns and the exploitation of the archaeolandscape. 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 (10 ECTS)

The course aims at offering 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 visualisation 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 visualisation of spatial-temporal associations and networks, the construction of 3D models etc.

ARC 699 Advanced Topics in the Digital Humanities (10 ECTS)

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 palaeolandscape/archaeoenvironmental reconstruction methods, 3D visibility analysis, photogrammetric methods etc.

Elective Courses

ARC 650 Settlement and Landscape Archaeology (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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) (10 ECTS)

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 (10 ECTS)

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

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RESEARCH INTERESTS OF THE ACADEMIC STAFF

Natasha Constantinidou, Associate Professor

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); 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 dynastic states.

Stella Demesticha, Associate Professor

Maritime 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.

Stefanos Katsikas, Associate Professor

Modern and Contemporary History of Europe and the (Eastern) Mediterranean (18th-21st centuries), with emphasis on the diplomatic, political, social and cultural history; Nation-building; Ethnic and religious minorities; Minority-state relations; Inter-ethnic and inter-religious relations, particularly the coexistence of Christian, Muslim and Jewish communities.

George Kazamias, Professor

Contemporary European history (World War II, Cold War, unification of Europe, Europeanisation); History of Southeastern Europe (19th - 20th c.); Greek minorities, diaspora and refugees in the Balkans; Eastern Mediterranean and the Middle East; Oral history.

Angel Nicolaou-Konnari, Professor

Hellenism under Latin rule (cultural interaction and exchanges between Greeks and Latins in Latin Greece in general and Cyprus in particular in 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.

Dimitrios Kontogeorgis, Assistant Professor

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.

Ourania Kouka, Professor

Historiography of prehistoric archaeology in Europe and the Eastern Mediterranean; Theoretical and methodological approaches in Prehistory; Stone and Bronze Ages in the Aegean, Anatolia and the Eastern Mediterranean; Island Archaeology; Inter- and intra-site organisation in prehistory; Policy, economy and society in Prehistory.

Theodoros Mavroyiannis, Professor

The history of ancient historiography; The history of the Hellenistic and Roman East; The monumental topography of Greece and Italy; Ancient religion and epigraphy.

Michalis Olympios, Associate Professor

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); Art history of the Latin East and Lusignan Cyprus (1192-1489).

Petros Papapolyviou, Associate Professor

Contemporary Greek history (World War II: occupation and resistance, Civil War, Greek national claims); Political history of Cyprus, 1878-1960 (British rule, Enosis movement, liberation struggle of 1955-1959, Cypriot volunteerism).

George Papasavvas, Professor

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.

Maria Parani, Associate Professor

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.

Apostolos Sarris, Professor

Applied Shallow Depth Geophysics & Remote Sensing; Application on Digital Heritage, spatial modelling, networking, Geodatabases; Integrated Shallow Depth Geophysical Prospection. Signal Processing, mapping and modelling; 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.

Dionysios Stathakopoulos, Assistant Professor

The social history of the Byzantine Empire with an emphasis on environmental history as well as the history of medicine; 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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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.

Acting Director

Ourania Kouka, Professor

Contact Details

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JOINT DEGREE AND OTHER PROGRAMMES

Interdepartmental Programme in Byzantine Studies and the Latin East

The Department of Byzantine and Modern Greek Studies and the Department of History and Archaeology offer 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.

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 and the Latin East at the M.A. and Ph.D. levels. There are two options available for the M.A. degree, either with or without writing a thesis.

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 (originally as the IPP in Byzantine Studies). 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:

- Political, social, economic, and ecclesiastical history.
- Ideology and identity, cultural traditions, and intercultural contacts.
- Intellectual production and artistic creation.
- Daily life and material culture.
- 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.

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.

Option II: Without M.A. Thesis

A. Successful completion of nine (9) postgraduate seminars, credited with 90 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 three (3) 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. 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 $\pm$ 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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 relazioni) 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.

C. Byzantine and Medieval Art and Archaeology (ARC 500-511)

ARC 500 Survey of Research and Interpretative Approaches to Byzantine Archaeology (10 ECTS)

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 (10 ECTS)

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-ware, as well as the evaluation of the information they provide for understanding Byzantine society.

ARC 502 The Archaeology of the Byzantine Economy (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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 (10 ECTS)

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: www.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.

6. Submission of the candidate's M.A. thesis.
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.
3. Research and writing of Ph.D. 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>



MEDICAL School



MEDICAL School



Medical School

www.ucy.ac.cy/medical/en

The Medical School offers the following two Master programmes of study:

1. The Master Programme in Precision Medicine in Clinical Practice.
2. The Master Programme in Methods in Medical Research.

The Medical School is also engaged in the process of developing a Doctoral level (Ph.D.) programme of study in Medicine.

Master Programme in Precision Medicine in Clinical Practice

The purpose of the 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, in Cyprus or abroad. It offers postgraduate specialist education on precision medicine to healthcare professionals and biomedical sciences graduates, as well as to Cypriot and international students.

The M.Sc. in Precision Medicine in Clinical Practice aims at improving 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. Also, it promotes research in this contemporary and currently expanding field. Students are expected to become familiar with the principles and the concepts of precision and personalized 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.

Master Programme in Methods in Medical Research

The primary objectives of the Programme are to educate and train medical doctors, other health-care professionals and scientists in the medical field on the design, methodology, and interpretation of results of modern medical research, as well as to help them develop the necessary skills in order to carry out independent research including Doctoral level studies.

In particular, the Programme aims at:

1. Providing high-quality graduate-level education.
2. Training students on most aspects of research in medicine and health.
3. Helping students practice theoretical information.

4. Providing knowledge and helping students develop the necessary skills for doctoral-level studies and for undertaking high-level research.

More details about the Programme are provided in the Study Guide below.

MASTER DEGREE IN METHODS IN MEDICAL RESEARCH

Introduction

The continuous advancement of medical science requires systematic investigation and application of research findings to improve health and healthcare services. In this context, the Master Programme Methods in Medical Research is designed to equip healthcare professionals and scientists in the medical field, with the necessary knowledge and skills required for conducting modern bio-medical research.

With a focus on high-level education, the Programme emphasizes the development of scientific thinking, critical analysis, and the practical application of research methodologies. By providing training in all methodological aspects of medical research and support for doctoral studies, the Programme aims at enhancing graduates' ability to contribute meaningfully to the improvement of medical practice and population health.

This innovative Programme is a significant driver for the promotion of scientific research in Cyprus, providing the necessary tools to address modern challenges in the field of health.

Purpose and Objectives

The Programme aims at:

1. Providing high-quality graduate-level education.
2. Training students on most aspects of research in medicine and health.
3. Helping students practice theoretical information.
4. Providing knowledge and helping students develop the necessary skills for doctoral level studies and for undertaking high-level research.

Intended learning outcomes:

By completing the M.Sc. in Methods in Medical Research, the graduates are expected to be able to understand methods and interpret the results of contemporary biomedical research, as well as to carry out independent research having the skills to be involved in all phases of medical research.

8. Measurement in Clinical Settings
9. Systematic Review and Meta-analysis (elective)
10. Introduction to Qualitative Research (elective)
11. Special Topics in Bioinformatics (elective)

Language of Instruction

The language of instruction is English.

Student Admission Requirements

Candidates considered for admission to the M.Sc. in Methods in Medical Research must hold a Bachelor's degree obtained by higher education institutions of the Republic of Cyprus or by officially recognized foreign institutions, in the fields of Medicine, Dentistry, Nursing, Biology, Psychology, Sociology, Mathematics, Statistics or other related fields.

Applications are evaluated by the Committee of Graduate Studies of the Medical School of the University of Cyprus (UCY), which submits its recommendations to the Board of the UCY Medical School that is responsible for the final approval of the applications.

The selection of students is based on the following criteria:

1. Interview grade.
2. Grade of undergraduate degree.
3. Grades of undergraduate courses related to the subject of the graduate Programme.
4. Subject of thesis of undergraduate degree (evaluation of its relevance to the M.Sc. Programme).
5. Holding another postgraduate or doctorate level degree.
6. Publications in journals / presentations at conferences.
7. Letters of recommendation.
8. Professional experience in health-related fields.
9. Good command of English.

Courses

The curriculum includes 11 modules, 8 compulsory and 3 elective modules, as well as a Master thesis.

The titles of the modules are:

1. Introduction to Medical Research
2. Introduction to Medical Statistics
3. Statistical Computing in Medical Research
4. Introduction to Epidemiology
5. Clinical Trials
6. Ethics in Medical Research
7. Advanced Methods of Data Analysis in Medical Research

PROGRAMME REQUIREMENTS	ECTS
Compulsory Courses	60
Elective Courses (a) Courses of specialization (b) General Education modules / Free Electives	10 Not applicable
Undergraduate/Postgraduate Assignment	20
Practical Training	Not applicable
TOTAL	90

PROGRAMME REQUIREMENTS PER SEMESTER				
Semester	Compulsory Courses	Elective Courses	Master Thesis	ECTS
A'	5	-		30
B'	3	-		30
C'	-	2 of 5 ECTS each or 1 of 10 ECTS	1	30
TOTAL				90

LIST OF COMPULSORY COURSES AND ELECTIVE COURSES			
Course Type	Course Name	Course Code	ECTS
Compulsory	Introduction to Medical Research	MEDM 720	4
Compulsory	Introduction to Medical Statistics	MAS 860	5
Compulsory	Statistical Computing in Medical Research	MEDM S713	7
Compulsory	Introduction to Epidemiology	MEDM 714	8
Compulsory	Clinical Trials	MEDM 712	6
Compulsory	Ethics in Medical research	MEDM 715	10
Compulsory	Advanced Methods of Data Analysis in Medical Research	MEDM 716	10
Compulsory	Measurement in Clinical Settings	MEDM 718	10
Compulsory	Master Thesis	MEDM 719	20
Elective	Systematic Review and Meta-analysis	MEDM 717	5
Elective	Introduction to Qualitative Research	MEDM 721	5
Elective	Special Topics in Bioinformatics	BIO 650	10

COURSES PER SEMESTER				
A' Semester				
A/A	Course Type	Course Name	Course Code	ECTS
1	Compulsory	Introduction to Medical Research	MEDM 720	4
2	Compulsory	Introduction to Medical Statistics	MAS 860	5
3	Compulsory	Statistical Computing in Medical Research	MEDM 713	7
4	Compulsory	Introduction to Epidemiology	MEDM 714	8
5	Compulsory	Clinical Trials	MEDM 712	6
B' Semester				
A/A	Course Type	Course Name	Course Code	ECTS
1	Compulsory	Ethics in Medical research	MEDM 175	10
2	Compulsory	Advanced Methods of Data Analysis in Medical Research	MEDM 716	10
3	Compulsory	Measurement in Clinical Settings	MEDM 718	10
C' Semester				
A/A	Course Type	Course Name	Course Code	ECTS
1	Elective	Systematic Review and Meta-analysis	MEDM 717	5
2	Elective	Introduction to Qualitative Research	MEDM 721	5
3	Elective	Special Topics in Bioinformatics	BIO 650	10
4	Compulsory	Master Thesis	MEDM 719	20

COURSES DESCRIPTION

MEDM 720 Introduction to Medical Research (4 ECTS)

This course provides a comprehensive introduction to the fundamental principles and practices of medical and health-related research. Students will explore the philosophy of medical research, learn to formulate research hypotheses and questions, and gain insights into designing ethical and impactful studies. Key topics include research design, ethics in research and publication, and effective dissemination of findings through conference presentations and peer-reviewed journals. The course also covers essential aspects of publication ethics and strategies for identifying funding opportunities. By the end of the course, students will be equipped with the foundational knowledge and skills needed to actively engage in the research process and contribute meaningfully to advancements in medical science and healthcare.

MAS 860 Introduction to Medical Statistics (5 ECTS)

This course introduces students to the core principles of statistical theory and the application of statistical methods in medical and health-related research. Topics include the theory of probabilities, probability distributions (binomial, normal, chi-square, and t-distribution), and types of variables (categorical and continuous). Students will learn descriptive measures of central tendency and variability, including mean, median, variance, standard deviation, and range. The course also covers essential statistical techniques such as sampling methods, hypothesis testing, p-value interpretation, and confidence interval calculation. Emphasis is placed on key statistical tests, including chi-square tests (Fisher's exact and McNemar's tests), t-tests, analysis of variance (ANOVA), and non-parametric methods. By the end of the course, students will develop the knowledge and skills necessary to apply traditional statistical methods effectively in solving problems related to medical and health-related research.

MEDM 713 Statistical Computing in Medical Research (7 ECTS)

This course provides students with hands-on experience in using Stata and R for data analysis in medical and health-related research. Students will learn how to interface with both software tools, including importing and exporting data, managing datasets, and creating, loading, and saving data files. The course covers essential data management skills, such as using commands for data analysis, creating and utilizing scripts that contain sets of commands, and performing complex analyses. Additionally, students will explore how to plot data and create informative graphs, keep detailed logs of their work, and gain an introduction to statistical programming. By the end of the course, students will be proficient in using Stata and R to apply statistical methods effectively and manage data in the context of medical and health-related research.

MEDM 714 Introduction to Epidemiology (8 ECTS)

This course introduces students to key epidemiological principles and methods used in medical and health-related research. Topics include measures of disease occurrence and effect, study designs (cross-sectional, cohort, case-control), and assessing causality. Students will learn about confounding, bias, random error, and interaction, as well as the epidemiology of chronic diseases (cardiovascular disease, cancer) and infectious diseases (HIV, tuberculosis, malaria). The course also covers mathematical modeling, disease surveillance, and the management of epidemiological data using statistical software (R and Stata). By the end of the course, students will have the skills to conduct epidemiological research and analyze health data effectively.

MEDM 712 Clinical Trials (6 ECTS)

This course provides an overview of the fundamentals and practical aspects of clinical trials in medical research. Students will explore the phases of clinical trials, including the process before a trial begins, timeline, budgeting, and developing and registering a protocol. Key topics include ethics committee approval, sample size calculation, randomization, the use of placebos, and blinding. The course also covers data management, interim analyses, intention-to-treat analysis, and reporting results. Students will learn about multi-armed designs, quality control, good clinical practice, regulatory affairs, and guidelines for reporting. By the end of the course, students will have the knowledge and skills necessary to contribute effectively to the design, conduct, and reporting of clinical trials in evidence-based medicine and public health.

MEDM 715 Ethics in Medical Research (10 ECTS)

This course provides a comprehensive exploration of the ethical principles and guidelines that govern medical and health-related research. Topics include the philosophy of ethics, key moral principles, and historical violations of ethics in research (e.g., the Tuskegee Syphilis Study and experiments during the Second World War). Students will examine important ethical frameworks such as the Belmont Report and the Declaration of Helsinki, as well as the role of Institutional Review Boards (IRBs) and informed consent. The course also covers data protection, relevant legislation in Cyprus, and scientific misconduct. By the end of the course, students will have a solid understanding of bioethics, international declarations, and local regulations, ensuring they conduct research with integrity and respect for human and animal subjects.

MEDM 716 Advanced Methods of Data Analysis in Medical Research (10 ECTS)

(Prerequisites

MAS 860 Introduction to Medical Statistics

MEDM 713 Statistical Computing in Medical Research)

This course provides an in-depth exploration of advanced statistical methods and their applications in medical and health-related research. Topics include correlation analysis, likelihood estimation, and various regression techniques such as linear, logistic, multinomial, ordinal, and Poisson regression. Students will also learn about survival analysis, fixed-, random-, and mixed-effects models, and methods for analyzing longitudinal data and hierarchical structures. Key issues such as confounding, interaction, and model selection strategies will be covered, along with practical training in running these analyses using Stata and R. Additionally, the course introduces the concept of big data in health services research, covering the "v's" of big data (volume, velocity, variety, veracity, variability, value, and visualization). Students will gain experience in big data mining, analytics, and artificial intelligence applications, including quantitative medical imaging using deep learning methods. By the end of the course, students will have the theoretical and practical skills needed to extract valuable insights from complex data in medical and health-related research.

MEDM 718 Measurement in Clinical Settings (10 ECTS)

(Prerequisites

MEDM 713 Statistical Computing in Medical Research)

This course focuses on the scientific methods used in clinical epidemiology to understand disease natural history, aetiology, diagnosis, prognosis, and treatment. Students will learn how to determine normal ranges and evaluate clinical and laboratory measurements, including concepts such as sensitivity,

specificity, and predictive values. The course covers the construction and adjustment of questionnaires and scales, with an emphasis on their reliability and validity. Students will also gain practical experience using Stata and R for clinical epidemiology and measurement. By the end of the course, students will be equipped with the knowledge and skills necessary to obtain, interpret, and apply clinical and laboratory measurements in both research and healthcare settings.

MEDM 717 Systematic Review and Meta-analysis (5 ECTS)

(Prerequisites

MEDM 713 Statistical Computing in Medical Research)

This course introduces students to the principles and methods of conducting systematic reviews and meta-analyses in medical research. Topics include searching and locating biomedical research in databases and other information sources, assessing the quality of primary studies, and performing data extraction. Students will learn about fixed- and random-effects methods of data synthesis, forest plots, and strategies for dealing with publication bias, heterogeneity, and other biases. The course also covers advanced techniques such as meta-regression, cumulative meta-analysis, umbrella reviews, and network meta-analysis. Students will explore guidelines for conducting and reporting systematic reviews (e.g., PRISMA) and gain hands-on experience in applying meta-analytic methods using Stata and R. By the end of the course, students will have the knowledge and skills to conduct and interpret systematic reviews and meta-analyses in health-related and medical research.

MEDM 721 Introduction to Qualitative Research (5 ECTS)

This course introduces qualitative research methodologies and their application in medical and health-related studies. Students will explore the history and development of qualitative research and key research paradigms, including phenomenology, grounded theory, ethnography, and case studies. The course covers essential topics such as formulating research questions, sampling methods (e.g. purposeful, snowball, and theoretical sampling), and data collection techniques like in-depth interviews, focus groups, participant observation, and document analysis. Students will also learn about qualitative data analysis methods, including coding, thematic analysis, and narrative analysis, as well as gain experience using qualitative data analysis software (e.g., ATLAS.ti). The course emphasizes rigor in qualitative research, including issues of credibility, transferability, dependability, and confirmability, as well as ethical considerations such as power dynamics. Finally, students will gain practical skills in writing qualitative research reports, including structuring reports and incorporating quotes and narratives, and explore mixed-methods research approaches. By the end of the course, students will be equipped with the knowledge and skills to design, conduct, and analyze qualitative research studies in medical and health-related contexts.

BIO 650 Special topics in Bioinformatics (10 ECTS)

(Prerequisites

MEDM 713 Statistical Computing in Medical Research)

This course provides an in-depth exploration of bioinformatics methods and algorithms commonly used in fields such as Molecular Biology, Genetics, and Genomics. The main objective is to equip students with a solid understanding of the principles behind widely used bioinformatics tools, enabling them to move beyond simply using these tools as "black boxes" and to critically assess the results they generate. The course combines lectures with discussion sessions, where students will

engage with classic and contemporary research papers that highlight the impact of bioinformatics on wet-laboratory biological research. Students will analyze authoritative reviews and original research articles, some of which discuss controversial issues in the field, forming the basis for individual assignments, oral presentations, and group discussions. Throughout the course, students will collaborate on a group project, working with real-world or simulated data using freely available bioinformatics tools. The group project will culminate in a written report and oral presentation, followed by a discussion. By the end of the course, students will gain a comprehensive understanding of bioinformatics methods, their applications, and how to evaluate and communicate bioinformatics results in biological research.

MEDM 719 Master Thesis (20 ECTS)

(Prerequisites

All compulsory courses and one of the electives, depending on the topic of the thesis)

This course provides students with the opportunity to apply the concepts and methods learned throughout their compulsory and elective modules to a specific research question in the medical and health-related fields. Students will conduct a comprehensive literature review, formulate research hypotheses, and design a study that includes data collection, analysis, and interpretation. Throughout the course, students will gain hands-on experience in research, with a focus on producing findings that are of a quality suitable for presentation at academic conferences or for publication in peer-reviewed journals. Key components of the course include research design, data management, statistical analysis, and the development of a well-structured research paper. Students will also learn how to present their findings effectively, both in written form and through oral presentations, while addressing ethical considerations in their research. By the end of the course, students will have developed the skills necessary to conduct research independently and contribute valuable insights to the field of medical and health-related research.

RESEARCH INTERESTS OF THE ACADEMIC STAFF

Dr. Georgios Hadjigeorgiou, Professor, Acting Dean

Neurogenetics and genetic epidemiology of neurological diseases; The role of Mediterranean diet on aging and dementia.

Dr. Panagiotis Yiallourous, Professor

Clinical and diagnostics studies in rare chronic lung diseases in childhood, such as primary ciliary dyskinesia and cystic fibrosis; Environmental factors implicated in the development of asthma and other non-communicable diseases, investigating particularly interactions with air pollution (especially desert dust storms) and global warming; Epidemiological studies on child health for conditions such as asthma, obesity, vitamin D deficiency; Cutting edge studies to understand important factors implicated in the development of asthma and other non-communicable diseases, such as obesity, dyslipidemia, hypertension, reduced activity, caesarean section delivery, vitamin D status, and genetic background; Consensus and policies papers on active and healthy ageing and respiratory disease management developed jointly with panels of experts from Europe and the world.

Dr. Anastasia Antoniadou, Professor

Activities including in vitro studies of new antibiotics and resistance mechanisms, HIV related comorbidities; CMV infection during pregnancy

Dr. Stavros Gravas, Professor

Medical and minimally invasive therapies for benign prostatic obstruction (BPO); Endourology; Stone management; E-Health.

Dr. Constantinos Deltas, Professor

Study of inherited kidney diseases and disease pathomechanisms; Study of a mouse model for Alport syndrome and preclinical trials with drug repurposing; Study of the DNA of Cypriots, aimed to evaluating the genetic mutation load of Cypriots and the genetic predisposition to disease; Study of the genetics of inherited heart conditions in Cyprus; Development of nanoparticles and organoids as tools for better treatment of diseases.

Dr. Zacharias Zachariou, Professor

Causative factors for infertility in males with uni- or bilateral cryptorchidism treated surgically in childhood; Morphological and sonographic examinations of the testis after Fowler-Stephens procedure; Therapy of hemangiomas according to their morphometric criteria; Postoperative Sepsis in newborns; Early Diagnosis of Necrotizing Enterocolitis.

Dr. Georgios Nikolopoulos, Associate Professor

Infectious disease epidemiology, prevention and public health; Systematic reviews and meta-analyses; Development of research methods, including methods for implementation research and evaluation of programs and services; Methodology for the development and adaptation of guidelines; Environmental epidemiology and health.

Dr. Panagiotis Zis, Associate Professor

Application of various neurophysiological techniques, including nerve conduction studies, electromyography (EMG), single-fiber electromyography (SFEMG), and transcranial magnetic stimulation (TMS), to improve the diagnosis and understanding of Peripheral Nervous System (PNS) disorders; Interest in polyneuropathies, investigating various aspects such as epidemiology, treatment, diagnosis, pathogenic mechanisms, and the natural course of the disease.

Dr. Maria Koliou, Associate Professor

Epidemiology and pathogenesis of Paediatric infections especially the Streptococcal diseases; Study on emerging infections; Neglected tropical /vector borne diseases such as leishmaniasis; West Nile virus; Meningococcal disease.

Dr. Nikolaos Gouvas, Associate Professor

Macroscopic Specimen quality and lymph node yield in rectal cancer specimens comparing the open vs the laparoscopic approach; Several meta-analyses and studies on colorectal outcomes and diagnostics; Leadership in Multicenter Trials: PI for the MECLANT-Colon and MECLANT-Rectum trials under the Greek Gastrointestinal Cancer Study Group, focusing on advanced colorectal treatment protocols; Investigating service provision in laparoscopic cholecystectomy and appendicectomy; Leading a local study on elderly rehabilitation after emergency laparotomy.

Dr. Nikolaos Dietis, Assistant Professor

Using zebrafish as animal models of drug discovery & repurposing against human diseases; Drug screenings against drug-resistant cancer growth (mainly in brain, pancreatic, colorectal and prostate cancer); In vivo toxicological profiling of potential anticancer drugs in zebrafish models; Disrupting the neural networks of intercellular connections in brain cancer growth; Psychoactive drug efficacy against brain cancer growth & metastasis; Protection from drug-induced toxicity of chemotherapeutic agents.

Dr. Konstantinos Parperis, Assistant Professor

Clinical and genetic characteristics of patients with Systemic Lupus Erythematosus in Cyprus; Characteristics and outcomes of patients with calcium pyrophosphate crystal deposition disease, particularly in the areas of cardiovascular disease and management; Granulomatous mastitis and the role of immunosuppressive treatment in the management of the disease.

Dr. Artemios Artemiadis, Assistant Professor

Cognitive function in patients with multiple sclerosis; The role of epigenetics in the cognitive functions of neurological patients; Clinical research in multiple sclerosis and other autoimmune neurological diseases; The psychoneuroendocrinology of stress in neurological disorders.

Dr. Andreas Chatzittofis, Assistant Professor

Biomarkers rTMS/tDCS neuromodulation; Psychoneuroendocrinology; Genetics and epigenetics in psychopathology; Violent behaviour, childhood adversity and psychopathology; Behavioral addictions-Compulsive sexual behaviour disorder; Stress and resilience.

Dr. Panagiotis Bargiotas, Assistant Professor

Sleep medicine; Neurodegenerative disorders; Lifestyle medicine; Movement disorders; Wearable technology.

Dr. Pinelopi Anagnostopoulou, Assistant Professor

Respiratory physiology & lung function testing in infants and children; Clinical studies on diagnostics and monitoring of chronic respiratory diseases in children (primary ciliary dyskinesia, cystic fibrosis, bronchopulmonary dysplasia, etc); Environmental exposure and lung health; Lung development in health and disease (in collaboration with the Institute of Anatomy, University of Bern); Computational lung modeling

Dr. Anneza Yiallourou, Assistant Professor

Breast Cancer (Epidemiology, Prevention, Screening, Surgical treatment); Implementing quality assurance in healthcare services; Development/ Adaptation of clinical practice guidelines; Promotion of evidence based medicine in clinical practice.

Dr. Anastasia Constantinidou, Assistant Professor

Translational research with emphasis on personalized and precision medicine aiming to identify new targets for anticancer therapy and biomarkers to guide diagnosis, prognosis and response assessment; Design and conduct of clinical trials in oncology which include participation in academically funded trials through the European Organisation for Research and Treatment in Cancer (EORTC).

Dr. Nikolaos Kadoglou, Assistant Professor

Heart failure monitoring using web-based platform, artificial intelligence and advanced cardiovascular imaging; International project "Cardiocare" for cardiac dysfunction diagnosis in women with breast cancer undergoing chemotherapy; Prompt diagnosis of heart failure with preserved ejection fraction in high risk patients.

Dr. Ilias Nikas, Lecturer

Digital Pathology and Artificial Intelligence; Medical Education related to Histology and Pathology; Systematic reviews and meta-analyses of diagnostic test accuracy studies.

Dr. Nikos Mitsides, Lecturer

Fluid management in chronic kidney disease; Disease progression in chronic kidney disease; Uraemic toxin clearance in haemodialysis, expanded haemodialysis and hemodiafiltration; Cardiovascular and non-cardiovascular chronic kidney disease complications innovation and technology development in renal disease.

Dr. Nikoleta Dimitriou, Lecturer

Pelvic floor disorders; Benign and malignant diseases of colon and rectum

Dr. Charalampos Charalampidis, Lecturer

Further development of the Anatomy course/ Histology-Embryology course with contemporary methods of teaching including the upgrade of the laboratory equipment and addition of visual/audio material for the laboratory teaching (in this context and in collaboration with the students of the University of Cyprus, translation all laboratory handbooks); Collaboration with Nicosia General Hospital Pathology Laboratory to enrich the Histology course with real-patient specimens and a more clinically oriented teaching – Mesothelioma; Development of an elective course on Clinical Anatomy (Programme HORIZON Europe); Development of a course on Electronic Microscopy in collaboration with the Cyprus Institute of Neurology and Genetics

Contact Details

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Faculty of
PURE AND
APPLIED SCIENCES





DEPARTMENTS

- Biological Sciences
- Chemistry
- Computer Science
- Mathematics and Statistics
- Physics

Department of Biological Sciences

www.ucy.ac.cy/biol/en

The Department of Biological Sciences at the University of Cyprus engages in research and teaching across various biological fields, including Molecular and Cell Biology, Cancer Biology, Immunology, Developmental Biology, Bioinformatics, Genetics, Epigenetics, Virology, Plant Biology, Marine Biology, Biodiversity and Ecology. The Department's research focuses on the in-depth understanding of living organisms and is expected to lead to innovative biological technologies for medicine and biodiversity conservation.

The Department is a leading research entity on the island, known for its state-of-the-art infrastructure and external funding. With 13 faculty members, each heading distinct research labs, the Department produces internationally competitive research published in high-impact journals. Since its establishment in 2002, the Department has secured significant external funding, including the prestigious ERC starting grant, Worldwide Cancer Research, Marie Skłodowska-Curie and other EU framework grants, as well as support from the Cyprus Research and Innovation Foundation.

Postgraduate Studies

The postgraduate programmes of the Department of Biology are currently in the process of being approved by DIPAE (The Cyprus Agency of Quality Assurance and Accreditation in Higher Education). Once the process is complete, details regarding the available programmes will be posted on the department's website.

RESEARCH INTERESTS OF THE ACADEMIC STAFF

Yiorgos Apidianakis, Associate Professor

MICROBE METABOLITE & CANCER LABORATORY: Drosophila Biomedical Research Unit (DBRU) - Cyprus Intestinal Health Study (CIHS)

Establish HOST-MICROBE-METABOLITE interactions that break homeostasis and predispose to intestinal disease; Deeper understanding of critical aspects of the intestinal environment explaining cancer development and progression; Study *Drosophila* and human genes, cells, microbiota and metabolites via histopathological, physiological and multi-omics analysis identifying host genes, cellular processes, microbes and dietary factors that predispose to cancer; Providing novel concepts and combinatorial biomarkers of intestinal tumorigenesis.

Elias Bassil, Assistant Professor

Plant Molecular Physiology and Biotechnology Laboratory

The Lab works at the intersection of basic and applied plant biology, uses techniques in cell biology, molecular biology and biotechnology and whole plant physiology, to understand how plants adapt to environmental stresses such as high salinity, water deficiency and nutrient imbalance; Implementation of high throughput plant phenotyping to monitor physiological responses to environmental conditions in real time; Understanding how a family of cation exchangers regulate intracellular ion homeostasis and control plant growth and stress tolerance.

Dr Pantelis Georgiades, Ph.D., Associate Professor

Developmental Biology and Stem cells Lab for Biomedical Research

Biomedical research on unknown and clinically significant aspects of mammalian developmental biology and stem cell biology using mouse embryos, placentas and embryo-derived stem cells as in vivo and ex vivo models; Pattern formation during early embryogenesis, placenta organogenesis and in stem cells; Extraembryonic influences on pattern formation within the early embryo; Trophoblast stem cell biology; Feto-maternal interactions in the uterus during pregnancy.

Antonis Kirmizis, Professor

Epigenetics and Gene Regulation Laboratory

Biomedical research in epigenetics using interdisciplinary approaches together with mammalian and yeast systems as model organisms; Epigenetic mechanisms focusing on those involving histone modifications in transcriptional control; Interplay of histone modifications with cellular metabolism; Implication of epigenetic modifications in diseases like cancer and identification of novel therapeutic targets.

Alexander Kirschel, Associate Professor

Behavioural Ecology and Evolution Laboratory

Exploration of the ecological and evolutionary processes behind behavioral variation across local to continental scales; Use of an interdisciplinary approach, integrating ecology, bioacoustics, animal coloration, GIS, genomics, bioinformatics, and fieldwork; Focus on interactions between related bird species in sub-Saharan Africa and investigation of the genomic basis of behavior, particularly traits involved in reproductive isolation and speciation; Examination of the impact of the environment on traits like song, body size, and feather color; Use of experimental models, including robotic birds, to study character recognition; Research in Cyprus on topics such as endemism, colonization, invasive species, and migration.

Leondios Kostrikis, Professor

Laboratory of Biotechnology and Molecular Virology

Use of a variety of experimental approaches in order to understand the molecular mechanisms of HIV-1 transmission and the pathogenesis of AIDS; 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.

Anna Papadopoulou, Associate Professor

Molecular Ecology and Evolution Laboratory

Molecular genetics and genomic tools to address ecological and evolutionary questions, with a special focus on the study of insular organisms; Development and application of DNA-based methodologies for species delimitation, biodiversity assessment and diet inference of poorly known taxonomic groups (mostly terrestrial arthropods); Phylogenomics, comparative phylogeography and population genomics of insular lineages; DNA barcoding and genome sequencing of Cypriot taxa for conservation purposes.

Chrysoula Pitsouli, Ph.D., Associate Professor
Drosophila Development and Homeostasis Laboratory

Biomedical research using the *Drosophila* fruit fly as model with emphasis on developmental cell biology and stem cell biology; Tracheal system remodeling during development and in hypoxia; Diet, microbiota and stem cell interactions in intestinal homeostasis, tumorigenesis and aging; Neoangiogenesis in intestinal inflammation and cancer; Modeling glioblastoma neoangiogenesis.

Vasileios Promponas, Associate Professor
Bioinformatics Research Laboratory

Protein sequence/structure/function/evolution; Non-globular proteins/sequence repeats/low complexity/compositionally biased regions; Large-scale gene/protein functional annotation; Bioinformatics and comparative genomics for systems and synthetic biology; Eukaryotic endomembrane systems (autophagy, nuclear pores).

Niovi Santama, Professor
Molecular Biology and Biochemistry Laboratory

Molecular, cell biological and biochemical research to investigate mechanisms underlying microtubule-based processes in mammalian cells; Centrosome and cilogenesis regulation in mammalian cells; Molecular and cell biology of motor proteins and cytoskeleton in mammalian mitotic cells and in the mammalian nervous system; Mechanisms of nuclear envelope formation and endoplasmic reticulum morphogenesis in human cells; Regulation of rRNA transcription in mammalian cells.

Spyros Sfenthourakis, Professor
Ecology and Biodiversity Laboratory

Patterns of species' spatial distribution; Phylogeography and systematics of invertebrates and reptiles; Differentiation through interactions of ecological and evolutionary processes; Terrestrial isopod and beetle communities in insular systems; Exploration of patterns and theories within the island biogeography framework; Applied research on biodiversity conservation. Fieldwork and application of molecular techniques in the study of geographical variation.

Paris A. Skourides, Professor
Developmental Biology and Bioimaging Technology Laboratory

Developmental and cell biology research using *Xenopus*, mice, and zebrafish as model systems, with emphasis on, cell adhesion, mechanobiology and multiciliated cell development; Morphogenetic movements during embryogenesis and advanced imaging techniques; Drug discovery for rare respiratory diseases targeting mucociliary clearance; Preclinical research on breast cancer metastasis and tumor cell invasion; Translational applications.

Katerina Strati, Associate Professor
Tumor Viruses and Cancer Laboratory

Research on the mechanisms of carcinogenesis driven by oncogenic viruses, in particular human papillomaviruses. Interaction of the viruses with the host and effect on tissue homeostasis and cellular regeneration. Modeling virus-associated cancers. Identifying therapeutic targets.

Anna Charalambous, Special Teaching Staff

Study of cancer cell invasion and metastasis, at the cellular and molecular level; Preclinical studies of newly developed drugs (in mice), to inhibit breast tumor cell invasion and metastasis; Translational Applications.

Niki Chartosia, Special Teaching Staff
Marine Ecology Lab, Oceanography Centre

Trophic Ecology (feeding habits of marine species); Study of marine faunal biodiversity of Cyprus; Interactions between marine alien and native species and impacts; Climate change and impact on marine communities; Reproduction and growth of marine faunal species; Fisheries biology.

Contact Details

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Department of Chemistry

www.ucy.ac.cy/chem/en

The Department of Chemistry prides itself in producing highly skilled scientists in the field of Chemistry, capable of addressing current and future challenges in Chemistry at both national and international levels.

The Department offers graduate programmes at the Master's (M.Sc.) and Doctoral (Ph.D.) levels.

Admission to the Chemistry Graduate Programmes

At present, 37 postgraduate students are enrolled in the graduate programme, 31 of which are at the Doctoral level. To date, the Department of Chemistry has awarded 106 Ph.D. and 108 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, candidates may refer to the Admission and Attendance Regulations – Application Requirements or consult the Graduate School (tel.: 22894021/44) or the Department Secretariat (tel.: 22892780).

In addition to the general application requirements, candidates are requested to submit a cover letter explaining the reasons why 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 the University, as well as participate in national and international research programmes 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 may be credited for part or all of the 60 ECTS, pending the recommendation of the Graduate Studies Committee (GSC) and approval by the Departmental Council. Moreover, doctoral students may spend up to one calendar year at universities abroad, under student exchange programmes. Master and Doctoral students may 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 (CHE 821 - CHE 826, 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 supervision of CHE 800 is carried out by the student's supervisor. The examination and grading of this seminar are conducted, after an open presentation, by a two-member Committee, which consists of the student's supervisor and one additional academic staff member.

For details on 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 student's research supervisor is responsible for supervising CHE 810. The examination and grading of this seminar are conducted, after an open presentation, by a two-member Committee, which consists of the student's supervisor and one additional academic staff member.

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, candidates may refer to the Admission and Attendance Regulations – Application Requirements or consult the Graduate School, or the Department's Secretariat.

DOCTOR OF PHILOSOPHY (Ph.D.) DEGREE

The minimum duration of studies for a Ph.D. degree is 3.5 years (full-time students) and the maximum duration is 8 years.

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 a Comprehensive Examination, which takes place between the third and the seventh semester of studies. 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 in total), while 15 research modules carrying 10 ECTS units each are credited through research towards the Ph.D. Thesis. Procedures for course selection and the required Literature Studies (CHE 800 and CHE 810) are the same as those for the M.Sc. Programme.

Departmental Seminars

During their studies, Ph.D. students are required to attend all departmental seminars for five semesters (CHE 860 – 864). Students must also present a seminar themselves (CHE 865) to the Department. 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 following semester.

Ph.D. Research

In addition to the requirements described for the M.Sc. research 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 their 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 has 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 of the three-member Committee and procedure followed), candidates may consult the Graduate School or the Department's Secretariat.

Ph.D. Thesis Proposal Examination

The Ph.D. 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 before a three-member Committee. The purpose of this examination is to assess the quality, quantity and novelty of the research work, as well as ascertain whether the student has made sufficient progress and he/she is in a position to meet any remaining 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 before a five-member examining Committee.

For details about the procedure for Ph.D. Thesis defence and the composition of the five-member Examining Committee, candidates may 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.)

	ECTS
Theoretical Courses	
CHE 610 Physicochemical Methods in Inorganic Chemistry II	10
CHE 611 Physicochemical Methods in Inorganic Chemistry I	10
CHE 615 Separation Methods and Applications	10
CHE 620 Introduction to Solid State Chemistry and Nanomaterials	10
CHE 630 Medicinal Chemistry	10
CHE 631 Advanced Organic Chemistry I	10
CHE 640 Basic Principles of Colloid Chemistry	10
CHE 651 Molecular Spectroscopy	10
CHE 695 Aquatic Chemistry of Heavy Metals	10
CHE 715 Mass Spectrometry	10
CHE 789 Synthetic Organic Chemistry	10
Graduate Literature Studies	
CHE 800 Literature Study	10
CHE 810 Literature Study	10
Department Seminars	
CHE 860 Chemistry Department Seminars I	0
CHE 861 Chemistry Department Seminars II	0
CHE 862 Chemistry Department Seminars III	0
CHE 863 Chemistry Department Seminars IV	0
CHE 864 Chemistry Department Seminars V	0
CHE 865 Chemistry Department Seminars VI	10
Research and Thesis Writing	
CHE 821 - 826 M.Sc. Research and M.Sc. Thesis Writing	10
CHE 880 - 894 Ph.D. Research	10
CHE 866 - 867 Ph.D. Thesis Writing	10

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(5) 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 bioinorganic models and metalloenzymes.
- Nuclear Magnetism Spectroscopy (NMR): Description of NMR experiment, Bloch equations, pulse NMR, NMR quantum mechanics, relaxation, inverse recovery and spin echo experiment, 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 615 Separation Methods and Applications (10 ECTS)

The primary goal of this course is to introduce students to the foundational principles of separation science and address key aspects of qualitative and quantitative analysis. The course covers various chromatographic separation methods, their evaluation criteria, and their applications across different fields such as industry, medicine, environment, forensic science, and food science.

Course Content:

- Method Evaluation Criteria: Precision (Repeatability & Reproducibility), Accuracy, Robustness, Selectivity, Sensitivity, Limits of Detection and Quantification, Linearity, Recovery, Matrix Effect, Carry-over Effect, Stability.
- Chromatography: Principle of Chromatographic Separation, Retention Factor, Selectivity Factor, Resolution, Band Broadening and Column Efficiency, van Deemter Equation, Optimization of Column Performance, Examples of Improved Chromatographic Separation.
- High-Performance Liquid Chromatography (HPLC): Instrumentation, Sample Preparation, Columns and Packing

Materials, Selection of Stationary and Mobile Phase, Detectors, Liquid Chromatography/Mass Spectrometry (LC/MS), UPLC-MS/MS, Method Development, Applications, Qualitative and Quantitative Analysis.

- Capillary Electrophoresis (CE): Capillary Zone Electrophoresis, Packed Capillary Electrochromatography, Open-Tubular Capillary Electrochromatography, Electrokinetic Chromatography (EKC) (with Micelles - MEKC, with Cyclodextrins - CD-EKC, with Cyclofructants - CF-EKC), Detectors, Capillary Columns, Electroosmotic Flow, Separation Mechanism, Chiral Separations using Micelles, Cyclodextrins, Cyclofructants, Ionic Liquids, and Deep Eutectic Solvents, Applications.

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 630 Medicinal Chemistry (10 ECTS)

- The process of drug discovery: Stages in the process, financial considerations, sources from which a lead structure can be identified, the combinatorial chemistry approach, in silico approaches, high-throughput biological screening, optimization approaches for improving pharmacodynamics and pharmacokinetics, isosteric substitutions, bioisosteres, optimization of individual physicochemical parameters of compounds, "drug-likeness" and Lipinski's rule of five, conformation and conformational controllers, deriving quantitative structure-activity relationships, examples of multi-parameter QSAR equations, 3D-QSAR, drug metabolism and considerations, discussion of QSAR and metabolic studies from recent literature, clinical trials.
- Cannabinoid receptor ligands: Cannabinoid receptors and their connection to physiological and disease condition, structure and broad selectivity of cannabinoid receptors, endogenous, naturally occurring and synthetic cannabinoid ligands, agonists, antagonists, partial agonists and inverse agonists, applications of cannabinoids as therapeutics in the context of Medicinal Chemistry, cannabinoids as drugs of abuse, cannabinoid detection.

- Modern approaches in targeting bacterial resistance: Background on bacterial structure, the Gram classification system, potential bacterial targets, historic evolution of antibiotics, the problem of bacterial resistance, mechanisms via which bacteria acquire resistance to drugs, classes of antibacterial agents and their mechanisms of action, recent developments in this field, discussion of antibiotic syntheses from recent literature with emphasis on long-term challenges.
- Kinase inhibitors in cancer: Receptor tyrosine kinases and their significance in signal transduction, kinase mutations and "gain-of-function" in cancer, proto(oncogenes) encoding for kinases, mutant kinases unique in cancer, the selectivity issue for kinase inhibitors, the "multiple targets - one drug" approach, case studies of kinase targets, principles of kinase inhibitor design, successful examples, next generation kinase inhibitors, modern trends, discussion of kinase inhibitor syntheses from recent literature.
- Antiviral drugs for influenza virus and covid19: Structure of viruses and constituent components, life cycle of viruses, self-assembly for generation of new viral particles, recent pandemics and challenges, vaccines and vaccine development, modern trends, viral targets, antiviral drug classes and drug development and evolution, the concept of drug repurposing, successful case studies and mechanisms of action, discussion of antiviral drug syntheses from recent literature.
- Cardiovascular drugs: Cardiovascular disease as a leading cause of death, the cardiovascular system and its function, various drug categories (antihypertensives, vasodilators, calcium entry blockers, funny ion channel inhibitors, lipid regulating agents, antithrombotic agents), discussion of cardiovascular drug syntheses from recent literature.

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 diimides); nitrogen compounds with N-O or N-N bonds (compounds with N-N bonds, oximes, N-oxides, nitroso compounds, nitro compounds).

CHE 640 Introduction to Colloid Science (10 ECTS)

- Matter in the colloidal state. The main types of colloids. Characteristic phenomena in colloid systems and dispersions. Preparation methods for uniform colloids.
- Optical properties of colloids. Scattering of light, X-rays and neutrons. Optical microscopy. Polarized microscopy. Electron microscopy. Atomic force microscopy and scanning tunnelling microscopy.
- Kinetic properties of colloids. Diffusion. Viscosity. Rheology. Electrophoresis.
- Thermodynamics of interfacial systems. Surface tension and contact angle. The fundamental equations of Gibbs (on adsorption), Young-Laplace, and Young. Elementary theory of nucleation, crystal-growth and aggregation.
- Interparticle forces in colloidal systems. Van der Waals forces, modern theory of Lifshitz. Modern electric double layer

theory. Colloid stability, DLVO theory. Theory of aggregation and precipitation kinetics.

- Association colloids. Micelles, liquid-crystalline phases of surfactants. Lamellar phases and vesicles, macro- and micro-emulsions. Colloidal properties of polymers and biological macromolecules.

CHE 651 Molecular Spectroscopy (10 ECTS)

The course provides an in-depth study of quantum mechanical theory, which forms the basis for molecular spectroscopy, aiming for the understanding of the type of information available from molecular spectroscopic methods applied to the condensed phase, and in particular electronic and vibrational spectroscopies.

1. Principles of Molecular Spectroscopy: Electrical properties of molecules, Interaction of dipole moment with an electric field, Polarizability and induced dipole moment. Time-dependent and independent perturbation theory, Transition probabilities, Cross-sections, Transition rates – Fermi's Golden Rule.
2. Electronic Spectroscopy: Types of electronic transitions, transition probabilities, selection rules, vibronic structure, solvent effects.
3. Fluorescence: Radiative and non-radiative transitions (Internal conversion, Fluorescence, intersystem crossing, Phosphorescence, Delayed luminescence, Triplet-triplet transitions), Lifetimes and Quantum yields, Molecular structure and Fluorescence, Environmental Effects on Fluorescence, Quenching, Fluorescence Polarization (emission anisotropy), Fluorescent Probes, Resonance Energy transfer, Fluorescent Molecular Sensors.
4. Raman Spectroscopy: Light Scattering, Calculation of polarizability from perturbation theory and scattering cross sections, Off-resonance Raman spectroscopy (Selection rules, Transition polarizability), Resonance Raman spectroscopy (Selection Rules, Depolarization ratios), Intensity analysis.

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 matrixes. 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.

CHE789 Synthetic Organic Chemistry (10 ECTS)

Synthetic design of complex organic molecules (including natural products), principles of retrosynthetic analysis, transforms and retrons. Transform-based strategies, powerful transforms for generating molecular complexity. Bi-directional synthetic analysis and topological strategies. Mechanistic strategies. Organic functional group interconversion (FGI). FGI-based strategies. Redox transforms and use of oxidation and reduction in synthesis. Specialized and new oxidants and reductants. Protecting groups. Protection and deprotection conditions for key functional groups. Methods for constructing rings as part of polycyclic carbon frames. Cycloadditions, rearrangements. Organometallic transformations and reagents for strategic C-C, C-O and C-N bond formation. Selective C-H bond activation for direct functionalization of (inert) substrates. Stereo-controlled strategies. Chiral auxiliaries, additives, ligands, catalysts. Case studies of complex organic molecule synthesis, using a combination of strategies.

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
- 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 mainly 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 AND MASS SPECTROMETRY

- 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).

MOLECULAR CHARACTERISATION

- Polarimeter.
- CHNS-O Eurovector Elemental Analyser.
- MK I Sherwood Magnetic Balance.
- Princeton Electrochemistry Equipment (Cyclic Voltammetry, Polarography, Potentiometry).
- NO_x, CO₂, CO, H₂ and CH₄ 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-IRRAS).
- 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.

Agapios Agapiou, Associate Professor

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; 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 meta-bolic 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.

Sotirios Christodoulou, Lecturer

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; To synthesise shape-controlled semiconductor nanocrystals emitting in the near-infrared such as PbS, InAs and GaAs quantum dots; High band-gap materials such as ZnO, CuO for optoelectronic devices and magnetic Fe₃O₄ nanocrystals for biological applications. The optoelectronic characterisation of quantum dots and inorganic materials (inorganic complexes, metal-organic-frameworks etc). The fabrication and characterisation of proof-of-concept optoelectronic devices, such as lasers and photodetectors mainly in the infrared.

Savvas N. Georgiades, Associate Professor

Synthesis of natural products and drug-like compound libraries; Methodology development and application of metal-catalyzed C-H bond activation (arylation, fluorination) for generation of (hetero)oligoryl compounds; Photoredox catalysis; C-H hydroxylation, amination and amidation of terpenoid substrates; Natural product synthesis originating from "chiral pool" precursors; 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

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; 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 diverse analytes; Use of the hyphenated techniques CE-MS, LC-MS, LC-MS/MS and UPLC-MS-MS for the detection and quantitation of analytes in biological, pharmaceutical, environmental and food matrices; Use of enantiomers as diagnostic biomarkers for diseases; Determination of the most effective sample pre-treatment methods; Synthesis and use of chiral ionic liquids, deep eutectic solvents (DESSs) and supramolecular DESSs in electrophoresis, chromatography and extraction processes.

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(pyrroles) and poly(thiophenes); Design, synthesis and characterisation of electronically unusual compounds; Organic neutral radicals, diradicals, and zwitterion radicals.

Epameinondas Leontidis, Professor

Physical chemistry of colloids and Interfaces; 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); Computational and theoretical chemistry with the goals of modelling the structure of electrolyte solutions close to surfaces and of understanding salt effects on proteins and peptides in solutions and at surfaces.

Athanassios Nicolaides, Associate Professor

Organic reactive intermediates with an emphasis on pyramidalized alkenes, carbenes and nitrenes; The application of quantum chemical computations to various organic and environmental chemistry problems.

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 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 [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/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

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.

Anastasios J. Tasiopoulos, Professor

Functional metal – organic frameworks (MOFs) combining interesting single - crystal to single - crystal (SCSC) transformation with gas sorption/magnetic/optical properties aiming to fine tune these properties through targeted SCSC structural modifications; Water-stable MOFs for use in wastewater treatment applications; Photoluminescent MOFs for use in sensing applications and iv) Polynuclear compounds of paramagnetic transition metal ions aiming to complexes with interesting magnetic properties.

Contact Details**POSTGRADUATE PROGRAMMES
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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 program in Computer Science is designed primarily for

- graduates of Computer Science and related Sciences who seek to deepen their knowledge in Computer Science, develop research skills in specialized areas of Informatics
- IT professionals who wish to expand and update their knowledge and acquire modern know-how in advanced Information Technologies.

Students who attend this programme may pursue a PhD degree after their graduation.

The program offers two titles:

1. Master of Science in Computer Science (for the students completing a 30 ECTS thesis), and
2. Master of Science in Computer Science – Professional (for the students fulfilling their requirements without a thesis)

The duration of studies must be at least three semesters.

Students that choose Option 1 (with thesis) are required to complete 90 ECTS that correspond to eight courses and a Master’s thesis. More specifically:

- Seven postgraduate courses of 8 ECTS (any seven from the CS postgraduate course list).
- One postgraduate course of 4 ECTS (CS 670 Research Methods and Professional Practices in Computer Science).
- Master’s thesis (30 ECTS).

Students that choose Option 2 (without thesis) are required to complete 92 ECTS that correspond to twelve courses. More specifically:

- Eleven postgraduate courses of 8 ECTS (any eleven from the CS postgraduate course list).
- One postgraduate course of 4 ECTS (CS 670 Research Methods and Professional Practices in Computer Science).

The program includes an independent study course (CS720). This course offers students, particularly those not writing a thesis, an opportunity to gain comprehensive knowledge in a specific area of Computer Science under the guidance of a faculty advisor.

Students have the option to take up to two courses from other related Master programs and credited up to 16 ECTS. These include the two programs, recently formed by our department, in Artificial Intelligence and Data Science.

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 comes 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 was 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 strong links with industry provide significant added value to the educational experience. The Programme is offered in English only and its full-time duration is 1.5 years (90-102 ECTS credits), namely three academic semesters and an optional summer period, during which students have the opportunity to pursue an internship. As of September 2023, this programme runs jointly with the Department of Electrical and Computer Engineering.

Course Descriptions

CS 601 Distributed Systems (8 ECTS)

Restricted Choice for MCS

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 602 Cloud Computing (8 ECTS)

Restricted Choice for MCS

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.

CS 603 Advanced Software Engineering (8 ECTS)

Restricted Choice for MCS

Topics in component-based software: Principles of development of component-based systems based on component-based software. Modelling techniques. Software architectures. Coordination programming. Middleware platforms for the development of systems. Software composition. Elements of the distributed programming. Configuration management. Advanced topics in Software Engineering: Requirements engineering processes. Real-time software design. Design with reuse. User interface design. Software change.

CS 604 Artificial Intelligence (8 ECTS)

Restricted Choice for MCS

Introduction to artificial intelligence. Topics in constraint satisfaction. Satisfiability and optimisation in logic. Answer set programming. Topics in symbolic learning, data mining, and reasoning under uncertainty. Introduction to artificial neural networks. Single layer and multilayer Perceptrons. Backpropagation learning algorithm. Deep learning and convolutional neural networks. Recurrent neural networks. Self-organizing maps. Radial-basis function networks. Reinforcement learning. Hopfield neural networks and boltzmann machines as well as restricted boltzmann machines.

CS 605 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)

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 3Dgraphics: 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)

Restricted Choice for MCS, MDS

(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 649 Principles of Ontological Databases (8 ECTS)

Restricted Choice for MCS

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.

CS 653 Computer Games Software Technology (8 ECTS)

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 656 Computer Graphics: Modelling and Realism (8 ECTS)

Restricted Choice for MCS

Modelling, parametric and implicit surfaces, camera specification, projections of primitives. Graphics pipeline. Local and global illumination, shadows, ray tracing and radiosity. Real-time rendering of large environments. Acceleration techniques.

CS 657 Wireless Networks (8 ECTS)

Restricted Choice for MCS

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.

CS 659 Design on Embedded Systems (8 ECTS)

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.

CS 660 Information Retrieval and Search Engines (8 ECTS)

Specialisation Course for MDS

Restricted Choice for MCS

Introduction to information retrieval. Boolean retrieval. Text encoding: tokenisation, stemming, lemmatisation, stop words, phrases. Dictionaries and tolerant retrieval. Index construction and compression. Scoring and term weighting. Vector space retrieval. Evaluation in information retrieval. Relevance feedback/ query expansion. Text classification and Naive Bayes. Vector Space classification. Flat and hierarchical clustering. Web Search basics. Web crawling and indexes. Link analysis.

CS 664 Systems Analysis and Verification (8 ECTS)

Restricted Choice for MCS, PM

Formal methods for system specification and analysis. Concurrent systems and interleaving and partial-order semantics. Transition systems and Kripke structures. Temporal logic (linear and branching). Automatic verification and model-checking. Process algebras: syntax, semantics, equivalence relations and axiom systems. Real-time system analysis (timed automata, timed process algebras and timed temporal logic). The tools SPIN and concurrency workbench.

CS 665 Constraint Solving Methods (8 ECTS)

Restricted Choice for MCS

Review of basic concepts from constraint satisfaction over finite domains. Advanced consistency techniques in binary and non-binary problems. Constraint satisfaction and propositional logic: new algorithms and reduction techniques. Logic programmes with negations and the systems SMOLEDS and DLV. Relation between constraint satisfaction and propositional satisfiability. Redundant constraints. Planning and constraint satisfaction. Satisfaction of temporal constraints. Introduction to distributed constraint satisfaction. Problem solving with CHIP.

CS 667 Computational Neuroscience (8 ECTS)

Restricted Choice for MCS, PM

Computational Neuroscience is an emerging and dynamically developing field, aiming at elucidating 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.

CS 668 Mechanical Vision (8 ECTS)

Restricted Choice for MCS

Basic concepts and methodologies relating to the subject of computer vision. Image information, image processing, feature extraction. Image segmentation, clustering, multiple-image processing, case studies.

CS 670 Research Methodologies and Professional Practices in Computer Science (4 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

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)

Restricted Choice for MCS

Introduction to security threats and attacks. Cryptographic and cryptanalysis techniques. Key exchange management (PKI). Network and Internet security protocols (IPSec, SSL/TLS). Identification and authentication standards (Kerberos, AAA). System security (Firewalls, IDS). Specific threats on end-systems (viruses, worms, trojan horses, stack overflow, rootkits). Identification of security vulnerabilities in software and operating systems. Checking of networks and applications for vulnerabilities, introduction to computer systems forensics. Security policies. Security management, ethical and legal issues in system security.

CS 679 Electronic Health (eHealth) (8 ECTS)

Restricted Choice for MCS

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 681 Advanced Topics in Software Reuse (8 ECTS)

Restricted Choice for MCS

Levels of reuse. Best practices for reuse. Evolution of reuse. Software repositories. Search and retrieval. Data extraction. Use of dedicated APIs. Design patterns. Object-oriented programming standards. Open source software. Open source licensing and legal issues. Organisation policies and open-source based development. License compliance. Model-Driven Engineering reuse. Service-Oriented Computing (SOAP, RESTful). Reuse on service level.

CS 682 Data Security (8 ECTS)

Restricted Choice for MCS

Data Security 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.

CS 683 Technology Entrepreneurship (8 ECTS)

Restricted Choice for MCS

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.

CS 699 Special Topics in Computer Science (8 ECTS)

The content of the course is according to the specific topic. Prerequisites: With consent of the Lecturer.

CS 720 Independent Study (8 ECTS)

Restricted Choice MCS

Independent study under the supervision of a faculty.

DSC 501 Python Crash Course (2 ECTS)

The course aims to provide a broad overview of Python, a general-purpose programming language that is becoming increasingly popular for Data Science. The course covers fundamentals of computer programming and its underlying principles using the Python programming language. The course is aimed at students with little programming background.

DSC 510 Introduction to Data Science and Analytics (8 ECTS)

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 (8 ECTS)

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 (8 ECTS)

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 (8 ECTS)

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 (8 ECTS)

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 (8 ECTS)

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, 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.

DCS 516 Cloud Computing (8 ECTS)

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 (8 ECTS)

Data Security 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 (8 ECTS)

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.

DSC 581 Data Manipulation in Python (4 ECTS)

The purpose of this course is to equip students with the skills and techniques necessary to effectively manipulate large datasets, a fundamental aspect of data analysis. Through a combination of hands-on experience and theoretical understanding, students will learn how to work with complex, raw data from diverse sources.

DSC 582 Data Science Toolbox (4 ECTS)

This course covers key areas including SQL and data version control with Git and Github. Students will learn to harness the power of SQL for data manipulation and analysis and master the intricacies of version control with Git and Github for efficient collaborations. Practical projects, case studies, and

peer feedback sessions ensure that students gain valuable real-world experience and are well-prepared to tackle data science challenges in diverse professional settings.

MAI 611 Artificial Intelligence Fundamentals (8 ECTS)

Mandatory Course for MAI. Restricted Choice for MCS

The course introduces students to the fundamental principles and techniques that underline software systems that exhibit "intelligent" behaviour. Language of instruction: English.

MAI 612 Machine Learning (8 ECTS)

Mandatory Course for MAI. Restricted Choice for MCS

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

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. It also covers foundational material in mathematics and statistics. 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

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

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

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, as well as 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

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

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

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

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.

MAI647 Computational Neuroscience (8 ECTS)

Restricted choice for MAI, MCS

Computational Neuroscience is an emerging and dynamically developing field, aiming at elucidating 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

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 at designing and developing 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

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

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.

MAI 652 Autonomous Mobile Robots (8 ECTS)

Restricted Choice for MAI, MCS, PM

As robotics and automation continue to drive technological advancements, this course—drawing inspiration from top academic programs worldwide—introduces the fundamentals of developing autonomous mobile robots and systems. Students will explore cutting-edge techniques, with a primary focus on robotic perception for scene understanding, as well as probabilistic environment modelling, localization, and mapping to enable autonomous navigation.

The course fosters in-class discussions, self-study, and critical thinking, equipping students with the knowledge and skills needed for the next stage of their careers. Theoretical concepts will be reinforced through hands-on exercises.

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.

SPECIALISATION COURSES IN GRADUATE PROGRAMMES

Course Code and Title	Master in Computer Science	Master in Data Science	Master in Artificial Intelligence
CS 601 Distributed Systems	√		
CS 602/DSC516 Cloud Computing	√	√	
CS 603 Advanced Software Engineering	√		
CS 604 Artificial Intelligence	√		
CS 605 Advanced Computer Architecture	√		
CS 606 Computer Networks and the Internet	√		
CS 607 Visual Computing	√		
ΕΠΛ 646/DSC 513 Προχωρημένα Θέματα Βάσεων Δεδομένων (Advanced Topics in Data Management)	√		
CS 649/MAI 649 Principles of Ontological Databases	√		√
CS 650/MDS 650 Internet of Things	√		√
CS 653 Computer Networks	√		
CS 655 Advanced Parallel Processing II	√		
CS 656 Computer Graphics - Modelling and Realism	√		
CS 657 Wireless Networks	√		
CS 659 Design with Embedded Processors	√		
ΕΠΛ 660/DSC 512 Ανάκτηση Πληροφοριών και Μηχανές Αναζήτησης (Information Retrieval and Search Engines)	√	√	
CS 662 Machine Learning and Data Mining	√		
CS 663 Computational Logic	√		
CS 664 Systems Analysis and Verification	√		
CS 665 Constraint Solving Methods	√		
CS 667 Neuroinformatics	√		
CS 668 Mechanical Vision	√		
CS 673 Algorithmic Game Theory	√		
CS 674 System and Network Security	√		
CS 679 Electronic Health	√		
CS 680 Cognitive programming	√		
CS 681 Advanced Topics in Software Reuse	√		
CS 682/MDS 517 Data Security	√		
CS 683 Technology Entrepreneurship	√		
CS 699 Special Topics in Computer Science	√		

Course Code and Title	Master in Computer Science	Master in Data Science	Master in Artificial Intelligence
MAI 611 Artificial Intelligence Fundamentals			√
MAI 612 Machine Learning			√
MAI 613 Research Methodologies and Professional Practices in AI			√
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			√
MAI 621 AI Ethics I			√
MAI 631 AI Ethics II and AI Policy Making			√
MAI 622 AI Entrepreneurship			√
MAI 623 Natural Language Processing		√	√
MAI 641 Master's Thesis			√
MAI 642/DSC 515 Deep Learning		√	√
MAI 643 AI in Medicine			√
MAI 644/EPL 668 Computer Vision			√
MAI 645 Machine Learning for Graphics and Computer Vision			√
MAI 646 Cognitive Programming for Human-Centric AI			√
MAI 647 Computational Neuroscience			√
MAI 648 Human-Centered Intelligent User Interfaces			√
MAI 649 Principles of Ontological Databases	√		√
MAI 650 Internet of Things			√
MAI 652 Autonomous Mobile Robots	√		√

RESEARCH INTERESTS OF THE ACADEMIC STAFF

Andreas Aristidou, Associate 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 involving motion capture; Inverse kinematics; Applications of conformal geometric algebra in graphics.

Elias Athanasopoulos, Associate Professor

System security and privacy.

Eleni Constantinou, 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; AI 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.

George Papadopoulos, Professor

Information systems; Cloud computing; Technology enhanced learning; E-health; E-government; Software engineering and internet technologies.

Constantinos Pattichis, Professor

Intelligent systems; Neural networks; Genetic algorithms; Signal and image processing and analysis; Telematics and their applications in medicine.

Anna Philippou, Professor

Concurrency theory; Formal methods and their application in distributed and real-time systems; Type systems; Privacy.

Andreas Pieris, Assistant Professor

Database theory with emphasis on uncertain data; Knowledge representation and reasoning; Logic in computer science.

Yiannos Sazeides, Professor

Computer architecture: Patterns of computation, cache redundancy, chip multicores, power and temperature aware microarchitectures, prediction, and speculation.

Vasos Vassiliou, Associate Professor

Computer and communication networks; Internet of things (IoT); Next generation network architectures; Mobile networks; Wireless communications; Network security; Smart systems.

Demetris Zeinalipour, Professor

Data management in computer systems and networks: Mobile and sensor data management; Big data management in parallel and distributed architectures; Spatio-temporal data management; Crowd, Web 2.0 and indoor data management; Data privacy management.

Charis Volos, Assistant Professor

Computer Architecture; Operating Systems; Data Storage and Processing.

Contact Details**DEPARTMENT SECRETARIAT**

Maria Kittira

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www.ucy.ac.cy/cs/en

Department of Mathematics and Statistics

www.ucy.ac.cy/mas/en

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, you may 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

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

Options	ECTS/Course	Total
2 Compulsory Courses	10	20
4 Elective Courses	10	40
Master Thesis	30	30
TOTAL		90

Indicative Programme of Studies per Semester

	ECTS/Course	Total
Fall Semester		
1 Compulsory Course	10	10
2 Elective Courses	10	20
TOTAL		30
Spring Semester		
1 Compulsory Course	10	10
2 Elective Courses	10	20
TOTAL		30
Fall Semester		
Master Thesis	30	30
Total		30
Grand Total		90

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

- MAS 606 Function Theory of One Complex Variable
- MAS 607 Function Theory of Several Complex Variables
- MAS 613 Ordinary Differential Equations
- MAS 617 Topics in Mathematical Analysis I
- MAS 618 Topics in Mathematical Analysis II
- MAS 619 Topics in Mathematical Analysis III
- MAS 620 Approximation Theory
- MAS 621 Numerical Linear Algebra
- MAS 622 Coding Theory
- MAS 623 Number Theory
- MAS 624 Introduction to Commutative Algebra
- MAS 625 Group Theory
- MAS 626 Field and Galois Theory
- MAS 627 Group Representation Theory I
- MAS 628 Group Representations II
- MAS 629 Topics in Algebra
- MAS 630 Algebraic Geometry
- MAS 631 Differential Topology
- MAS 632 Riemannian Geometry
- MAS 633 General Relativity
- MAS 634 Algebraic Topology I
- MAS 635 Lie Groups and Algebras
- MAS 636 Algebraic Topology II
- MAS 637 Spectral Geometry
- MAS 638 Spin Geometry
- MAS 640 Topics in Geometry I
- MAS 641 Topics in Geometry II
- MAS 660 Probability Theory
- MAS 671 Numerical Solution of Ordinary Differential Equations
- MAS 672 Numerical Solution of Partial Differential Equations
- MAS 673 Finite Element Methods
- MAS 677 Topics in Numerical Analysis I
- MAS 678 Topics in Numerical Analysis II
- MAS 679 Topics in Numerical Analysis III
- MAS 682 Classical Mechanics
- MAS 683 Fluid Dynamics
- MAS 684 Scientific Computing with MATLAB
- MAS 687 Topics in Applied Mathematics I
- MAS 688 Topics in Applied Mathematics II
- MAS 689 Topics in Applied Mathematics III
- MAS 697 Topics in Differential Equations I
- MAS 698 Topics in Differential Equations II
- MAS 699 Topics in Differential Equations III

Note: Courses will be offered according to the capacities of the Department.

MASTER IN DATA SCIENCE (MDS)

The Master 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. 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

Obligations	ECTS/course	Total
Teaching Part (partial or full recognition of a Master's degree)		At least 60
4 Research Stages	30	120
2 Writing Stages	30	60
Comprehensive Examinations (2 three-hour exams)	0	0
Submission of proposal for Doctoral Dissertation	0	0
Defense of Doctoral Dissertation	0	0
Grand Total		240

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. Postgraduate Courses

Prerequisite for the derivation of the doctoral dissertation is the successful completion of the requirements of the Master programme, according to the Department's programme of study, i.e. at least 60 ECTS in courses at Master level. The possession of a Master degree or equivalent title exempts partially or fully the student from this requirement.

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)

Structure and properties of real numbers, continuity, differentiability, Riemann integrability. Metric spaces, compactness, connectedness, Bolzano-Weierstrass theorem, Heine-Borel theorem, Baire category theorem, uniform continuity, convergence of sequences and series of functions. σ -Algebras, outer measures, Borel and Lebesgue measures, measurable functions, Lebesgue dominated convergence theorem, monotone convergence theorem, Fatou's lemma. Signed measures, Radon-Nikodym theorem, product measures, Fubini's theorem. The complex plane, stereographic projection. Möbius transformations. Elementary analytic functions. Cauchy-Riemann equations, harmonic functions. Cauchy's integral formula and theorem, Morera's theorem. Liouville's theorem. Fundamental theorem of algebra. Taylor and Laurent series, residues. Maximum Measure principle. Schwarz's lemma, the Argument Principle, Rouché's theorem, conformal mapping, the Riemann mapping theorem.

Bibliography:

- Royden, H. L. Real Analysis, New York, Macmillan
- Rudin W. Real and Complex Analysis, New York, McGraw-Hill.
- John B. Conway, Functions of one complex variable, Springer Verlag.
- L. V. Ahlfors, Complex Analysis, McGraw-Hill
- Markushevich, Theory of Functions, Chelsea Boas, Invitation to Complex Analysis, McGraw Hill.

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.

Bibliography:

- P. Olver Applications of Lie Groups to Differential Equations, Second Edition, Springer-Verlag, New York, 1993.
- F.B. Hildebrand, Methods of Applied Mathematics, Dover, 1992.
- Course notes from MAS 481 and 682.

MAS 784 Comprehensive Examination in Partial Differential Equations (0 ECTS)

First order partial differential equations, Second order partial differential equations: Wave equation, Heat equations, Harmonic functions. Initial boundary value problems, Fourier series, Green's functions, Maximum Principle.

Bibliography:

- G. D. Akrivis, D. Dougalis, Partial Differential Equations (University Publications).
- W. A. Strauss, Partial Differential Equations: An Introduction (Chapters 1–7).
- L. Evans, Partial Differential Equations (Chapter 2 and Chapter 3: Sections 3.1, 3.2).

MAS 785 Comprehensive Examination in Numerical Analysis (0 ECTS)

Numerical solution of nonlinear equations. Vector and matrix norms. Solution of linear systems (direct and iterative methods). Calculation of eigenvalues and eigenvectors. Interpolation (Lagrange and Hermite). Numerical integration (Newton–Cotes, Gauss).

Bibliography:

- E. Süli and D. Mayers, An Introduction to Numerical Analysis, Cambridge Univ Press, 2003.
- K. Atkinson: An Introduction to Numerical Analysis, Wiley, New York, 1978.
- G. D. Akrivis, D. Dougalis: Introduction to Numerical Analysis, University Publications, Crete, 1997.

MAS 786 Comprehensive Examination in Numerical Solution of Ordinary Differential Equations (0 ECTS)

Single and multistep methods and Runge-Kutta methods for the numerical solution of initial value problems for ordinary differential equations. Finite difference methods for ordinary differential equations. Finite Element Methods for ordinary differential equations.

Bibliography:

- L. Fox and D. F. Mayers: Numerical Solution of Ordinary Differential Equations, Chapman and Hall (London, 1987).
- A. Iserles: A First Course in the Numerical Analysis of Differential Equations, Cambridge Univ Press, 1996.
- G. D. Akrivis, D. Dougalis: Numerical Methods for Ordinary Differential Equations, University Publications, Crete, 2006.
- C. Johnson: Numerical solution of partial differential equations by the finite element method, Cambridge Univ Press, 1994.
- G. D. Akrivis: Finite Element Methods, University Lectures, Cyprus, 2005.

Ph.D. IN MATHEMATICS (PURE MATHEMATICS)
Requirements for the Ph.D. Programme
Indicative Programme of Studies

Obligations	ECTS/course	Total
Teaching Part (partial or full recognition of a Master's degree)		At least 60
4 Research Stages	30	120
2 Writing Stages	30	60
Comprehensive Examinations (2 three-hour exams)	0	0
Submission of proposal for Doctoral Dissertation	0	0
Defense of Doctoral Dissertation	0	0
Grand Total		240

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. Postgraduate Courses

Prerequisite for the derivation of the doctoral dissertation is the successful completion of the requirements of the Master programme, according to the Department's programme of study, i.e. at least 60 ECTS in courses at Master level. The possession of a Master degree or equivalent title exempts partially or fully the student from this requirement.

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)

Structure and properties of real numbers, continuity, differentiability, Riemann integrability. Metric spaces, compactness, connectedness, Bolzano-Weierstrass theorem, Heine-Borel theorem, Baire category theorem, uniform continuity, convergence of sequences and series of functions. σ -Algebras, outer measures, Borel and Lebesgue measures, measurable functions, Lebesgue dominated convergence theorem, monotone convergence theorem, Fatou's lemma. Signed measures, Radon-Nikodym theorem, product measures, Fubini's theorem. The complex plane, stereographic projection. Möbius transformations. Elementary analytic functions. Cauchy-Riemann equations, harmonic functions. Cauchy's integral formula and theorem, Morera's theorem. Liouville's theorem. Fundamental theorem of algebra. Taylor and Laurent series, residues. Maximum Measure Principle. Schwarz's lemma, the Argument Principle, Rouché's theorem, conformal mapping, the Riemann mapping theorem.

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.
- L. V. Ahlfors, Complex Analysis, McGraw-Hill Markushevich, Theory of Functions, Chelsea Boas, Invitation to Complex Analysis, McGraw Hill.

Useful Courses: MAS 601, 606

MAS 781 Comprehensive Examination in Algebra (0 ECTS)

Groups and homomorphisms, Lagrange's theorem. Direct and semi-direct products. Cyclic, dihedral and symmetric groups. Free groups, generators and relations, finitely generated Abelian groups. Group actions. Sylow's theorem and p-groups. Simple groups, composition series. Solvable groups. Rings and homomorphisms. Ideals. Polynomial rings. Factorisation in commutative rings. Modules and exact sequences. Extensions of fields, splitting field of a polynomial, separable extensions, normal extensions. Fundamental theorem of Galois theory. Roots of unity and cyclotomic polynomials. Solvability by radicals. Symmetric functions and Abel's theorem.

Bibliography:

- I. Herstein, Topics in Algebra, N.Y. Wiley.
- T. Hungerford, Algebra, Springer-Verlag.
- J. Rotman, An Introduction to the theory of groups, Fourth Edition, Springer-Verlag.
- P. Cameron, Introduction to Algebra, Oxford University Press.

Useful Courses: MAS 625, 626

MAS 782 Comprehensive Examination in Geometry (0 ECTS)

Topological and differentiable manifolds, basic examples and properties. Fundamental group. Tangent spaces. Partitions of unity. Normal values. Vector fields, flows. Frobenius' theorem. Differentiable forms. Stokes' theorem. Riemannian manifolds. The Riemannian connection and exterior differential forms. Geodesic curves, exponential mapping, normal coordinates, Gauss' Lemma. Hopf-Rinow theorem. Curvature. Gauss-Bonnet

theorem. Hadamard-Cartan theorem.

Bibliography:

- Boothby, W. An introduction to differentiable manifolds and Riemannian Geometry, Academic Press.
- M. Do Carmo, Riemannian Geometry, Birkhauser.
- K. M. Lee, Riemannian Geometry, Springer.

Useful Courses: MAS 631, 632

Ph.D. IN STATISTICS

Requirements for the Ph.D. Programme

Indicative Programme of Studies

Obligations	ECTS/course	Total
Teaching Part (partial or full recognition of a Master's degree)		At least 60
4 Research Stages	30	120
2 Writing Stages	30	60
3 Comprehensive Examinations)	0	0
Submission of proposal for Dissertation	0	0
Defense of Dissertation	0	0
Grand Total		240

For the completion of a Ph.D. in Statistics, the following are required:

1. Postgraduate Courses

The successful completion of the requirements of the Master programme according to the Department's programme of study, i.e. at least 60 ECTS in Master level courses, is a prerequisite for the derivation of the doctoral dissertation. The possession of a Master's degree or an equivalent academic title exempts the student, fully or partially, from this requirement.

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.

Seminar Codes	ECTS
MAS 751 Seminar in Applied Statistics (Ph.D.) I	0
MAS 752 Seminar in Applied Statistics (Ph.D.) II	0
MAS 753 Seminar in Applied Statistics (Ph.D.) III	0
MAS 754 Seminar in Applied Statistics (Ph.D.) IV	0
MAS 755 Seminar in Applied Statistics (Ph.D.) V	0
MAS 756 Seminar in Applied Statistics (Ph.D.) VI	0

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

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:

- P. Billingsley, Probability and Measure, Wiley, 2nd Edition, 1986.
- Y.S. Chow and H. Teicher, Probability Theory, Springer Verlag, 2nd Edition, 1988.
- K.L. Chung, A Course in Probability Theory, Academic Press, 1974.
- J.L. Doob, Stochastic Processes, Wiley, 1993.
- W. Feller, An Introduction to Probability Theory and Its Applications, Wiley, Vol. 1, 3rd Edition, 1968 and Vol. 2, 2nd Edition 1971.

MAS 770 Comprehensive Examination in Statistical Theory (0 ECTS)

Estimation theory, random sample, statistic, families of distributions, exponential families. Estimators (maximum likelihood, least squares, moment estimators, Bayes estimators). Properties of estimators, unbiasedness, sufficiency, consistency. Unbiased estimators of uniformly minimal variance, Fisher information, Cramer-Rao inequality. Rao-Blackwell Theorem and Theorem of Lehmann-Scheffe. Theory of testing statistical hypothesis, decision theory, simple and composite hypothesis, test statistics, properties of tests. Neyman - Pearson lemma, uniformly most powerful tests. Likelihood ratio tests. Hypothesis testing and confidence intervals. Goodness-of-fit tests, tests of independence.

Bibliography:

- Lehmann, E. L. and G. Casella, Theory of Point Estimation. Springer, 2nd Edition, 1998.
- Lehmann, E. L. and J. Romano, Testing Statistical Hypothesis. Springer, 3rd Edition, 2005.
- Lehmann, E. L., Elements of Large-Sample Theory, Springer, 1988.
- Rao, C.R., Linear Statistical Inference and its Applications. John Wiley, 1973.
- Serfling, R., Approximation Theorems of Mathematical Statistics. Wiley, 1980.
- Van der Vaart, A. W., Asymptotic Statistics. Cambridge University Press, 1998.

Moreover, the following courses may be offered as restricted electives within the Department. Students may enrol in them in order to deepen their knowledge in the relevant fields.

MAS 650 Mathematical Statistics (10 ECTS)

MAS 653 Generalised Linear Models (10 ECTS)

MAS 654 Nonparametric Statistics (10 ECTS)

MAS 655 Survey Sampling (10 ECTS)

MAS 656 Time Series Analysis (10 ECTS)

MAS 657 Analysis of Discrete Data (10 ECTS)

MAS 659 Multivariate Analysis (10 ECTS)

MAS 661 Topics in Statistics I (10 ECTS)

MAS 662 Topics in Statistics II (10 ECTS)

MAS 663 Topics in Statistics III (10 ECTS)**MAS 665 Computational Statistics (10 ECTS)****MAS 666 Biostatistics (10 ECTS)**

Course Descriptions

MAS 601 Measure and Integration (10 ECTS)

Metric spaces. σ -algebras, measures, outer measures. Borel measures on the real line. Measurable functions. Integration. General convergence theorems. Signed measures. Product measures n -dimensional Lebesgue integral. The Radon-Nikodym Theorem. L_p spaces.

MAS 602 Fourier Analysis (10 ECTS)

The Schwarz space. Fourier transform. Plancherel's formula. Convergence of Fourier series and integrals. Applications in partial differential equations. Distributions. Tempered distributions, compactly supported distributions. Sobolev spaces.

MAS 603 Partial Differential Equations (10 ECTS)

First order quasi-linear equations, the method of characteristics. Classification and normal forms. Existence theorem of Cauchy-Kovalevskaya and uniqueness theorem of Holmgren. Distributions and weak solutions. Hyperbolic theory, characteristics, propagation of singularities. Wave equation in one, two and three space dimensions. Conservation laws and shock waves. Elliptic theory, Laplace and Poisson equations, fundamental solutions, harmonic functions. Variational formulation of elliptic boundary value problems. Parabolic theory, heat equation, parabolic initial/boundary value problems.

MAS 604 Functional Analysis (10 ECTS)

Compact operators. Spectral theory. Self adjoint operators. Closed and orthonormal operators. Spectral theorem. Semigroups.

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, Harnack inequalities, equations with variable coefficients, Dirichlet problem, existence and regularity of solutions.

MAS 606 Function Theory of One Complex Variable (10 ECTS)

Basic facts about complex functions of one complex variable. Differentiation. Cauchy-Riemann equations. Elementary complex functions. Complex integration and the Cauchy Theorem. Applications of Cauchy Theorem. Meromorphic functions and residues. Laurent series. Geometric Theory and Analytic Continuation. Conformal mappings.

MAS607 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). Chirstoffel- Darboux kernels and applications to several complex variables.

MAS 613 Ordinary Differential Equations (10 ECTS)

Existence theorems: Picard-Lindelof and Cauchy-Peano. Uniqueness theorem when Lipschitz condition is satisfied. Smooth dependence of solutions on parameters. Extensibility of solutions. Linear systems, fundamental solution matrix, systems with periodic coefficient. Stability of nonlinear systems.

MAS 617 Topics in Mathematical Analysis I**MAS 618 Topics in Mathematical Analysis II****MAS 619 Topics in Mathematical Analysis III (10 ECTS)**

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)

Elements of matrix analysis, vector and matrix norms. Factorisation and least - squares methods. Stability. Direct and iterative methods for the solution of linear systems. Methods for calculating eigenvectors and eigenvalues.

MAS 622 Algebraic Coding Theory (10 ECTS)

Finite fields. Linear codes, syndrome decoding. Cyclic codes. BCH codes and Reed - Solomon codes. MDS codes. Permutation decoding.

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)

Rings and Ideals. Modules. Localisation of rings and modules. Primary decomposition. Integral extensions of rings. Noetherian and Artinian rings. Completion of a ring. Dimension.

MAS 625 Group Theory (10 ECTS)

Examples of groups, subgroups. Generators and relations. Direct and semi-direct products. Group actions. Sylow theorems and p -groups. Composition series and Jordan-Hölder theorem. Solvable and nilpotent groups.

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)

Representations. FG-modules, FG-submodules and FG-homomorphisms. Maschke's Theorem and Schur's Lemma. Irreducible module. The group algebra, the centre of the group algebra. Characters, relation between characters and representations. Character tables. Frobenius reciprocity theorem.

MAS 628 Group Representation Theory II (10 ECTS)

Semi simple rings, construction of irreducible R - modules. Splitting fields. Clifford's theorem. Mackey Decomposition

Theorem. Representations and characters of finite groups.
Representations of compact groups.

MAS 629 Topics in Algebra I (10 ECTS)

Topics from algebra.

MAS 630 Algebraic Geometry (10 ECTS)

Algebraic sets and the Hilbert-Nullstellensatz theorem. Affine, projective and quasi-projective varieties, morphisms, products. Local properties. Smooth and singular points. Tangent space. Dimension. Divisors on algebraic curves, Riemann-Roch theorem. Bezout's theorem. Elliptic curves. The group structure of an elliptic curve.

MAS 631 Differential Topology (10 ECTS)

Differentiable manifolds. Tangent space. Partition of unity. Regular points. Sard's theorem. Vector fields and flows. Frobenius Theorem. Differential forms. Stokes' Theorem. De Rham's Theorem.

MAS 632 Riemannian Geometry (10 ECTS)

Riemannian manifolds. Geodesics, exponential map, normal coordinates. Gauss lemma. Theorem of Hopf-Rinow. Curvature. Jacobi fields. Theorems of Bonnet-Myers, Synge-Weinstein and Hadamard-Cartan. Homogeneous and symmetric spaces.

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)

Differentiable manifolds. Tangent spaces and vector fields. Lie Groups. Exponential function. Homogeneous spaces. The Campbell-Hausdorff formula. Ado's Theorem. Lie algebras. Ideals and homomorphisms. Solvable and nilpotent Lie algebras. Semisimple Lie algebras. Root systems. Compact Lie groups.

MAS 636 Algebraic Topology II (10 ECTS)

Obstruction theory. Bundles and K-theory. Bordism. Spectral sequences. Characteristic classes.

MAS 637 Spectral Geometry (10 ECTS)

Laplace operator. Minimax principle. Isoperimetric inequalities. Heat kernel.

MAS 638 Spin Geometry (10 ECTS)

Clifford algebras. Spin groups and representations. Spin structures. Spin connection. Spin manifolds. Dirac operator. Bochner formula. Lichnerowicz's Theorem.

MAS 640 Topics in Geometry I

MAS 641 Topics in Geometry II (10 ECTS)

Topics from Differential Geometry, Algebraic Geometry and Algebraic Topology. Depends on the special interests of the staff member teaching it.

MAS 650 Mathematical Statistics (10 ECTS)

Univariate and multivariate random variables, distribution function, joint and conditional distribution, independence, moments. Special parametric families of distributions. Estimation. Methods of finding estimators. Properties of estimators, sufficiency, unbiasedness, consistency. Comparison of estimators. Confidence Intervals. Hypothesis testing. Simple and composite hypothesis, power function. Methods of constructing tests. Properties of tests, unbiasedness, consistency. Comparison of tests. Hypothesis testing and confidence intervals.

MAS 653 Generalised Linear Models (10 ECTS)

Linear and multiple regression, residuals and model selection procedures, diagnostics. Analysis of variance and nonlinear regression. Design of experiments, completely randomized designs, designs with two or more factors with interactions. Block designs, split plot and nested designs.

MAS 654 Nonparametric Statistics (10 ECTS)

Order statistics and their distributions. Tolerance regions. Rank and sign tests for one and two populations. Goodness of fit tests (Kolmogorov-Smirnov, Lilliefors, Shapiro-Wilks), Siegel-Tukey and Kruskal-Wallis tests. Normal and Savage scores. Fisher exact test for 2x2 contingency tables. Mantel-Haenszel test for contingency tables. Kaplan-Meier estimator of the survival function. Jonckheere-Terpstra and page test for ordered alternatives. Nonparametric correlation coefficients (Spearman, Kendall) and measures of agreement.

MAS 655 Survey Sampling (10 ECTS)

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. Special techniques for human populations in cases of stigmatizing characteristics.

MAS 656 Time Series Analysis (10 ECTS)

Stochastic processes, weak and strong stationarity. Trend and seasonal behaviour of time series. Sample autocorrelation function and sample partial autocorrelation function. Prediction. Parametric families of stochastic processes. ARMA, ARIMA and SARIMA models. Properties, estimation and examples. ARCH and GARCH processes, properties of estimators and examples.

MAS 657 Analysis of Discrete Data (10 ECTS)

Types of discrete data. Contingency tables and inference (testing independence and homogeneity). Measures of association. Loglinear models for contingency tables. Logit models. Distribution and Inference for categorical data. Asymptotic theory of goodness-of-fit χ^2 tests. Logistic regression.

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)

Random vectors, measures of centre and variation in multivariate moments. Multivariate normal distribution. Tests for normality. Estimation of the mean vector and the variance analysis, independence, multivariate-covariance matrix.

Wishart and Hotelling distributions. Statistical inference. Union – Intersection Test. Confidence regions. Multivariate analysis of variance and multivariate regression analysis. Least squares method and Wilks distribution. Analysis of covariance. Principal components, Factor analysis, Discriminant analysis, Cluster analysis.

MAS 660 Probability Theory (10 ECTS)

Measure spaces and σ -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)

Numerical linear algebra: Multiple regression, Cholesky decomposition, diagnostics and collinearity, principal components and eigenvalue problems. Nonlinear statistical methods: Maximum likelihood estimation, Newton-Raphson and related methods, multivariate data and the Newton Raphson method, optimisation techniques (unconditional and under constraints) EM algorithm. Numerical Integration and Approximation: Newton-Coates method, spline interpolation, Monte Carlo integration, general approximation methods. Probability Density Estimation: Histogram, linear and non linear smoothing, splines. Bootstrap.

MAS 666 Biostatistics (10 ECTS)

Definition of epidemiology and types of epidemiological studies. Descriptive statistics: graphical and numerical methods for medical data. Measures of association and correlation. Measures of risk and rate. Inference for mean, proportions indicators and coefficients of correlation. Nonparametric tests (Fisher's exact test, McNemar test, etc.). Diagnostic methods, sensitivity and specificity. Numerical methods in clinical epidemiology, ROC curves. Meta - analysis. Censored data. Survival and hazard functions. Nonparametric estimation (Kaplan – Meier and Nelson – Aalen estimators). Methods of comparison of two survival functions (Log – rank, Breslow Peto – Peto tests). Semiparametric estimation (Cox proportional hazards model, partial likelihood). Parametric estimation (exponential, Weibull, log – logistic and lognormal models, proportional odds model). Frailty models.

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)

One-step methods and multistep methods for the numerical solution of initial value problems for first order systems of ordinary differential equations. Runge – Kutta methods. Finite difference methods for the numerical solution of two-point boundary value problems.

MAS 672 Numerical Solution of Partial Differential Equations (10 ECTS)

Finite difference approximations. Numerical solution of the heat equation. Convergence and stability. ADI methods. Numerical solution of the wave equation. The Courant – Friedrichs – Lewy condition. Numerical solution of the Poisson and biharmonic equations.

MAS 673 Finite Element Methods Sobolev spaces (10 ECTS)

Sobolev spaces. Ritz-Galerkin approximation. Variational formulation of elliptic boundary value problems. Finite element spaces. Polynomial approximation in Sobolev spaces. N-dimensional variational problems. Multigrid finite element methods.

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)

Lie Groups and Lie Algebras. Equations of motion (Newton, Lagrange). Poisson structures, Integrable systems, Lax pairs, bi – Hamiltonian systems. Symmetries of differential equations, Noether Theorem.

MAS 683 Fluid Dynamics (10 ECTS)

Equations of motion. Steady or transient viscous flows. Stokes flows. Non-Newtonian and viscoelastic flows.

MAS 684 Scientific Computation with MATLAB (10 ECTS)

Introduction to MATLAB. Data and function approximation. Linear Systems. Eigenvalues and Eigenvectors. Ordinary differential equations. Numerical methods for boundary value problems.

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.

RESEARCH INTERESTS OF THE ACADEMIC STAFF

Andreas Anastasiou, Assistant Professor

Asymptotic statistics; Distributional approximations; Change-point detection in time series.

Sergios Agapiou, Associate Professor

Bayesian nonparametric statistics; Inverse Problems.

Anastasia Baxevasi, Associate Professor

Random spatio-temporal fields; Non-Gaussian stochastic models; Stochastic processes; Environmental statistics.

Nelia Charalambous, Professor

Global analysis; Mathematical physics.

Tasos Christofides, Professor

U-Statistics; Probability inequalities; Sampling; Stochastic orders.

Cleopatra Christoforou, Professor

Partial differential equations; Applied analysis; Continuum physics and hyperbolic systems of conservation and balanced laws; Zero viscosity Method and shock waves.

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, Associate 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.

Christos Pallikaros, Associate Professor

Group representation theory; Representations of Hecke algebras.

Evangelia Samiou, Associate Professor

Differential geometry; Riemannian geometry.

Theofanis Sapatinas, Professor

Functional time series analysis; Non-parametric statistical inference.

Yiorgos-Socratis Smyrlis, Professor

Partial differential equations; Functional analysis; Numerical analysis; Fluid dynamics.

Christodoulos Sophocleous, Professor

Mathematical physics; Non-linear optics; Non-linear partial differential equations.

Xenia Miscouridou, Lecturer

Bayesian nonparametrics; Network modelling; Stochastic processes; Statistical machine learning; Deep generative models.

Nikos Stylianopoulos, Professor

Orthogonal polynomials; Approximation in the complex plane; Numerical methods in complex analysis; Conformal and quasiconformal mapping; Iterative methods for linear systems; Moment problems; Potential theory.

Nicolaos Tziolas, Professor

Algebraic geometry.

Alekos Vidras, Professor

Complex analysis (Multidimensional Residues, Mean Periodicity); Carleman formulas; Bohr phenomena.

Christos Xenophontos, Professor

Numerical analysis; Computational mathematics; Numerical solution of partial differential equations; Finite element methods.

Nikos Savva, Assistant Professor

Fluid Mechanics and systems with interfaces; Asymptotic methods in applied mathematics; Scientific computing;; Applications of machine learning in physical systems.

Christoforos Neofytidis, Assistant Professor

Topology; Geometry; Algebra; Dynamics.

Constat Details**DEPARTMENT SECRETARIAT**

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Department of Physics

www.ucy.ac.cy/phy/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 several graduate courses with a minimum of 120 ECTS.

Master's degree students must complete 6 courses (60 ECTS) consisting of 3 (30 ECTS) to 5 (50 ECTS) of the 5 mandatory core courses and 1 (10 ECTS) to 3 (30 ECTS) of elective courses, related to the field in which they will specialize. The remaining 60 ECTS are completed by writing a thesis.

Doctoral degree students must complete the 5 mandatory core courses (50 ECTS) and at least another 40 ECTS in specialization courses, of which at least 30 ECTS in courses related to their field and 10 ECTS in specialization course(s) outside their field. Candidates for a Ph.D. must also pass a qualifying examination in the broader field of their PhD specialization. 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

	ECTS
Core Courses for Master and Ph.D.	
PHY 625 Quantum Mechanics I	10
PHY 626 Quantum Mechanics II	10
PHY 631 Electromagnetism	10
PHY 641 Statistical Physics	10
PHY 811 Experimental Physics	10
Master Courses	
Specialisation Course	10
PHY 860 Master's Thesis I	10
PHY 861 Master's Thesis II	20
PHY 862 Master's Thesis III	30
Ph.D. Courses	
Three Specialisation Courses	30
One Course outside the area of specialisation	10
PHY 870 Research Stage I	30
PHY 871 Research Stage II	30
PHY 872 Research Stage III	30
PHY 873 Research Stage IV	30
PHY 880 Writing Stage I	15
PHY 881 Writing Stage II	15

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-Anandan phase).

PHY 626 Quantum Mechanics II (10 ECTS)

- Symmetries: Definition, Types of symmetries, Physical consequences. Symmetries of classical and quantum mechanics. Lorentz group, Unitary Groups. Noether's Theorem.
- Relativistic quantum mechanics: Klein-Gordon, Dirac equation. Relativistic spin. Relativistic study of hydrogen. Elements of second quantisation.
- Classical fields: Action of electromagnetism. Gauge symmetry. Non-Abelian fields; Application to the standard model.
- Scattering theory: Asymptotic states. Born approximation. Optical theorem. Partial waves. Analytic properties of scattering amplitudes. Resonances.
- Topics in perturbation theory: Time-dependent perturbations. Radiation emission, Absorption. Raman scattering.
- Functional integrals: Heisenberg - Schrödinger pictures. The Propagator as a sum over paths.
- Many-body systems: atoms. Computational methods. Hartree-Fock approximation.

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-Wiechert 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 Schrödinger 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 811 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 photoexcitation 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)

The Dirac equation. Compatibility with special relativity. Relation to the Pauli equation. Solutions of the free equation and their interpretation. The Klein-Gordon equation for a scalar field and its quantisation. Quantisation of fermions. Quantisation of photons. Discrete symmetries C, P, T. The relation between spin and statistics. Interacting fields and their quantisation. The S matrix. Relativistic Kinematics. Phase space. Covariant perturbation theory. Calculation of cross sections and decay amplitudes in quantum electrodynamics at tree level. Calculation of weak decays. Comparison of Fermi's weak Hamiltonian to the standard model.

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)

- Radiative corrections in quantum electrodynamics: Introduction to renormalisation, Magnetic moment of the electron, ultraviolet and infrared divergences in loop diagrams, renormalisation of the fermionic field and the electric charge, LSZ reduction, The Optical Theorem, The Ward Identity.
- 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.
- Non-Abelian Gauge theories: Gauge symmetries, Yang-Mills theory, Feynman rules, Faddeev-Popov quantisation and ghosts, BRST transformation, Asymptotic Freedom.
- The standard model: Spontaneous symmetry breaking and Goldstone bosons, Higgs mechanism and mass generation, CKM Mass Matrix, CP violation. One loop study of the decays of the Higgs particle and the top quark.

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)

The path integral approach to quantisation. Euclidean quantum field theory. Quantum fields on a lattice. Continuum limit and critical behaviour. The free scalar field on the lattice. Fermions on the lattice. Wilson fermions, Kogut-Susskind staggered fermions, Nielsen-Ninomiya Theorem. Abelian Gauge fields on the lattice and compact QED. Non-Abelian Gauge Fields on the Lattice, Compact QCD. Strong coupling expansion. Hopping parameter expansion. Quark-antiquark potential. Glueball spectrum. Phase structure of lattice Gauge theory. Weak coupling expansion in scalar theories and in QCD. The continuum limit of lattice QCD. The beta function and asymptotic freedom. Monte Carlo methods. Numerical simulation and Markov processes. Algorithms: metropolis, heatbath, overrelaxation. Simulation of fermions: Hybrid Monte Carlo, Multiboson algorithms. Deconfinement and Chiral Phase Transition. High Temperature Phase of QCD.

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)

Fock space - Second quantisation. Many-particle Green's functions - Matsubara formalism. Linear response theories. Coulomb systems - Dielectric formulation - Screening. Phase diagram of interacting electrons. Functional integrals and Hubbard-Stratonovich transformation: Application to plasmons and superconductivity (Nambu-Gorkov Formalism).

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 magnetoelectric 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 Hartree-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 673 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, parton structure functions and hadronisation in p-p collisions, emerging phenomena from heavy ion collisions, new observations in the heavy quark sector (top and b), rare 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

RESEARCH INTERESTS OF THE ACADEMIC STAFF

Constantia Alexandrou, Professor

Lattice QCD; Variational methods in field theories; Many-body systems; Stochastic techniques for Many-Fermion Systems.

George Archontis, Associate Professor

Statistical mechanics of biopolymers (Proteins and Nucleic Acids) in solution: Determination of equilibrium and dynamical properties by atomic-detail simulations; Free-energy calculations; Structure and thermodynamic stability of biomolecular complexes; Implicit solvent models; Liquid state theory.

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

Experimental condensed matter physics; Optical properties/optical spectroscopy of semiconductors; Photophysics of nanomaterials.

Konstantinos Mouloupoulos, 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

Ultrafast phenomena in semiconductors; Optoelectronics and nanotechnology; Semiconductor devices; Laser physics; Non-linear phenomena; Physics of quantum information; Fiber optics and fiber Bragg gratings.

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).

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 superconductors, 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 condensed matter systems with quantum disorder.

Theodosis Trypiniotis, Assistant Professor

Experimental condensed matter physics. Spintronics in semi-conductor, metallic and nanomagnetic structures. Ultrafast dynamics in magnetic nanostructures. Molecular beam epitaxy (MBE). Nanoparticles for biochemical and energy applications.

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

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Faculty of
SOCIAL SCIENCES
AND EDUCATION



A photograph of a young man with dark, wavy hair and a beard, wearing blue headphones and a grey t-shirt. He is sitting at a white desk in a library or study hall, writing on a tablet with a pen. The background is blurred, showing other students and library shelves. The image is framed by a large orange circle on the left and a yellow circle at the top.

DEPARTMENTS

- EDUCATION
- LAW
- PSYCHOLOGY
- SOCIAL AND
POLITICAL SCIENCES



Department of Education

www.ucy.ac.cy/edu/en

The Department of Education currently offers nine conventional postgraduate programmes and one distance learning programme, 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)
- Distance Learning in Creative Learning and the Arts in Childhood (Master)

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

For the conventional programmes, all courses are credited with 12 ECTS each and students need to complete a total of 90 ECTS for each programme.

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

The Seminar includes lectures which focus on a specific topic of the discipline. Each seminar is credited with 6 ECTS.

Students can register for Masters' 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 Masters' Thesis continuation (1 ECTS), until they complete their thesis and defend it to the three-member Committee.

For the distance learning Master programme, all courses are credited with 15 ECTS each and students need to complete 90 ECTS in total. Students can register for Masters' Thesis and be exempted from two elective courses.

Requirements for the Ph.D. Degree

All Ph.D. programmes require students to successfully complete 273 ECTS, distributed as follows:

	ECTS
5 Courses x 12 ECTS	60
Research Stages (8 stages x 15 ECTS)	120
Comprehensive Examination	14
Dissertation (4 stages x 11.5 ECTS)	46
EDU 750 Submission of Research Proposal	0
Grand Total	240
<i>Note: All work beginning with Dissertation III onwards receives 0 ECTS.</i>	

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/she is required to complete 3-5 courses (36-60 ECTS), following recommendation of both 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.

Application for Admission

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 ensure 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.

Structure of the Master's Programme

The Programme consists of 90 ECTS, which are distributed as follows: 4 compulsory courses x 12 ETS (48 ECTS), 1 common core course (research) (12 ECTS), 2 elective course-specialisation (24 ECTS) and 1 Seminar (6 ECTS) = Total 90 ECTS.

	ECTS
Compulsory Courses	48
EDU 620 Introduction to Educational Administration*	12
EDU 623 Observation and Evaluation of Teaching and Personnel	12
EDU 631 School Effectiveness and School Improvement	12
EDU 645 Educational Policy	12
<i>* Note: EDU 620 is prerequisite for all courses</i>	
Elective Courses-Specialisation	24
<u>Two of the following:</u>	
EDU 603 Comparative Education	12
EDU 617 Educational Governance and the Management of Change	12
EDU 640 Principles and Processes of Curriculum Development and Evaluation	12
EDU 533 Education for Life. Lifelong Education	12
EDU 550 Education and Social Exclusion	12
EDU 570 Research and Theory of Sport Pedagogy	12
EDU 571 Instructional and Curriculum Models in Physical Education	12
EDU 601 Philosophical Dimensions of Education	12
EDU 689 Independent Study	12
EDU 798 Master's Thesis I	12
EDU 799 Master's Thesis II	12
Common Core Courses-Research	12
<u>One of the following:</u>	
EDU 682 Qualitative Research in Education	12
EDU 683 Educational Statistics with Statistical Packages Applications	12
Seminar	6
EDU 681 Seminar in Educational Administration and Evaluation	6
Grand Total	90
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's 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

	ECTS
3 Elective Courses (from the following)	36
EDU 603 Comparative Education	
EDU 617 Educational Governance and the Management of Change	12
EDU 623 Observation and Evaluation of Teaching and Personnel	12
EDU 631 School Effectiveness and School Improvement	
EDU 640 Principles and Processes of Curriculum Development and Evaluation	12
EDU 645 Educational Policy	
Compulsory Course	12
EDU 787 Academic Writing	12
1 Common Core Course-Research	12
EDU 780 Using Basic and Advanced Multilevel Modelling in Educational Research	12
EDU 788 Advanced Research Methods	
Comprehensive Examination: EDU 820	14
Research Stage I (A and B): EDU 891A and EDU 891B	30
Research Stage II (A and B): EDU 892A and EDU 892B	30
Research Stage III (A and B): EDU 893A and EDU 893B	30
Research Stage IV (A and B): EDU 894A and EDU 894B	30
Dissertation I (A and B): EDU 895A and EDU 895B	23
Dissertation II (A and B): EDU 896A and EDU 896B	23
EDU 750 Submission of Research Proposal	0
Grand Total	240

Comprehensive Examination (CE)

The main goal of the CE is to evaluate the abilities of Doctoral candidates to work in a holistic way, based on 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.
- 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.

Contact Details

PROGRAMME COORDINATORS

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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.

Structure of the Master's Programme

The Programme consists of 90 ECTS, which are distributed as follows: 4 Compulsory Courses X 12 ECTS (48 ECTS) + 1 Common Core Course X 12 ECTS (12 ECTS) + 2 Elective Courses X 12 ECTS (24 ECTS) + 1 Seminar X 6 ECTS = Total of 90 ECTS

Requirements for the Master's Programme

	ECTS
Compulsory Courses	48
EDU 603 Comparative Education	12
EDU 640 Principles and Processes of Curriculum Development and Evaluation	12
EDU 654 History of Education	12
EDU 693 Contemporary Trends in the Study of Teaching	12
Elective Courses -Educational Research	12
<u>Choose one course:</u>	
EDU 520 Discourse Analysis	12
EDU 682 Qualitative Research in Education	12
EDU 683 Educational Statistics with Statistical Packages Applications	12
Seminar	6
EDU 687 Seminar "Curriculum, Teaching and Comparative Education"	6
Elective Course	24
<u>Choose one course:</u>	
EDU 583 Design and Development of Dynamic Digital Learning Environments	12
EDU 597 Educational Governance and Development	12
EDU 598 Postcolonial Theory and the Curriculum	12
EDU 607 Sociology of Curriculum	12
EDU 620 Introduction to Educational Administration	12
EDU 641 Gender and Education	12
EDU 646 Globalization, Cosmopolitanism and Education	12
EDU 689 Independent Study	12
EDU 798 Master's Thesis I	12*
EDU 799 Master's Thesis II	12*
Grand Total	90
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's 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 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 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 "problematics" 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 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

	ECTS
4 Specialization Courses	48
EDU 597 Educational Governance and Development	12
EDU 603 Comparative Education	12
EDU 607 Sociology of Curriculum	12
EDU 640 Principles and Processes of Curriculum Development and Evaluation	12
EDU 654 History of Education	12
EDU 689 Independent Study	12
EDU 693 Contemporary Trends in the Study of Teaching	12
1 Common Core Course-Research Course	12
EDU 520 Discourse Analysis 12	
EDU 682 Qualitative Research in Education	12
EDU 683 Educational Statistics with Statistical Packages Applications	12
EDU 780 Using Basic and Advanced Multilevel Modelling in Educational Research	12
EDU 788 Advanced Research Methods	12
Comprehensive Examination	14
Research Stages	120
Research Stages I (A and B)	30
Research Stages II (A and B)	30
Research Stages III (A and B)	30
Research Stages IV (A and B)	30
Dissertation Stages	46
Dissertation Stage I (A and B)	23
Dissertation Stage II (A and B)	23
EDU 750 Submission of Research Proposal	0
Grand Total	240
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.	

Comprehensive Examination (CE)

The CE evaluates the ability of candidates to synthesize theories and assumptions in a theoretical framework, which enables them to work on problem solving situations and reflect creatively on curriculum issues under consideration.

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.

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".

(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.

Contact Details

PROGRAMME COORDINATORS

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PEDAGOGICAL SCIENCES

Objectives of the Master's Programme

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 (this specialization is being postponed)

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 years curricula, evaluating and reforming educational policy, critically analyzing 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.

Structure of the Master's Programme

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.

- One course in Educational Research (12 ECTS).
- Courses from one of the following areas: Preschool Education (3 courses/36 ECTS), Physical Education (4 courses/48 ECTS), Cultural Dimensions of Education (3 courses/36 ECTS).
- Core Courses according to the direction followed: Preschool Education (3 courses/36 ECTS), Physical Education (2 courses/24 ECTS), Cultural Dimensions of Education (3 courses/36 ECTS).
- One Seminar (6 ECTS).

Programme Structure

	ECTS
Area Courses	36/48
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	36
EDU 561 The Diverse Perspectives of Play	12
EDU 562 Mathematical Thinking in the Early Years: Theoretical and Empirical Approaches	12
EDU 563 Supporting Creativity in Early Childhood Education	12
Sports Pedagogy	48
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 Teaching and Personnel	12
EDU 631 School Effectiveness and School Improvement	12

Multiculturalism, Migration and Decolonial Education 36

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 CoursesArea -**Early Childhood Education 36**Three of 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	Theory and Politics of Multicultural Education	12
EDU 689	Independent Study	12
EDU 693	Contemporary Trends in the Study of Teaching	12
EDU 798	Master's Thesis I	12
EDU 799	Master's Thesis II	12

Area - Sports Pedagogy 24Two from the following:

EDU 533	Education for life. Lifelong Education	12
EDU 561	The Diverse Perspective of Play	12
EDU 572	Current Trends in Sport Pedagogy	12
EDU 574	Analysis of Teaching in Physical Education	12
EDU 603	Comparative Education	12
EDU 637	Theory and Politics of Multicultural Education	12
EDU 689	Independent Study	12
EDU 798	Master's Thesis	12
EDU 799	Master's Thesis	12

Area - Multiculturalism, Migration and Decolonial Education 36Three of the following:

EDU 521	Language, Discourse and Communication	12
EDU 522	Contemporary Approaches to Language Arts and Literacy Education	12
EDU 529	Monolingual, Bilingual, Multilingual Education: Attitudes, Trends and Perspectives	12
EDU 550	Education and Social Exclusion	12
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 646	Globalisation, Cosmopolitanism and Education	12
EDU 563	Supporting Creativity in Early Childhood Education	12
EDU 570	Research and Theory of Sport Pedagogy	12
EDU 689	Independent Study	12
EDU 798	Master's Thesis I	12
EDU 799	Master's Thesis II	12

Educational Research 12One from the following:

EDU 682	Qualitative Research in Education	12
EDU 683	Educational Statistics with Statistical Package Applications	12

Seminar 6One from the following:**Area - Early Childhood Education**

EDU 691	Early Childhood Education Contemporary Issues	6

Area - Sports Pedagogy

EDU 681	Seminar Educational Administration and Evaluation	6

Area - Multiculturalism, Migration and Decolonial Education

EDU 698	Seminar Multiculturalism, Migration and Decolonial Education	6

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's 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 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 on 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 perspectives originating from their own backgrounds, with the required knowledge that is cultivated or provided by the present Programme. 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 with 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 of education. Participants will acquire skills in basic and applied research. They will also develop strategies for evaluating and reforming educational policies, as well as acquire skills for critically analysing recent trends and findings related to early years of 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 be 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 of the programme that the student will choose.

Doctoral Programme Structure

Successful completion of 240 ECTS is required. This includes the following courses:

	ECTS
5 Courses x 12 ECTS	60
Comprehensive Examination	14
Research Stage (8 stages x 15 ECTS)	120
Dissertation (4 stages x 11,50 ECTS)	46
Grand Total	240
<i>Note: All work beginning with Dissertation III and onwards will be credited with 0 ECTS.</i>	

		ECTS			Research Courses	12
Early Childhood Education				<u>One of the following:</u>		
EDU 561	The Diverse Perspectives of Play	12		EDU 520	Discourse Analysis	12
EDU 562	Mathematical Thinking in the Early Years: Theoretical and Empirical Approaches	12		EDU 682	Qualitative Research in Education	12
EDU 563	Supporting Creativity in Early Childhood Education	12		EDU 683	Educational Statistics with Statistical Package Applications	12
<u>One of the following courses:</u>				Religious Education		
EDU 603	Comparative Education	12		Compulsory		
EDU 640	Principles and Processes of Curriculum Development and Evaluation	12		EDU 787	Academic Writing	12
EDU 641	Gender and Education	12		<u>Three of the following:</u>		
EDU 646	Globalisation, Cosmopolitanism and Education	12		EDU 532	Issues of Ethics	12
Research Courses				EDU 533	Education for Life. Lifelong Education	12
<u>One from the following:</u>				EDU 623	Observation and Evaluation of Teaching and Personnel	12
EDU 520	Discourse Analysis	12		EDU 631	School Effectiveness and School Improvement	12
EDU 751	Design of Research Proposals	12		EDU 646	Globalisation, Cosmopolitanism and Education	12
EDU 752	Analysis and Implementation of Research Evidence	12		Research Courses		
EDU 788	Advanced Research Methods	12		<u>One from the following:</u>		
Sports Pedagogy				EDU 682	Qualitative Research in Education	12
Compulsory				EDU 683	Educational Statistics with Statistical Package Applications	12
EDU 787	Academic Writing	12		EDU 780	Using Basic and Advanced Multilevel Modelling in Educational Research	12
<u>Two of the following:</u>				EDU 788	Advanced Research Methods	12
EDU 570	Research and Theory of Sports Pedagogy	12		Theory and Philosophy of Education		
EDU 571	Instructional and Curriculum Models in Physical Education	12		<u>Four of the following:</u>		
EDU 572	Current Issues in Sports Pedagogy	12		EDU 532	Issues of Ethics	12
EDU 574	Analysis of Teaching in Physical Education	12		EDU 550	Education and Social Exclusion	12
EDU 623	Observation and Evaluation of Teaching and Personnel	12		EDU 598	Postcolonial Theory and the Curriculum	12
EDU 631	School Effectiveness and School Improvement	12		EDU 601	Philosophical Dimensions of Education	12
Research Courses			24	EDU 646	Globilisation, Cosmopolitanism and Education	12
<u>Two of the following:</u>				Research Course		
EDU 682	Qualitative Research in Education	12		EDU 682	Qualitative Research in Education	12
EDU 683	Educational Statistics with Statistical Package Applications	12		Sociology of Education Compulsory Courses		
EDU 780	Using Basic and Advanced Multilevel Modelling in Educational Research	12		Compulsory		
EDU 788	Advanced Research Methods	12		EDU 787	Academic Writing	12
Multiculturalism, Migration and Docolonial Education				<u>Three of the following:</u>		
<u>Four of the following:</u>				EDU 550	Education and Social Exclusion	12
EDU 556	Advanced Seminar in the Theory and Philosophy of Education	12		EDU 601	Philosophical Dimensions of Education	12
EDU 597	Education Governance and Development	12		EDU 637	Theory and Politics of Multicultural Education	12
EDU 598	Postcolonial Theory and the Curriculum	12		EDU 641	Education and Gender	12
EDU 637	Theory and Politics of Multicultural Education	12		EDU 646	Globalisation, Cosmopolitanism and Education	12
GRS 776	Queer Theory and Study of Sexuality	12		Research Courses		
				EDU 682	Qualitative Research in Education	12
				EDU 683	Educational Statistics with Statistical Package Applications	12

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MATHEMATICS EDUCATION

Objectives of the Programme

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.

Structure of the Master's Programme

Students must complete courses totaling 90 ECTS, as shown below. The courses are divided into three categories: a) Compulsory (60 ECTS), b) Educational Research Courses (12 ECTS), c) Elective Courses (12 ECTS) and d) Seminar (6 ECTS).

	ECTS
Compulsory Courses	60
EDU 504 Quantitative Research in Mathematics Education	6
EDU 505 Qualitative Research in Mathematics Education	6
EDU 673 Curriculum Development for Mathematics and Educational Evaluation	12
EDU 674 Mathematical Problem Solving	12
EDU 676 Contemporary Technology in Mathematics Teaching	12
EDU 680 Theories of Mathematical Understanding	12
Elective Courses	12
One of the following:	
EDU 583 Design and Development of Dynamic Digital Learning Environments	12
EDU 662 New Technologies and Learning in the Natural Sciences	12
EDU 667 Theory and Research in Geometry Learning and Teaching	12
EDU 670 Theory and Research in Algebra and Calculus Learning and Teaching	12
Educational Research Courses	12
EDU 682 Qualitative Research in Education or	12
EDU 683 Educational Statistics with Statistical Packages Applications	12
Thesis	24
EDU 798 Master's Thesis I	12
EDU 799 Master's Thesis II	12
Seminar	6
EDU 685 Seminar in Mathematics Education	6
Grand Total	90

Note: Students who register for Master 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

Students must complete courses totaling 240 ECTS, as shown below. The courses are divided into three categories: a) Compulsory (60 ECTS), b) Comprehensive Examination (14 ECTS), c) Research Stages (120 ECTS) and d) Dissertation Stages (46 ECTS).

	ECTS
Compulsory Courses	
EDU 787 Academic Writing	12
Specialisation Courses (choose three courses)	36
EDU 673 Curriculum Development for Mathematics and Educational Evaluation	12
EDU 674 Mathematical Problem Solving	12
EDU 675 Recent Trends in Mathematics Education	12
EDU 676 Contemporary Technology in Mathematics Teaching	12
EDU 680 Theories of Mathematical Understanding	12
Research Courses (choose one course)	12
EDU 682 Qualitative Research in Education	12
EDU 683 Educational Statistics with Statistical Package Applications	12
EDU 780 Using Basic and Advanced Multilevel Modelling in Educational Research	12
EDU 788 Advanced Research Methods	12
Comprehensive Examination	14
Research Stage I	30
Research Stage II	30
Research Stage III	30
Research Stage IV	30
Dissertation Stage I	23
Dissertation Stage II	23
EDU 750 Submission of Research Proposal	0
Grand Total	240

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LEARNING IN NATURAL SCIENCES AND ENVIRONMENT

Purpose and Objectives of the Programme

A) Specialisation "Learning in Natural Sciences"

The development of Science Education as an autonomous scientific area has led to the need to improve 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.

Intended Learning Outcome

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.

Structure of the Master’s Programme

Students must successfully complete 90 ECTS, which are distributed as follows: 2 Elective Core Courses (24 ECTS) + 1 Research Course (12 ECTS) + 4 Elective Specialisation Courses (48 ECTS) + 1 Seminar (6 ECTS).

	ECTS
2 Elective Core Courses	24
EDU 640 Principles and Processes of Curriculum Development and Evaluation	
EDU 652 Constructivism and Inquiry Learning	12
EDU 660 Design, Development and Evaluation of Curricula in Science Education	
EDU 693 Educational Statistics with Statistical Packages Applications <i>(concerns only the specialization of Learning in Natural Sciences)</i>	12
Methodology of Educational Research	12
<u>One of the following:</u>	
EDU 682 Qualitative Research Education	
EDU 683 Educational Statistics with Statistical Packages Applications	12
Elective Specialisation Courses	48 or 24
<i>(Students must select one area)</i>	
Learning in Natural Sciences	12
<u>Four of the following:</u>	
EDU 580 Theoretical Foundations of Instructional Technology: Problems and Prospects	12
EDU 583 Design and Development of Dynamic Digital Learning Environments	12
EDU 651 Nature of Science and Science Teaching	12
EDU 653 Cognitive Constraints in Learning Natural Sciences	12
EDU 662 New Technologies and Learning in the Natural Sciences or	
EDU 663 Modern Trends in Teaching Natural Sciences	12
EDU 664 Integrated Curricula in Natural Sciences	12
EDU 689 Independent Study (after consulting the academic advisor)	12
Environmental and Sustainability Education	
<u>Four of the following:</u>	
EDU 641 Gender and Education	12
EDU 646 Globalisation, Cosmopolitanism and Education	12
EDU 655 Fundamentals of Environmental and Sustainability Education	12
EDU 656 Teaching and Learning in Environmental and Sustainability Education	12

EDU 657	Design and Implementation of Environmental and Sustainability Education Curricula and Project	12
EDU 658	Formal and Non-formal Learning Environments	12
EDU 659	Research in Environmental and Sustainability Education	12
EDU 689	Independent Study (after consulting the academic advisor)	12
Master's Thesis		
EDU 800	Master's Thesis I	12
EDU 801	Master's Thesis II	12
Seminar		6
EDU 684	Seminar: Learning in Natural Sciences and Environment	6
Grand Total		90

Notes:

- For the completion of the Master's thesis, students can be exempted from two elective specialisation courses.
- Students register for the course EDU 600 (1 ECTS), until they complete their Thesis and defense it before the three-member Committee.
- 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.

	ECTS
One of the following:	
EDU 682	Qualitative Research in Education 12
EDU 751	Design of Research Proposals 12
EDU 780	Using Basic and Advanced Multilevel Modeling in Educational Research 12
One of the following:	
EDU 683	Educational Statistics with Statistical Packages Applications 12
EDU 752	Analysis and Implementation of Research Evidence 12
EDU 788	Advanced Research Methods 12
One of the following:	
EDU 652	Constructivism and Inquiry Learning 12
EDU 662	New Technologies and Learning in the Natural Sciences or 12
EDU 693	Contemporary Trends in the Study of Teaching or 12
EDU 753	Models of Teaching and Didactical Recontextualization of the Content of Natural Sciences 12
Two of the following Elective Courses:	
EDU 580	Theoretical Foundations of Instructional Technology: Problems and Prospects 12
EDU 583	Design and Development of Dynamic Digital Learning Environments 12
EDU 653	Cognitive Constrains in Learning Natural Sciences 12
EDU 655	Fundamentals of Environmental and Sustainability Education 12
EDU 656	Teaching and Learning in Environmental Sustainability Education 12
EDU 657	Design and Implementation of Environmental and Sustainability Education Curricula and Project 12
EDU 658	Formal and Non-Formal Learning Environments 12
EDU 660	Design, Development and Evaluation of Curricula in Science Education 12
EDU 662	New Technologies and Learning in the Natural Sciences 12
EDU 663	Modern Trends in Teaching Natural Sciences 12

EDU 664 Integrated Curricula in Natural Sciences	12
EDU 689 Independent Study	12
Comprehensive Examination	14
Four Research Stages	120
Research Stage I (A and B)	30
Research Stage II (A and B)	30
Research Stage III (A and B)	30
Research Stage IV (A and B)	30
Two Dissertation Stages	46
Dissertation Stage I (A and B)	23
Dissertation Stage II (A and B)	23
<i>All work which begins with Dissertation Stage III and onwards is credited with 0 ECTS</i>	
Grand Total	240

Contact Details

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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.

Structure of the Master's Programme

7 Courses x 12 ECTS (84 ECTS) + 1 Seminar x 6 ECTS = 90 ECTS in total.

	ECTS
Compulsory Courses	48
EDU 542 Special and Inclusive Education in Cyprus	12
EDU 545 Disability in Society and School	12
EDU 546 Differentiated Instruction in the Inclusive Classroom	12
EDU 639 Inclusive Education: The New Face of Special Education	12
Research Course	12
EDU 520 Discourse Analysis	12
EDU 682 Qualitative Research in Education	12
EDU 683 Educational Statistics with Statistical Package Applications	12

Elective Core Courses	24
<u>Two of the following:</u>	
EDU 522 Contemporary Approaches to Language Arts and Literacy Education	12
EDU 529 Monolingual, Bilingual and Multilingual Education: Attitudes, Trends and Perspectives	12
EDU 550 Education and Social Exclusion	12
EDU 557 Play and Creativity	15
EDU 563 Supporting Creativity in Early Childhood Education	12
EDU 571 Instructional and Curriculum Models in Physical Education	12
EDU 603 Comparative Education	12
EDU 646 Globalization, Cosmopolitanism and Education	12
EDU 689 Independent Study	12
Master's Thesis	
EDU 798 Master's Thesis I	12
EDU 799 Master's Thesis II	12
Seminar	
EDU 688 Seminar: Current Trends in Special and Inclusive Education	6
Grand Total	90

Notes:

- Students can register for Master's Thesis and be exempted from two Elective Area courses and then in the following semesters register Master Thesis continuation (1 ECTS) until they complete their Thesis and defense it to the three-member Committee.
- Students can register for the Independent Study course upon the academic advisor's approval. 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

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.
- Be acquainted with a range of qualitative and quantitative research methods, as well as 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

Structure of the Doctoral Programme

To be awarded a Ph.D. in Special and Inclusive Education, students must have completed the following requirements:

	ECTS
Compulsory Courses	48
EDU 542 Special and Inclusive Education in Cyprus	12
EDU 545 Disability in Society and School	12
EDU 546 Differentiated Instructions in the Inclusive Classroom	12
EDU 639 Inclusive Education: The New Face of Special Education	12
Research Courses	12
<u>One from the following:</u>	
EDU 520 Discourse Analysis	12
EDU 682 Qualitative Research in Education	12
EDU 683 Educational Statistics with Statistical Packages Applications	12
EDU 788 Advanced Research Methods	12
Comprehensive Examination	14
Four Research Stages	120
Research Stage I (A and B)	30
Research Stage II (A and B)	30
Research Stage III (A and B)	30
Research State IV (A and B)	30
Two Dissertation Stages	46
Dissertation Stage I (A and B)	23
Dissertation Stage II (A and B)	23
Grand Total	240

Contact Details

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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.

Structure of the Master's Programme

Completion of the Programme requires 90 ECTS. Students may take one of the following options: 7 Courses X 12 ECTS (84 ECTS) and 1 Seminar (6 ECTS).

Requirements of the Master's Programme

	ECTS
Compulsory Courses	24
EDU 521 Language, Discourse and Communication	12
EDU 522 Contemporary Approaches to Language Arts and Literacy Education	12
Compulsory Methodology of Educational Research	12
<u>One of the following:</u>	
EDU 682 Qualitative Research in Education or	12
EDU 683 Educational Statistics with Statistical Packages Applications	12
Elective Specialization Courses	
Core/Content	
<u>Two of the following:</u>	
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
Elective Courses from other Programmes of Study	24
<u>Two of the following:</u>	
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
Master Thesis	24
Master's Thesis I	12
Master's Thesis II	12
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 courses from other programs and then continue with the registration for Master's Thesis Continuation (1 ECTS), until they complete their thesis and defence 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. It also offers 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 an international programme of study relevant to the aims and context of the Ph.D. programme.
- 2) Successful completion of the following

	ECTS
5 Courses X 12 ECTS	60
Comprehensive Examinations	14
Research Stages (4 X 30 ECTS)	120
Dissertation Stage Ia, Ib 1 X 11,5 ECTS	23
Dissertation Stage IIa, IIb X 11,5 ECTS	23
Grand Total	240

	ECTS
Compulsory Core Courses	
EDU 521 Language, Discourse and Communication	12
EDU 522 Contemporary Approaches to Language Arts and Literacy Education	12
<u>Choose one of the following:</u>	
EDU 520 Discourse Analysis	12
EDU 788 Advanced Research Methods	12
<u>Choose two of the following:</u>	
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
Comprehensive Examination	14
Four Research Stages	120
Research Stage I (A and B)	30
Research Stage II (A and B)	30
Research Stage III (A and B)	30
Research Stage IV (A and B)	30
Two Dissertation Stage	46
Dissertation Stage I (A and B)	23
Dissertation Stage II (A and B)	23
<i>All Work beginning with Dissertation Stage III onwards, receives 0 ECTS</i>	
Grand Total	240

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.

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.

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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

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.

Structure of the Master's Programme

	ECTS
Compulsory Specialisation Courses	48
EDU 580 Theoretical Foundations of Instructional Technology: Problems and Prospects	12
EDU 581 Research Paradigms in Instructional Technology: Research Design and Data Analysis	12
EDU 583 Design and Development of Dynamic Digital Learning Environments	12
EDU 683 Educational Statistics with Statistical Package Applications	12
Elective Courses	24
<u>Choose two of the following:</u>	
EDU 524 Multiliteracies and Literacies in the Digital Age	12

EDU 601 Philosophical Dimensions of Education	12
EDU 631 School Effectiveness and School Improvement	12
EDU 640 Principles and Processes of Curriculum Development and Evaluation	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
EDU 798 Master's Thesis I	12*
EDU 799 Master's Thesis II	12*
Seminar	6
EDU 692 Seminar in Instructional Technology	6
Grand Total	90

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.

Structure of the Doctoral Programme

	ECTS
Compulsory Specialisation Courses	36
EDU 580 Theoretical Foundations of Instructional Technology: Problems and Prospects	12
EDU 581 Research Paradigms in Instructional Technology: Research Design and Data Analysis	12
EDU 582 Preparation of Research Proposals in Instructional Technology	12
Elective Specialisations Courses	12
<u>Choose one of the following:</u>	
EDU 583 Design and Development of Dynamic Digital Learning Environments	12
EDU 643 Application of new Technologies in Curriculum Development	12
Research Courses	12
<u>Choose one of the following:</u>	
EDU 682 Qualitative Research in Education	12
EDU 683 Educational Statistics with Statistical Package Applications	12
Comprehensive Examination	14
Research Stages (8X15)	120
Dissertation Stages (4X15)	46
Grand Total	240
Notes:	
• All courses are credited with 12 ECTS each. • 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 a Ph.D. student will present his/her research proposal, he/she 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.

Structure of the Master's Programme

2 compulsory Courses X 12 ECTS (24 ECTS) + 4 Elective Courses X 12 ECTS (48 ECTS) + 1 Research Course + 1 Seminar X 6 ECTS (6 ECTS) =90 ECTS.

	ECTS
Compulsory Courses	24
GRS 629 Feminist Theory	12
GRS 776 Queer Theory and the Study of Sexuality	12
Research Courses	12
EDU 520 Discourse Analysis	12
GRS/EDU 682 Qualitative Research in Education	12
GRS/EDU 683 Educational Statistics with Applications of Statistical Packages	12
Mandatory Seminars	
GRS 774 Seminar in Gender and Sexuality Studies I	
GRS 775 Seminar in Gender and Sexuality Studies II	6
Elective Courses	24-48
EDU 556 Advanced Seminar in the Theory and Philosophy of Education	12
EDU 641 Gender and Education	12
BMG 535 Byzantine Masculinities and Femininities	9
GRS 613 Gender and the Cinema	12
GRS 619 Gender Equality, Human Rights, Gender Equality and the Law	12
GRS 626 Work and Gender Identities: A Sociological Approach	12
GRS 631 Visual Sources in the Humanities and Social Sciences	12
GRS 632 Contemporary Trends and Issues	12
GRS 639 Language and Gender	12
GRS 642 Race, Gender and Post-colonial Feminism	12
GRS 689 Independent Study	
ENG 705 The Animal in Literature and Philosophy	10
ENG 713 Gender, Sexuality and Subjectivity in Early Modern Literature and Culture	10
ENG 720 Seminar in Contemporary Feminist Theory: Debates on Aesthetics, Ethics and Politics	10
FES 772 Gender Roles within the European Space	10
FES 774 Hate Speech in the European Space	10
HIST 558 Women in Latin Ruled Cyprus	9
GRS 798 Master's Thesis I	12*
GRS 799 Master's Thesis II	12*

Notes:

- Student attendance at seminars is mandatory. One seminar is recommended by the academic advisor who is responsible for the Programme. Students may need to attend both seminars depending on the courses each student will attend, in order to complete the 90 ECTS.
- For the completion of the Master's Thesis, students can be exempted from two Elective Courses.

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.

Structure of the Doctoral Programme

The candidate is required to hold a Master's degree in the same or a related subject. Students must successfully complete 240 ECTS, distributed as follows:

	ECTS
Compulsory Courses	24
GRS 629 Feminist Theory	12
GRS 776 Queer Theory & Sexuality Studies	12
Research Methodology	12
<u>One of the following:</u>	
EDU 520 Discourse Analysis	12
EDU 682 Qualitative Research	12
EDU 683 Educational Statistics with Statistics Application Packages	12
Elective Courses	24
<u>Two of the following:</u>	
GRS 613 Gender and the Cinema	12
GRS 619 Gender Equality, Human Rights, Gender Equality and the Law	12
GRS 626 Work and Gender Identities: A Sociological Approach	12
GRS 631 Visual Sources in the Humanities and Social Sciences	12
GRS 632 Contemporary Trends and Issues	12
GRS 639 Gender and Language	12
GRS 642 Race, Gender and Postcolonial Feminism	12
GRS 689 Independent Study	12
ENG 705 The Animal in Literature and Philosophy	10
ENG 713 Gender, Sexuality, and Subjectivity in Early Modern Literature and Culture	10
ENG 720 Seminar in Contemporary Feminist Theory: Debates on Aesthetics, Ethics, and Politics	10

BNE 535 Byzantine Masculinities and Femininities	10
FRE 772 Gender Roles in the European Space	10
FRE 774 Hate Speech in the European Space	10
EDU 556 Advanced Seminar in Theory and Philosophy of Education 12	
EDU 641 Gender and Education	12
HIST 558 Women in Latin Ruled Cyprus	10
GRS 774 Seminar in Gender and Sexuality Studies I	6
GRS 775 Seminar in Gender and Sexuality Studies II	6
GRS 820 Comprehensive Exams	14
GRS 891 Research I a, Ib X 15 ECTS	30
GRS 892 Research IIa, IIb X 15 ECTS	30
GRS 893 Research IIIa, IIIb X 15 ECTS	30
GRS 894 Research IVa, IVb X 15 ECTS	30
GRS 895 Dissertation Writing Ia, Ib X 11,5 ECTS	23
GRS 896 Dissertation Writing IIa, IIb X 11,5 ECTS	23
Grand Total	240

Note: Seminars are mandatory for students that only need extra credits to complete the ECTS.

Contact Details

PROGRAMME COORDINATOR

Miranda Christou, Associate Professor

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E-LEARNING MASTER IN CREATIVE LEARNING AND THE ARTS IN CHILDHOOD

Purpose and Objectives of the Programme

Pedagogy and education have a direct impact on generating creative experiences to children and developing their creative thinking. The purpose of the e-learning Master's Programme Creative Learning and the Arts in Childhood is to provide educators, as well as those who work with children (e.g. kindergarten teachers, primary school teachers, psychologists, social workers, speech therapists, occupational therapists), with the theoretical knowledge to enhance their research skills to support innovative practices that combine the Arts, creativity and thus creative thinking. At the same time, this Master's programme will offer the candidates many experiences and opportunities to develop their own creativity using the Arts as a medium.

Through the Master's Programme Creative Learning and the Arts in Childhood, candidates will enrich their knowledge and strengthen their practical skills to meet the demands of education in the future. The Arts as a tool and as a philosophy of pedagogy provide opportunities to develop skills and authentic experiences, which support positive self-esteem, flexibility, and the ability to solve problems. The candidates will learn to create and be creative but will also acquire knowledge and develop practices that enhance children's creative thinking. Moreover, they will be able to document the reasons and the ways of utilizing the Arts for the development of children's creative thinking.

Furthermore, another important purpose of this Programme is to focus on research, as well as on practice skills that promote research and the implementation of creative learning, while trying to respond to social and cultural changes. The Programme focuses on the Arts as a major element of the human existence of the individual and society, attempting to bring change in a democratic and developing future.

Intended Learning Outcomes (In accordance with the European qualifications framework)

Upon successful completion of the Programme, prospective students are expected to:

- Demonstrate knowledge and insight for the basic literature on creativity and the arts in early childhood education, as well as the contemporary analytical and pedagogical approaches.
- Integrate previous and acquired knowledge to apply practices for the development of creativity in children but also the creative process through the Arts
- Formulate judgements of existing programs from different disciplines taking into consideration the ethical aspects of learning and development based on the knowledge they acquire for creativity and the Arts.
- Apply research skills to design and conduct research in the early years focusing on creative learning and the Arts offering original contributions to the field.
- Evaluate the existing empirical research and policies to formulate new research questions and choose the appropriate methodology for their study.
- Develop research skills, become familiar with quantitative and qualitative research methods, and gain experience in applying these methods to the collection and analysis of data and to advancing the study of children in relation to creativity.
- Problem solve existing contested early years' themes and use available research evidence to collaboratively develop detailed proposals for changes in educational policy to optimize the effectiveness of creative learning in the early years.
- Independently apply and communicate research-based knowledge to initiate new or to collaboratively improve existing early years' programmes.

Structure of the Programme

According to the Regulations for Postgraduate studies, the minimum period of studies at the Master's programme in order to fulfil the requirements is 3 semesters and the maximum 8 semesters.

6 courses X 15 ECTS=Total 90 ECTS

	ECTS
Compulsory Courses	30
EDU 567 Creative Research Methods with Children	15
EDU 568 Research Methods in Education	15
Elective Courses	60
<u>Choose four of the following:</u>	
EDU 557 Play and Creativity	15
EDU 558 Creative Musical Experiences in Childhood	15
EDU 559 Mental Processes, Representations and Creative Learning	15
EDU 566 Visual Arts and Creative Learning in Childhood	15
EDU 802 Master's Thesis I	15
EDU 803 Master's Thesis II	15
<i>Note: For the completion of the Master's Thesis, students can be exempted from two Elective Courses.</i>	

Course Descriptions

For more information about the courses, please refer to the website of each postgraduate programme, as follows:

Educational Administration and Evaluation

- Master in Educational Administration and Evaluation - Educational Administration and Evaluation - Department of Education
- Ph.D. in Educational Administration and Evaluation - Educational Administration and Evaluation - Department of Education

Curriculum Studies, Teaching and Comparative Education

- Master in Curriculum Studies, Teaching and Comparative Education - Curriculum Studies, Teaching and Comparative Education - Department of Education
- Ph.D. in Curriculum Studies, Teaching and Comparative Education - Curriculum Studies, Teaching and Comparative Education - Department of Education

Pedagogical Sciences

- Master in Pedagogical Sciences/Preschool Education - Master in Pedagogical Sciences/Preschool Education - Department of Education
- Ph.D. in Pedagogical Sciences/Preschool Education - PhD in Pedagogical Sciences/Preschool Education - Department of Education
- Master in Pedagogical Sciences/Multiculturalism, Migration and Decolonial Education - Master in Pedagogical Sciences/Multiculturalism, Migration and Decolonial Education - Department of Education
- Ph.D. in Pedagogical Sciences/Multiculturalism, Migration and Decolonial Education
- PhD in Pedagogical Sciences/Multiculturalism, Migration and Decolonial Education - Department of Education
- Master in Pedagogical Sciences/Sports Pedagogy - Master in Pedagogical Science/Sports Pedagogy - Department of Education
- Ph.D. in Pedagogical Sciences/Sports Pedagogy - PhD in Pedagogical Sciences/Sports Pedagogy - Department of Education
- Ph.D. in Pedagogical Sciences/Theory and Philosophy of Education - PhD in Pedagogical Sciences/Theory and Philosophy of Education - Department of Education
- Ph.D. in Pedagogical Sciences/Religious Education - PhD in Pedagogical Sciences/Religious Education - Department of Education
- Ph.D. in Pedagogical Sciences/Sociology of Education - PhD in Pedagogical Sciences/Sociology of Education - Department of Education

Mathematics Education

- Master in Mathematics Education-Mathematics Education - Department of Education
- Ph.D. in Mathematics Education-Mathematics Education - Department of Education

Learning in Natural Sciences

- Master in Learning in Natural Sciences-Master in Learning in Natural Sciences and Environment - Department of Education
- Master in Learning in Environmental and Sustainability Education-Master in Environmental and Sustainability Education - Department of Education
- Ph.D. in Learning in Natural Sciences and the Environment-Learning in Natural Sciences and Environment - Department of Education

Special and Inclusive Education

- Master in Special and Inclusive Education - Special and Inclusive Education - Department of Education
- Ph.D. in Special and Inclusive Education - Ειδική και Ενιαία Εκπαίδευση - Department of Education

Language, Literacy and Education

- Master in Language, Literacy and Education-Language, Literacy and Education-Department of Education
- Ph.D. in Language, Literacy and Education-Γλώσσα, Γραμματισμός και Εκπαίδευση - Department of Education

Instructional Technology

- Master in Instructional Technology- Instructional Technology - Department of Education
- Ph.D. in Instructional Technology-Εκπαιδευτική Τεχνολογία - Department of Education

Inter-departmental and Inter-disciplinary self-financed Programme in Gender Studies

- Master in Gender Studies-Gender Studies - Department of Education
- Ph.D. in Gender Studies-Gender Studies - Department of Education

Distance Learning in Creative Learning and the Arts in Childhood (Master)

Note: The english website of the programme is under construction.

RESEARCH INTERESTS OF THE ACADEMIC STAFF

Panayiotis Antoniou, Assistant Professor

Educational Management and School Leadership; Human Resource Management in Education; Teacher Evaluation and Appraisal; Programme and School Evaluation; Student Formative Assessment; Value-added assessment; Factors influencing the development of educational policy at various levels; The impact of school leadership on student outcomes.

Charalambos Charalambous, Associate Professor

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 representations of human pain and suffering; Education and globalization; 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

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 Kontovourki, Associate Professor

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); 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

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, 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; 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

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; 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.

Contact Details**DEPARTMENT SECRETARIAT**

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Department of Law

www.ucy.ac.cy/law/en

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 application. The Department also promotes research. It has a strong presence in international, European and domestic research activities, especially in the fields of Criminal Law, Business Law, Company Law, International Law, European Law, Human Rights Law, International and European Private Law, Competition Law, Banking Law, Intellectual Property Law, Internet Law, and Environmental Law.

POSTGRADUATE STUDIES IN LAW

The postgraduate programmes of the Law Department are currently in the process of being approved by DIPAE (The Cyprus Agency of Quality Assurance and Accreditation in Higher Education). Once the process is complete, details regarding the available programmes will be posted on the department's website.

RESEARCH INTERESTS OF THE ACADEMIC STAFF

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

Law of the United Nations (with emphasis on the Security Council); International security; International development cooperation; International protection of human rights, the Cyprus problem; International law in domestic legal orders.

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

Law of the European Union: Constitutional, administrative, external relations; Environmental and climate change law; International environmental law; Law of the world trade organisation.

Charalambos Papacharalambous, Professor

Criminal law; Criminal procedure; Legal theory; Critical theory of criminal law; International criminal law; Organized crime; Criminal protection of human rights.

Thomas Papadopoulos, Associate 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.

Alina Tryfonidou, Assistant Professor

Substantive law of the EU (EU free movement law and EU citizenship); Family law; The legal protection of LGBTI rights; EU anti-discrimination law.

Kostantinos Tsinas, Assistant Professor

Criminal law; Criminal procedure & evidence; Legal reasoning; Statutory interpretation; Logic - argumentation and the law.

Contact Details

COORDINATOR OF Ph.D. PROGRAMMES OF STUDY

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Department of Psychology

www.ucy.ac.cy/psych/en

The Psychology Department currently offers postgraduate programmes leading to a Master's degree in the following areas:

- Applied Programme in School Psychology
- Theoretical Programme in Social Developmental Psychology
- School Counselling and Guidance
(Joint Programme with the National and Kapodistrian University of Athens)
- Cognitive Systems (Joint Programme with the Open University of Cyprus):
<https://www.ouc.ac.cy/index.php/en/studies/master/cos>
- Behavioural Economics (Joint Programme with the Department of Economics):
<https://www.ucy.ac.cy/econ/master-in-behavioural-economics/?lang=en>

Students have the choice to either apply for admission to the two research/theoretical tracks, which entitles them to continue their studies at Ph.D. level, or apply for admission to the professional practice track (APSC), which allows them to register and work as professional school psychologists. For admission to the APSC track, an undergraduate degree in Psychology is a requirement.

The Department also offers two Doctoral programmes, that result in a Doctorate of Philosophy:

- Doctorate in Psychology
- Doctorate in Clinical Psychology

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 allows 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 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 provides 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, who meet the required qualifications (academic and clinical), may register to the Cyprus Psychologist's Association. 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 Internship together with 3 clinical seminars (60 ECTS) and the final Comprehensive Examination of Professional Knowledge (0 ECTS).

	ECTS
Compulsory Courses	90
PSY 621 Research Methods in School Psychology	7.5
PSY 604 Multivariate Statistics for the Behavioural Sciences	7.5
PSY 614 Psychological Interventions in the Schools I	7.5
PSY 615 Early Diagnosis and Interventions for Reading Disabilities	7.5
PSY 617 Counselling Psychology	7.5
PSY 619 Intelligence: Development and Evaluation	7.5
PSY 642 Child and Adolescent Psychopathology	7.5
PSY 701 Psychology of Teaching	7.5
PSY 705 Diagnostic Intellectual Assessment of Children and Adolescents	7.5
PSY 708 Analysis and Behavior Modification	7.5
PSY 714 Psychological Interventions in the Schools II	7.5
Compulsory Clinical Practicum	60
PSY 698 Clinical Practicum Seminar I	5
PSY 699 Clinical Practicum Seminar II	27.5
PSY 700 Clinical Practicum Seminar III	27.5
Compulsory Graduate Research Study	7.5
PSY 750 Master's Thesis I	7.5
PSY 751 Master's Thesis II	7.5
PSY 752 Master's Thesis III	7.5
PSY 745 Continuation of Master's Thesis (optional)	1
PSY 746 Social Development Psychology of Intercultural Education	7.5
Professional Comprehensive Examination In School Psychology	
PSY 688 Professional Comprehensive Examination in School Psychology	0
Elective Courses	
I. Theoretical Background of Psychology	60
PSY 603 Child and Adolescent Psychopharmacology	7.5
PSY 730 Neuropsychological Assessment	7.5
PSY 715 Language Development and Language Disorders	7.5
PSY 610 Psychology of Education	7.5

Supervised Clinical Practicum

The practicum programme is integrated into the detailed curriculum and, by extension, it 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 students' 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: €5.125

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.*

Analytical Programme of Studies

		ECTS
First Year		
Fall Semester		
PSY 617	Counselling Psychology	7.5
PSY 619	Intelligence: Development and Education	7.5
PSY 621	Research Methods in School Psychology	7.5
PSY 746	Social Developmental Psychology of Intercultural Education	7.5
Total		30
Spring Semester		
PSY 604	Multivariate Statistics for the Behavioural Sciences	7.5
PSY 642	Child and Adolescent Psychopathology	7.5
PSY 750	Master's Thesis I	7.5
<u>Elective Courses (one from the following)</u>		
PSY 603	Child and Adolescent Psychopharmacology	7.5
PSY 610	Psychology of Education	7.5
PSY 715	Language Development and Language Disorders	7.5
PSY 730	Neuropsychological Assessment	7.5
Total		30
Summer Semester		
PSY 751	Master's Thesis II	7.5
Second Year		
Fall Semester		
PSY 614	Psychological Interventions in the Schools I	7.5
PSY 615	Early Diagnosis and Interventions for Reading Disabilities	7.5
PSY 701	Psychology of Teaching	7.5
PSY 705	Diagnostic Intellectual Assessment of Children and Adolescents	7.5
School experience - Practical Exercise I		
Total		30
Spring Semester		
PSY 708	Analysis and Behaviour Modification	7.5
PSY 714	Psychological Interventions in the Schools II	7.5
PSY 698	Clinical Practicum Seminar I	5
PSY 752	Master's Thesis III	7.5
Practical Exercise II		
Total		27.5
Summer Semester		
Continuation of Practical Exercise II		
Total		1
Third Year		
Fall Semester		
PSY 699	Clinical Practicum Seminar II	27.5
Clinical Practice I		
Total		27.5

Spring Semester

PSY 700 Clinical Practicum Seminar III	27.5
PSY 688 Professional Comprehensive Examination in School Psychology (PASS OR FAIL)	0
Clinical Practice II	
Total	27.5
Total Compulsory Academic ECTS	97.5
Total Compulsory Applied/Clinical ECTS	60
Total Compulsory Research ECTS	22.5
Grand Total	180

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 focuses on the development of knowledge in diagnostic assessment of children and adolescents, including the methods of clinical interview and clinical observation of behaviour, as well as on the clinical practice in administration, scoring, interpretation of intelligence tests (with a particular emphasis on Wechsler scales for children and adolescents) and scales of socioemotional adjustment. Each student is required to carry out a certain number of complete assessments. The course also contributes to the development of psychological 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 714 Psychological Interventions in 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 and cognitive 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 disorders 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 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 Counselling 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 study programme (up to 20% or a maximum of two electives, excluding the practicum) may be offered as distance learning via teleconference.

	ECTS
Compulsory Courses	
COU 601 Ethics in School Counselling and Guidance	7.5
COU 602 Introduction to School Counselling and Guidance	7.5
COU 604 Research Methods in Education (or an equivalent course offered by the collaborating departments)	7.5
COU 605 Vocational Guidance and Counselling I	7.5
COU 650 Innovation and Creativity in Education	7.5
COU 660 Educators as Professionals	7.5
COU 700 Master's Thesis I	15
COU 701 Master's Thesis II	15
COU 789 Practicum I (in Public, Private Schools and other sites) and	10
COU 790 Practicum II (in Public, Private Schools and other sites)	10
Elective Courses (7.5 ECTS each)	
<u>Education Courses (selection of 2 courses)</u>	
COU 609 Adult Education	
COU 651 Theory and Practice of Educational Science	
COU 652 Skills Development at School	
COU 653 Technologies of Information and Communication in Education	
COU 654 Human Resource Management in Education	
COU 655 Social Education	
COU 656 Curriculum Development and Micro-teaching	
COU 657 Current Issues in Education	
COU 658 School Pedagogy	
COU 659 Sociology of Education	
COU 661 Minority groups, social exclusion and long-life learning	

Psychology and Counselling Courses (selection of 2 courses)

COU 610	Psychology of Education
COU 611	Counselling Psychology
COU 612	Contemporary Theories of Human Development
COU 613	Child and Adolescent Psychopathology
COU 614	Psychology of Instruction
COU 615	Family and Child Development
COU 606	Learning Difficulties
COU 607	Prevention and Treatment of Crises in the School
COU 608	Intercultural Counselling and Minority Counselling
COU 603	Methods and Tools for Assessment and Evaluation in Counselling
COU 616	Vocational Guidance and Counselling II

Elective Courses (7.5 ECTS each)

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.

Grand Total **140**

Course Descriptions

All courses carry 7.5 ECTS

COMPULSORY COURSES

COU 601 Ethics in School Counselling and Guidance (7.5 ECTS)

There is an important code of ethics and certain other criteria that are implicated in the profession of a school counsellor. The course provides students with a thorough understanding of how the ethical code features in the field of Counseling and Guidance by examining contemporary dimensions of human behaviour in a socio-political and historical context. It also examines the relevant legislation and covers ethical and professional issues usually faced by a school counsellor. This course is a prerequisite for courses related to the development of clinical and professional skills (e.g. Practicum courses).

COU 602 Introduction to School Counselling and Guidance (7.5 ECTS)

The course introduces students to the role and duties of a school counsellor. It includes a review of the relevant literature and covers the key theories and principles related to the profession of school counsellor. The syllabus is tailored to educators and psychologists who begin their postgraduate studies in this area. The course focuses on issues related to the assistive role of the professional school counsellor and the development of counselling and guidance skills.

COU 604 Research Methods in Education (7.5 ECTS)

The course focuses on study design, definition and testing of research hypotheses, procedures and measurement of variables, data collection, organisation and analysis, statistical analysis (SPSS), and the writing of a scientific project.

COU 605 Vocational Guidance and Counselling I (7.5 ECTS)

The course focuses on the evaluation of topics of personal and professional development such as: lifelong career development, theories of professional orientation, process of decision making and diversity issues. The course provides students with an understanding of basic counselling tools, more specifically, the interview, individual and group counselling and the instruction of the professional guidance class. An important aim of the course is to familiarise students with the questionnaires for counselling and professional orientation purposes, their administration and interpretation. The course looks at various issues of the counselling process such as parental counselling, people with disabilities and people from various social groups. Students must also be aware that any information that is given to them must be verified by multiple sources, checked for validity and reliability, and utilised correctly.

COU 650 Innovation and Creativity in Education (7.5 ECTS)

The course explores the importance of creativity and innovation in relation to topical social and educational themes. Students/ prospective counsellors must learn that the ability to be flexible, able to adapt to change, and adopt an attitude to lifelong learning are necessary to respond to the crises and challenges of the current era.

COU 660 Educators as Professionals (7.5 ECTS)

The course discusses topics pertaining to the daily practices and routines of the educator in the school and his/her relationship with organisations and outside entities. There is an emphasis placed on the qualifications required of a successful 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, Private Schools and other sites) (10 ECTS) and

COU 790 Practicum II (in Public, 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 COURSES

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 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 Counseling 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. Intra-personal 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)

Adult education around the world: problems and issues. Basic theories. Strategies and educational techniques. Critical thought and art. Experiential activities. Programme development for adult education. Micro-teaching and micro-learning in adult education.

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)

Social and emotional skills. Skills and school success. Skills and didactic models. Skills and current approaches. The dynamics of groups. Ways of including social skills in teaching. The role and skills of the educator. Putting skills into practice (e.g. self-esteem, conflict resolution, empathy, self-worth). Skills and non-verbal communication skills. Benefits of education in socio-emotional skills.

COU 653 Technologies of Information and Communication in Education (7.5 ECTS)

Theories of learning and Technologies of Information and Communication (TIC). Benefits of the use of TIC in the educational process. Methodology of blended learning. TIC tools for the development of educational themes (logistics, platforms, visual learning environment, videoconferencing, etc.). Communication tools and cooperation. Games for electronic learning. Exploiting interactive whiteboard learning. The role of TIC in the analytic school programme.

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)

Current Issues in Education (e.g. education of peace). Programmes in education (health education, environmental education, cultural themes, etc.). The European dimension in education. The school environment and its effect on learning. Free time and its utilisation in learning. Home schooling: the teaching of the future. School abuse and bullying. Alternative teaching strategies for students who are in danger. Effect of the economic situation on learning and teaching.

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 students' 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 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>.

PH.D. IN CLINICAL PSYCHOLOGY (with direct access from a Bachelor's degree)

Overview of the Programme

The Ph.D. in Clinical Psychology (with direct access from a Bachelor's degree) at the University of Cyprus, is an innovative training programme for professional clinical psychologists, shaped according to best international practices, combining both theoretical and practical teaching, clinical practice of at least 1500 hours, and doctoral dissertation.

Graduates of the Programme meet the criteria for registration in the Register of Licensed Psychologists in the specialty of Clinical Psychology, while at the same time they are able to pursue a research or academic career. They also meet the criteria for registration in other European registers of clinical psychologists, as well as for professional activity in other countries of the European Union or in other continents.

The Programme accepts applications from candidates with a bachelor's degree in psychology, whether from Cyprus or abroad. No previous master's degree is required, since all necessary clinical knowledge and research skills are covered in the first two years of the PhD. It is not necessary to find a research supervisor beforehand, since the process of appointing a supervisor takes place at a later stage of the student selection process. However, candidates will have to declare up to

three members of the academic staff, with whom they would be interested in collaborating, in case of their selection.

The total duration of the Programme is five years. Graduates receive the title Ph.D. in Clinical Psychology.

Detailed Description of the Programme of Study

Purpose of the Programme

The aim and vision of the Doctoral Programme in Clinical Psychology (with direct access from a Bachelor's degree) is the training of scientist-practitioner psychologists with a specialty in Clinical Psychology, who will serve science, the profession and beneficiaries by offering high quality psychological services, based on the modern science of Psychology, high standards of ethics, with respect to the relevant legislation of the State and the European Union, and on the basis of adequate theoretical background and empirically substantiated practices. In addition, we look forward to our graduates contributing to the production of new knowledge and public health policies in relation to mental health, incorporating best practices in public health systems. The curriculum was created based on modern global trends in the education of scientists-professional psychologists and the requirements of the profession of Clinical Psychologist, while developing research knowledge and skills for conducting original research, as required by international standards of doctoral level studies and by the relevant rules of the University of Cyprus.

The curriculum follows the structure and requirements of the School of Postgraduate Studies and the regulations governing the doctoral programmes of the University of Cyprus (see Guide to Postgraduate Studies of the University of Cyprus <https://www.ucy.ac.cy/graduateschool/requirements-for-phd-degree/>).

A unique feature of the Programme is that it includes 1500 hours supervised internship as an integral part of the Programme, which is completed in parallel with the research and academic requirements of the Programme.

It is mainly aimed at students who are interested in working as registered clinical psychologists or as academics/researchers in Clinical Psychology, but who combine a strong interest in both research and clinical work.

Expected Learning Outcomes

The expected learning outcomes fall under two axes:

1) Research development and excellence

- i. The research development of the Ph.D. student is a key objective of the Programme. Students are involved in research from the beginning of the Programme through the Research Stages and their integration into the research team of their supervisor. After the 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 through the Writing Stages. The dissertation is completed with its successful support and following all the regulations of the University of Cyprus.

2) Professional/Clinical Competence

- i. The Programme aims to help students acquire specialized knowledge and skills, by gradually assuming roles related to the practice of the profession of Clinical Psychologist, in accordance with international training standards (e.g. EuroPsy, Boulder Model).
- ii. Professional skills are developed through gradual integration into practical training conducted through specialized psychotherapy seminars and internship seminars, and appropriate research experiences related to clinical issues. Students enter supervised practice in a gradual manner, as they start 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-Behavioral Therapy I & II, etc.), in Cyprus and/or external structures with which the Department has concluded specific agreements/memoranda to provide access to specialized populations (e.g. children). The first stage of internship is offered during the 3rd year of study (semester 5) and takes the form of part-time (up to 10 hours per week) at the Mental Health Center 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, with which the Department of Psychology and/or the University of Cyprus have memoranda of understanding. At this stage, the internship structures offer professional training, under the supervision of licensed psychologists in accordance with Cypriot legislation. Also, during the supervised stages of internships, internal secondary supervision is provided through the Supervised Internship Seminars or specialized 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 line with the best international practices for the training of clinical psychologists and is based on the training model Scientists-Professional Psychologists. Students may attend, if they wish, clinical supervised

training, approved by the programme, in additional structures, usually during Erasmus placement visits or other international visits. These are calculated as exceeding the 1500 required hours of this Programme. Students enrolled who already hold 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 included relevant clinical practice, may be credited up to a maximum of 500 hours, by decision of both the Programme Committee and the Council of the Department.

- 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 through the Final Clinical Knowledge and Skills Examination, where students must succeed by answering a set of questions about all the aforementioned areas related to unknown clinical cases.

Language of Instruction

The language of instruction is Greek, although most of the teaching material is in English and there is also an option to prepare a doctoral dissertation in English.

Curriculum

The Doctoral Programme in Clinical Psychology is full-time 5 years and is valued at 345 ECTS credits. The 1st and 2nd years of study focus on the acquisition of knowledge related to the background required for the commencement of clinical practice, as well as the preparation of the doctoral dissertation research proposal. Specifically, students acquire knowledge of clinical assessment for a wide range of mental disorders, personality disorders, neuropsychiatric disorders and behavioral problems, administration, interpretation and utilization of psychometric tools, clinical intervention and ethics. They also acquire a background in research methodology and statistical knowledge through courses, active involvement in research teams and participation in clinical research seminars, so that they can begin to compose their research proposal and acquire skills in presenting their own research work, under the guidance of their academic and research supervisor.

In the 3rd and 4th year of study, students deepen in intervention and psychotherapy methods. This is achieved through Specialized Seminars, which cover the practice of the profession of clinical psychologist, in relation to specific disorders or populations (e.g. severe psychopathology, couples and families, neuropsychological rehabilitation, psychotherapeutic

interventions in health structures, etc.), and include both theoretical knowledge and direct supervised hours of clinical practice with specific populations/themes, and personal development. The theoretical approach of the Programme is the broader c-behavioral (all waves), including more modern approaches such as the process-based approach and other research-supported approaches to psychotherapy.

In the summer semester after the 2nd year, students are usually enrolled in the comprehensive examination, as required by the rules of the University of Cyprus (exams need to be completed no later than the 7th semester but are officially scheduled to be held in the summer following the 4th semester). After passing the comprehensive exam (after the summer of the 2nd year), students are expected to present and successfully support their doctoral research proposal. They continue with starting their Ph.D., collecting their research data. In addition, at this stage all specialized seminars and the first and second stages of practice (in the Mental Health Center in the 3rd year and in collaborating structures in the 4th year, 500 supervised hours each) are completed.

In the 5th year, the doctoral dissertation and its defense are expected to be completed. Also, the completion of all specialized seminars/courses and the supervised third and fourth stage internship in external structures (completion of at least another 500 hours) are expected. Upon completion of the above obligations, students are expected to have the necessary knowledge to succeed in the mandatory clinical competence examination, in the last semester of study, before the completion of the program.

In summary, the curriculum includes the following:

1. Academic, theoretical and research background (240 ECTS).
2. Supervised Internship (45 ECTS).
3. Comprehensive examination, Dissertation, Final Clinical Skills Examination (60 ECTS).

Students will complete seventeen (17) courses from the following three categories:

1. Research: 3 courses (in addition to participation in a laboratory group and in the seminar series).
2. Clinical Evaluation & Diagnosis: 6 courses.
3. Clinical Intervention & Psychotherapy Seminars: 8 lessons.

For the eighteenth course, the student can choose a course from the list of limited elective courses in collaboration with the research supervisor and as required for the completion of the students' doctoral dissertation.

The full list of courses is listed below.

	ECTS
Research Courses (22.5 ECTS total)	
PSY 753 Research Methods in Clinical Psychology	7.5
PSY 790 PhD Seminar: Thesis Development and Research Programs (7.5 ECTS)	7.5
PSY 789 Applied Data Analysis II (7.5 ECTS)	7.5
Clinical Evaluation and Diagnosis Courses (45 ECTS total)	
PSY 716 Basic Clinical Skills	7.5
PSY 717 Adult Psychopathology I: General Psychopathology	7.5
PSY 729 Adult Psychopathology II: Severe Psychopathology	7.5
PSY 747 Child and Adolescent Psychopathology	7.5
PSY 705 Diagnostic Assessment of Cognitive Abilities	7.5
PSY 730 Neuropsychological Assessment	7.5
Clinical Intervention and Psychotherapy Seminars (60 ECTS total)	
PSY 754 Cognitive Behavioral Psychotherapy I	7.5
PSY 723 Cognitive Behavioral Therapy II: Process-Based Approach and Therapy	7.5
PSY 733 Elements of Humanistic, Existential, and Narrative Psychotherapy	7.5
PSY 714 Psychological Interventions with Children and Adolescents	7.5
PSY 720 Psychotherapy with Couples and Families	7.5
PSY 721 Group Psychotherapy	7.5
PSY 725 Psychological Therapies in Health and Digital Interventions	7.5
PSY 748 Neuropsychological Rehabilitation	7.5
Elective Courses-Limited Elective (one of the following, 7.5 ECTS total)	
PSY 642 Developmental Psychopathology	
PSY 708 Analysis and Modification of Behaviour	
PSY 711 Introduction to Psychopharmacology	
PSY 706 Neurophysiology	
PSY 713 Experimental Psychology	
PSY 722 Intercultural Issues in Psychology	
PSY 741 Intergroup Relations in Divided Societies	
PSY 749 Qualitative Research Methods in Psychology	
PSY 788 Advanced Data Analysis Methods II	
Comprehensive Exam (15 ECTS)	
PSY 800 Comprehensive Examination	
Clinical Research Seminars (10 seminars, 7.5 ECTS total)	
PSY 756.A Clinical Research Seminar 1	
PSY 756.B Clinical Research Seminar 2	
PSY 756.C Clinical Research Seminar 3	
PSY 756.D Clinical Research Seminar 4	
PSY 756.E Clinical Research Seminar 5	

PSY 756.F	Clinical Research Seminar 6
PSY 756.G	Clinical Research Seminar 7
PSY 756.H	Clinical Research Seminar 8
PSY 756.I	Clinical Research Seminar 9
PSY 756.J	Clinical Research Seminar 10

Research Stages (11 research stages, 97.5 ECTS total)

PSY 850	Research Proposal Examination (0 ECTS)	
PSY 757.A	Research Stage I	7.5
PSY 757.B	Research Stage II	7.5
PSY 757.C	Research Stage III	7.5
PSY 757.D	Research Stage IV	7.5
PSY 757.E	Research Stage V	7.5
PSY 757.F	Research Stage VI	7.5
PSY 757.G	Research Stage VII	7.5
PSY 757.H	Research Stage VIII	7.5
PSY 757.I	Research Stage IX	7.5
PSY 757.J	Research Stage X	7.5
PSY 757.K	Research Stage XI	7.5

Writing Stages (45 ECTS)

PSY 888	Writing Stage I	22.5
PSY 889	Writing Stage II	22.5

Supervised Clinical Practicum Seminars (6 courses, 45 ECTS)

PSY 734.A	Seminar on Supervised Clinical Internship I	7.5
PSY 734.B	Seminar on Supervised Clinical Internship I	7.5
PSY 735.A	Seminar on Supervised Clinical Internship II	7.5
PSY 735.B	Seminar on Supervised Clinical Internship II	7.5
PSY 736.A	Seminar on Supervised Clinical Internship III	7.5
PSY 736.B	Seminar on Supervised Clinical Internship III	7.5

Final Doctoral Examination of Clinical Competence

PSY 737	Final Clinical Skills Exam (0 ECTS)	

Quality Assurance Issues

The Programme is subject to the Regulations of Studies of the University of Cyprus and the School of Postgraduate Studies.

The Programme is constantly supervised by a four-member committee of faculty members appointed by the Council of the Department of Psychology and the Coordinator of the Internship of the Programme (Clinical Psychology Committee). Student representatives are also regularly invited to participate in committee meetings and express their views. Programme reviews are carried out after extensive consultations with current students, alumni and all involved faculty. The Clinical Psychology Committee has a two-year term and deals with all issues related to the smooth operation of the Programme, communication with students, academic guidance and problem solving. It also proposes changes to the Programme to the Department Council, implements the changes adopted, evaluates the progress of students and presents it to the Department Council, supervises the smooth conduct of the internship and the cooperation

with external internship structures, and coordinates the final Clinical Knowledge and Skills Examination.

The courses and teachers of the Programme are evaluated every semester, based on the evaluation process of the University of Cyprus as conducted by the Center for Teaching and Learning (KEDIMA), through an electronic questionnaire mandatory for students. Each teacher receives evaluations for self-improvement. Each President of the Department also has access to faculty evaluations and can offer guidance where needed.

Students' progress in the Programme is evaluated on an annual basis. The Clinical Psychology Committee receives feedback for each of the students of the year from all faculty, research supervisors, academic supervisors and external clinical supervisors, regarding the following criteria:

1. Academic progress and knowledge adequacy.
2. Personal growth and maturation.
3. Professional readiness and acquisition of professional skills.
4. Research progress.
5. Other data as marked individually for each student.

The Committee collects, processes and summarizes the data which it presents to the Council of the Department. After the progress is evaluated by the Council, each student receives written feedback on his/her progress and can discuss the feedback with the Committee. The Department retains authority not to allow the placement in internship structures to students who do not have the maturity or professional readiness or academic competence to participate. The Department Council also appoints corrective measures where necessary, to ensure the smooth progress and development of the student. Measures may include repetition of traineeship courses and seminars, individualised study, referral for psychological counselling and additional traineeships.

Upon completion of the programme of study, students acquire the right to sit the Clinical Knowledge and Skills Examination, which ensures that students who will graduate as clinical psychologists are able to practice the profession with an adequate level of professionalism, ethics, knowledge and utilization of psychological knowledge in clinical practice. This examination is considered necessary if the Law of the Republic for the practice of the profession of psychologist does not require another examination of professional competence before the granting of the relevant license. The goal of the examination is the protection of the consumer, and, for this reason, it focuses on the management of cases related to the practice of the profession of clinical psychologist. Students may sit the examination, if they:

1. Have satisfactorily completed their clinical portfolio.
2. Have completed at least 1500 hours of supervised clinical practice as evidenced by the attendance records signed by the supervisors.
3. Have successfully completed the " Supervised Clinical Internship Seminar III" and have received relevant feedback from the instructor.

4. Have competence and readiness as demonstrated by the Supervisor's final review of progress.
5. Have competence and readiness as evidenced by the final self-assessment of the student's progress.
6. Have overall competence and readiness as assessed based on all of the above by the Clinical Psychology Committee.

The examination is conducted in writing and is evaluated by two people, usually a faculty member (registered clinical psychologist) and the Internship Coordinator. In case of significant disagreement in the grade, another faculty member (registered clinical psychologist) is invited to evaluate the paper. On the day of the examination, the examinee receives a written description of two individual cases that a Clinical Psychologist may be asked to manage with 4-5 questions for each case. Topics cover ethics, professional conduct, assessment, case understanding and diagnosis, and treatment plans. Students have three hours to prepare their answers. The exam is scored as Pass/Fail. In case of failure, the Department may ask the student to take corrective measures such as repetition of course, personalized study or additional internship. The student is entitled to sit the exam up to two times.

Admission Requirements

Each year the Department of Psychology announces 5-9 positions in the Doctoral Programme in Clinical Psychology, starting in September. Available positions are announced at least 6 months before the beginning of each academic year, according to the official procedures of the School of Postgraduate Studies. Interested candidates need to apply via the internet, on the website of the School of Postgraduate Studies, following the link <https://www.ucy.ac.cy/graduateschool/postgraduate-programmes-places/> .

Applications must include the following:

1. Online application form.
2. Curriculum vitae.
3. Certified copies of degrees.
4. Transcript of academic records(s).
5. Cover letter, referring to his professional goals and interests, as well as possible research topics that they will be interested to focus on in the PhD, if selected.
6. Two letters of recommendation from academics, using the special form of the Department of Psychology.
7. Certificates of English language proficiency.
8. Sample of written work or scientific publication (either in English or Greek).

The Council of the Department of Psychology appoints a special three-member committee, consisting of at least two faculty members Clinical psychologists, another faculty member of the Department, and the Clinical Internship Coordinator who participates ex officio without a vote. Applications are examined in a two-step process. In the first step, the committee reviews applications to decide which participants to invite for an interview (usually 12-15 candidates). The criteria for

selection in the interview list include: a degree in Psychology from a recognized academic institution, grades in relevant courses as evidenced in the official transcript form, the content of the cover letter, knowledge of English and provision of 2 letters of recommendation. Each member of the committee reviews the applications and independently proposes the people they believe should be invited for an interview.

At the next stage, candidates who receive at least 2 votes are invited to the interview day. In addition, students invited for an interview receive a link to information regarding the research interests of faculty members who intend to undertake students. Candidates should complete and send a form, stating up to three faculty members with whom they would be interested in collaborating, based on their interests and stated topics. These faculty members will be invited by the committee to attend, if they wish, the candidate's interview.

In the interview of each candidate with the selection committee, both the research ability and the potential of the candidate as a future clinical psychologist will be assessed. The interview is semi-structured, and each member of the committee independently evaluates each candidate based on the following criteria:

1. Academic performance, based on the overall grade of the degree, additional academic achievements and content knowledge.
2. Letters of recommendation.
3. Publications and presentations at conferences.
4. Research knowledge and experience as presented in the interview.
5. Professional readiness and maturity as presented in the interview (e.g. ethical thinking, experience with clinical populations).

At the interview, interested potential supervisors will also be given time to ask candidates their own questions so that they can make their own ranking among candidates.

The Committee ranks the candidates in hierarchical order, according to the above criteria, from the 1st to the last for which they consider that they meet the minimum criteria for admission to the Programme. The first 5 to 9 are listed as successful candidates, and the others as runners-up. For each candidate, they also indicate the names of supervisors that the students declared. The Committee then contacts potential supervisors to complete the appointment of supervisors for successful candidates. If it is not possible to find a supervisor for one of the successful candidates, then he/she is removed from the list and the next runner-up is investigated.

The Selection Committee then submits its proposals to the Council of the Department, which is authorized to submit the final decision of the Department. The Department's proposal is then submitted for final approval by the School of Postgraduate Studies of the University of Cyprus.

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 had a Master's Degree in Psychology or a 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:

	ECTS
I. Academic Coursework	
Required Courses	22.5
<u>Three from the following courses:</u>	
PSY 790 Doctoral Seminar: Dissertation and Research Programme Development	7.5
PSY 789 Applied Data Analysis II (Prerequisite: PSY 604 Multivariate Statistics for the Behavioural Sciences)	7.5
PSY 788 Advanced Research Methods II 7.5 or PSY 749 Qualitative Research Methods in Psychology	7.5
Elective Courses	30
<u>Four from the following courses:</u>	
PSY 706 Neurophysiology	7.5
PSY 707 Family and Child Development	7.5
PSY 710 Advanced Seminar in Psychology	7.5
PSY 711 Psychopharmacology	7.5
PSY 712 Cognitive Science	7.5
PSY 713 Experimental Psychology	7.5
PSY 715 Language Development and Language Disorders	7.5
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
Elective Course	7.5
<i>Select 1 of the elective list courses or one from another postgraduate course in the department.</i>	
II. Comprehensive Examination and Doctoral Dissertation	
PSY 777 Preparation for Final Exam (optional) (1)	
PSY 800 Comprehensive Examination	15

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.

Courses	ECTS
PSY 869 Research Level IA	15
PSY 870 Research Level IB	15
PSY 871 Research Level IIA	15
PSY 872 Research Level IIB	15
PSY 873 Research Level III	30
PSY 874 Research Level IV	30
PSY 875 Writing Level IA	15
PSY 876 Writing Level IB	15
PSY 877 Writing Level IIA	15
PSY 878 Writing Level IIB	15
PSY 879 Writing Level III	1
PSY 880 Writing Level IV	1
PSY 881 Writing Level V	1
PSY 882 Writing Level VI	1
PSY 883 Writing Level VII	1
PSY 884 Writing Level VIII	1
PSY 885 Writing Level IX	1
PSY 886 Writing Level X	1
Eight Academic Courses (X 7.5 ECTS)	60
Comprehensive Examination	15
Research Levels	120
Dissertation Writing Levels	60
Grand Total	255

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 School of Postgraduate Studies. 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.
3. Submission and successful defence of a Doctoral dissertation proposal.
4. Completion and successful defence of a Doctoral dissertation.

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.

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 the 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 the course description on previous pages.

PSY 722 Social Psychological Dimensions of Migration (7.5 ECTS)

See the course description on previous pages.

PSY 730 Neuropsychological Assessment (7.5 ECTS)

See the course description on previous pages.

PSY 731 Cognitive Neuroscience: Understanding the Biology of the Mind (7.5 ECTS)

See the course description on previous pages.

PSY 741 Intergroup Relationships in Divided Societies (7.5 ECTS)

See the course description on previous pages.

PSY 746 Social Developmental Psychology of Intercultural Education (7.5 ECTS)

See the 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, the 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 the course description on previous pages.

PSY 790 Doctoral Seminar Dissertation and Research Programme Development (7.5 ECTS)

See the course description on previous pages.

RESEARCH INTERESTS OF THE ACADEMIC STAFF

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; Neurobiological and neurophysiological underpinnings of neuropsychological functioning; 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

Social interaction, learning and development; Co-operative learning; Genetic social psychology; Social representations of gender; Intergroup contact and intergroup relations; Intercultural education and integrated schools; Development of national identities; History teaching and collective memory.

Athanasios 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

Psychopathic traits (lack of empathy and moral judgment, narcissistic traits, and extreme impulsivity) that lead to particular forms of childhood aggression; The relationship between various types of parenting and adolescent abnormal adjustment outcomes (substance use & delinquency).

Andria Shimi, Assistant Professor

The development of attention and memory at the behavioural, neural, and genetic level in healthy and clinical child populations.

Alexandros Lordos, Assistant Professor

How the acquisition of life skills can contribute to mental health, employability and constructive citizenship outcomes; 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

Functional connectivity of cortical areas associated with tinnitus, as recorded by electroencephalographic measurements; 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**

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www.ucy.ac.cy/psych/en

Τμήμα Social and Political Sciences

www.ucy.ac.cy/sap/en

The Department of Social and Political Sciences promotes research and knowledge in the fields of Sociology, Political Science and Journalism. It offers undergraduate and postgraduate programmes in these three fields.

In addition, the Department offers the following programmes:

- M.A. in Political Science
- MA in Peace, Conflict and Democracy
- Ph.D. in Sociology
- Ph.D. in Political Science

The Department also participates in the consortium of universities offering the European Master in Human Rights and Democratisation. The Consortium consists of 41 universities from 28 European Union member states and constitutes an example of European inter-university co-operation.

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 M.A. in Peace, Conflict & Democracy is an 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

	ECTS
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

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
SPS 629 Internship	7.5
SPS 628 Special Topics in Peace, Conflict & Democracy	7.5
SPS 634 The Political Economy of Peace, Conflict and Democracy	7.5
Compulsory – Dissertation	30
SPS 632 Master's Thesis	30

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 or above.
3. International graduates must have the equivalent grade (e.g. UK universities must have a second-class honors degree (55+)).
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 6.5 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

	ECTS
Compulsory Courses	22.5
Elective Courses – Courses of Specialisation	37.5
MA Thesis	30
Grand Total	90

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.
- 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).

SPS 634 The Political Economy of Peace, Conflict and Democracy

This course seeks to understand the political economy of war, peace and democracy in a comparative perspective. It asks why peace and liberal democracy have prevailed in the West whereas states in the Global South have been characterized by a relative weakness to fulfill core functions, such as ensuring security, building markets, maintaining legitimacy across their territories, and providing equitable distribution of public goods. These deficiencies, in turn, contribute to conflict in various ways, such as triggering security dilemmas or rekindling ethnic and communal competition, as well as lead to the persistence of authoritarian forms of rule. The course seeks to answer these questions by contextualizing war, peace and democracy within the macro socio-historical changes that have happened in the global political economy since 1945. It connects war, peace and democracy to such political-economy themes as 'embedded liberalism', 'financialization', 'neoliberalism', 'precariat', 'populism', 'climate justice', 'development' and the 'rise of BRICs'.

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

[all three are compulsory for both specialisation directions]

- SPS 540 International Political Theory
- SPS 541 Regional and International Governance
- SPS 500 Research Methods

(2) Specialization Courses

a. 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

b. 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 a or b 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

	ECTS
First Semester	
3 Courses	22.5
SPS 540 International Political Theory	7.5
SPS 640 International Political Economy	7.5
SPS 642 International Law	7.5
SPS 643 Contemporary European Politics (or any other Optional Course for the specialisation in European Politics)	
Second Semester	
3 Courses	22.5
SPS 541 Regional and International Government	7.5
SPS 641 Diplomacy	7.5
SPS 644 European Political Economy	7.5
SPS 645 European Union as International Actor (or any other Optional Course for specialisation in International Relations)	
<i>Summer Semester: Optional Internship Programme (10 ECTS)</i>	
Third Semester	
2 Courses	15
SPS 500 Research Methods Optional Course	
Fourth Semester	
Dissertation	30

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:

	ECTS
Courses	60
Dissertation	30
Internship Programme (optional)	10

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, legitimisation, 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 case 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 Human Rights and Democratisation, the role of European 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 does its involvement differ depending on the level of integration in various policy fields? What are the changes due to its participation? What changes occur due to the existence of

the European External Action Service? How are 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.M.A. 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.M.A.)

Monastery of San Nicolò

26 Riviera San Nicolò

30126 Venice - Lido, Italy

Tel.: +39 041 2720911

E-mail: secretariat@eiuc.org

For more information:

- ec.europa.eu/external_relations/human_rights/ema/index_en.htm
- www.emahumanrights.org
- www.eiuc.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 co-operation 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:

	ECTS
Courses (credited by the M.A. programme)	60
Research (4 semesters x 30 ECTS)	120
Writing of Postgraduate Thesis (2 semesters x 30 ECTS)	60
Grand Total	240

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.

RESEARCH INTERESTS OF THE ACADEMIC STAFF

Kalliope Agapiou-Josephides, Associate 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 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

Diplomacy; International political theory; International rules, norms and exceptions; International conflicts; Politics of the Cyprus conflict.

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.

Antonis Ellinas, Professor

Comparative politics: Political parties, bureaucracies, media, political trust.

Adam Gemar, Lecturer

Inequalities; Social class; Culture; Sport; Religion; Education.

Nayia Kamenou, Lecturer

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; The role of women and gender in peace-building processes.

Iosif Kovras, Associate Professor

Transitional justice; Human rights; Conflict analysis and resolutions.

Iasonas 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 outselos, Assistant Professor

Comparative politics; Social movements; Immigration; Europeanisation processes.

Yiannis Papadakis, Professor

Nationalism; Ethnicity Ethnic Conflict; Borders; Social memory; History education; Cypriot cinemas; Migration; Social emocracy; Cemeteries in a comparative perspective.

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, inter-nationalisation 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; Theories of the state and of social classes, civil society and social movements.

Dimitris Trimithiotis, Assistant Professor

New production; Media discourse; Political communication; Digital journalism; Peace journalism; Research methods.

Eren Duzgun, Assistant Professor

International relations theory; Historical sociology; Political economy.

Evgenia Mesaritou, Lecturer

Pilgrimage; Religion; Displacement; Conflict and peace building; Memory and cultural heritage.

Contact Details**COORDINATOR OF M.A. IN PEACE,
CONFLICT AND DEMOCRACY**

Yiannis Papadakis, Professor

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**COORDINATOR OF MA IN POLITICAL
SCIENCE IN INTERNATIONAL RELATIONS
AND EUROPEAN POLITICS**

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COORDINATOR OF THE EUROPEAN MASTER

Kalliope Agapiou-Josephides, Assistant Professor,

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DEPARTMENT SECRETARIAT

Stavroula Stavrou-Sofroniou

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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

Ηγεσία ΠΚ

University Council Chairperson's Office	22894350/4011	
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Vice-Rector's Office (International Affairs, Finance and Administration)	22894005	vrectorf@ucy.ac.cy
Director of Administration and Finance	22894013	director@ucy.ac.cy

Faculties/Department

HUMANITIES	22894202	fhs@ucy.ac.cy
English Studies	22892101/2	english@ucy.ac.cy
French and European Studies	22894389/90/93	french@ucy.ac.cy
Turkish and Middle Eastern Studies	22893950	tus@ucy.ac.cy
PURE AND APPLIED SCIENCES	22892233	fpas@ucy.ac.cy
Biological Sciences	22892894	biol@ucy.ac.cy
Mathematics and Statistics	22892600	commas@ucy.ac.cy
Computer Science	22892700	cs@cs.ucy.ac.cy
Physics	22892820/6	phy@ucy.ac.cy
Chemistry	22892780/800	chem@ucy.ac.cy
MEDICAL SCHOOL	22894352	med@ucy.ac.cy
SOCIAL SCIENCES AND EDUCATION	22893420/1	fsse@ucy.ac.cy
Education	22892940/1/2	csoe@ucy.ac.cy
Social and Political Sciences	22894560/1	sap@ucy.ac.cy
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Psychology	22892070/86	cpay@ucy.ac.cy
GRADUATE SCHOOL	22894044	fgs@ucy.ac.cy
ECONOMICS AND MANAGEMENT	22893660	fem@ucy.ac.cy
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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	isa@ucy.ac.cy
Classics and Philosophy	22893850	classics@ucy.ac.cy

Research Units/Institutes

Archaeological Research Unit	22893560	archlgy@ucy.ac.cy
FOSS Research Centre for Sustainable Energy	22894396/21	foss@ucy.ac.cy
Centre for Medieval Arts and Rituals (CeMAR)	22893976	cemar@ucy.ac.cy
Centre for Applied Neuroscience	22895190	can@ucy.ac.cy
Research Centre "EMPHASIS"	22893812	emphasis@ucy.ac.cy
The Petrondas Institutes of Modern Greek Studies	22893825	petrondas@ucy.ac.cy
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Centre for Teaching and Learning	22894546	kedima@ucy.ac.cy
Economics Research Centre	22893214	erc@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	22892028/5289	smgreek@ucy.ac.cy
Oceanography Centre	22893989	

Centres of Research Excellence

PHAETHON Research and Innovation Centre	22894321	phaethoncoe@ucy.ac.cy
Research Centre for Intelligent Systems and Networks "KOIOS"	22893450/1	kios@ucy.ac.cy
Centre of Excellence and Biomedical Research, biobank.cy	22892815/82	biobank@ucy.ac.cy

Administrative Services

Human Resources Service	22894177	hr@ucy.ac.cy
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The Information Centre-Library "Stelios Ioannou"	22892020	lib@ucy.ac.cy
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Information Infrastructure Service	22895100	itis@ucy.ac.cy
Information Systems Service	22892130	ias@ucy.ac.cy
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Technical Services	22894200	ts@ucy.ac.cy
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Other Organized Entities

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Centre for Entrepreneurship (C4E)	22895110	encenter@ucy.ac.cy
Career Centre	22894057	careers@ucy.ac.cy
Registry.cy	22892127	domains@nic.cy
"Lito Papachristophorou" Preschool and the University of Cyprus Nursery School	22894136/4150	nursery@ucy.ac.cy
Cyprus University Press (	22894314	pek@ucy.ac.cy
Cultural Centre "Michalis Pieris"	22894531	culture@ucy.ac.cy
Radio Station (UCY Voice)	22895140	ucyvoice@ucy.ac.cy
Student Welfare Fund	22894052	
Student Union (FEPAN)	22894026	fepan@ucy.ac.cy

Other Services

Sports Centre	22894182	acenter@ucy.ac.cy
Payroll Office	22894156/60	payroll.office@ucy.ac.cy
University Development and Alumni Relations Office	22894305	alumni@ucy.ac.cy
Diversity, Equality and Inclusivity Office	22894451/4363	diversity@ucy.ac.cy
Events Office	22894347	events@ucy.ac.c
Express Services Office	22895555	express@ucy.ac.cy
Communication and Public Relations Office	22894304/5	prinfo@ucy.ac.cy
Health Centre (Kallipoleos)	22895280	
Health Centre (UCY Campus)	22895270	
Mental Health Centre	22892136	mentalhealth@ucy.ac.cy
Legal Counsellor of the University of Cyprus	22894358	
Access to Information Officer	22894361/42	info-ucy@ucy.ac.cy
Personal Data Protection Officer	22894361/42	dpo@ucy.ac.cy
Guard, Kallipoleos Old Campus	22892011	
Guard, University House Anastasios G. Leventis	22894055	

Shops/Restaurants/Cafe

Parga Book Centre/UCY Copy Centre	22022876	
Hellenic Bank (CC)*	22501713	
Commercial Activities Management Section	22894174	opsdir@ucy.ac.cy
Restaurant (ground floor SFC 01)	22895135	
Restaurant (Kallipoleos)	22892012	
Cafe at the Learning Resource Center "Stelios Ioannou"	22893765	
Cafe at the Sport Centre	22894054	
Cafe at Shacolas Educational Centre for Clinical Medicine	22893764	
Clinical Laboratory MEGALAB - Hemoleptic UCY	22771004	
Canteen (University House "A.G. Leventis)	22894425	
Canteen (SFC 01)	22893763	
Canteen (SFC 02)	22893762	
Non-profit organisation "Emprace Life"	97877354	
Mini Market (CC)*	22895139	
Bank of Cyprus (CC)*	22129832	
Unidog Sports Burger Bar	22251177	

* CC = Commercial Centre



Postgraduate Prospectus 2025-2027