Πανεπιστήμιο Κύπρου
University of Cyprus

SCHOOL OF ECONOMICS AND MANAGEMENT

DEPARTMENT OF ECONOMICS

UNDERGRADUATE PROSPECTUS

ACADEMIC YEAR 2020-21

Contents

ADMINISTRATION AND ACADEMIC STAFF

CHAIRPERSON	**VICE-CHAIRPERSON**
Sofronis Clerides	Kourtellos Andros

Academic Staff

Andreou Elena	Professor
Aristodemou Eleni	Lecturer
Chassamboulli Andri	Assistant Professor
Clerides Sofronis	Professor
Hadjiyiannis Costas	Associate Professor
Hassapis Christis	Associate Professor
Kasparis Ioannis	Associate Professor
Kourtellos Andros	Associate Professor
Louis Philippos	Lecturer
Lyssiotou Panayiota	Associate Professor
Mamuneas Theofanis	Professor
Michael S. Michael	Professor
Michaelides Marios	Assistant Professor
Pissarides Christoforos	Professor
Theodoropoulos Nikos	Assistant Professor
Tryphonides Andreas	Lecturer
Tsakas Nikolas	Assistant Professor
Xefteris Dimitrios	Assistant Professor
Zachariadis Marios	Professor
Ziros Nicholas	Associate Professor

EMERITUS PROFESSOR

Christofides Louis

ADMINISTRATIVE ASSISTANTS

Demetriou Anastasia
Tsiali Litsia

Address:	1 Panepistimiou Avenue, 2109, Aglantzia
	P.O. Box 20537, 1678 Nicosia. CYPRUS
Tel:	+357-22893701/2
Fax:	+357-22895028
Web site:	http://ucy.ac.cy/econ/en/
Email:	dept.econ@ucy.ac.cy

INTRODUCTION

Economics is important because it deals with the behaviour of human beings both as individuals and as organised society. As individuals, we continuously face economic problems, such as whether and how much to save, what goods and services to purchase, and how to increase and use our income to satisfy the multitude of our economic needs. Also, every society faces a continuously changing international economic problems at home such as inflation, unemployment and balance-of-payments disequilibrium. A nation's effective solution to these problems determines its standard of living and consequently it's ranking in the international community.

Understanding the economic behaviour of the individual and the basic principles that govern the functioning of a modern economy enables the economist to evaluate economic indicators and information correctly and to make rational decisions. With such knowledge the economics graduate can pursue a career in civil service, banking, education, or research and earn an important position in the public or private sector.

With the contemporary, high quality economics program offered by the Department, its graduates are in a position to compete effectively with the graduates of any other university. In addition, they have the necessary prerequisites for pursuing graduate studies either at the University of Cyprus or at foreign universities of international reputation. Many of our graduates have been admitted to prestigious graduate programs in the UK and the USA some with very generous scholarships. Upon graduation from doctoral programs, several of these students have been able to obtain academic positions abroad.

The following pages describe the aim of the Department as well as the Program of Studies leading to a degree in economics. They also give information about graduate studies and the academic staff of the Department.

1. AIM OF THE DEPARTMENT

The aim of the Department of Economics is to promote and disseminate economic knowledge. The professors of the Department are active researchers who contribute to the development of economics by participating in international research projects. Their experiences are transferred to the classrooms, so that our students can be recipients of the latest economic knowledge and modern scientific research methods.

The Department's study programs provide students with the resources to successfully apply for admission to postgraduate programs at top universities abroad. In recent years, our students have been accepted with full scholarships in the doctoral programs of the University of Rochester, Washington U. St Louis, University of Illinois, and the University of Southern California. Students have also secured positions in master's degree programs at universities such as the London School of Economics and Imperial College. Three of our 19 academic staff members are

graduates of the Department who did their doctoral studies at very good US universities and returned to the Department as professors.

The strong background that our students acquire also gives them the opportunity to claim attractive jobs both in Cyprus and in Europe. Many of our students choose to specialize in accounting, while others choose different areas such as banking, finance, marketing, risk management and more.

Students who choose accounting can secure exemptions from certain vocational training exams such as ACCA and ACA by attending specific courses at the University of Cyprus. Those who choose Accounting as a minor degree receive almost the same number of exemptions as the students of the Degree in Accounting.

2. ADMINISTRATIVE STRUCTURE

The Department of Economics is part of the School of Economics and Management. It is run by the Board of the Department. The Board elects the Chair of the Department every two years.

The Department is located in 1 Panepistimiou Avenue, FEB02 Building, 1st floor. Students can communicate with the teaching staff during office hours which are announced on the notice board located in the lobby of the Departmental building. Students are strongly advised to consult with the Departmental notice board regularly as many announcements about changes in their teaching and examination schedules and other important information are communicated to them in this way or by electronic mail.

3. ADMISSIONS AND REGISTRATION

The academic year consists of two semesters and student registration takes place during the first week of each semester. Uninterrupted attendance is compulsory for all courses. Students are expected to complete their undergraduate studies in eight semesters but this can be extended to a maximum of twelve semesters in exceptional circumstances. Also in exceptional circumstances students can be eligible for leave of absence for a maximum of two semesters. Students are not granted leave of absence to prepare for the University entrance examinations in order to change to another degree course. Also, students applying for leave of absence 'for personal reasons' must consult with the Academic Affairs and Students Welfare Service.

Student wishing to change from one degree course to another within the Department can do so provided that this does not violate Departmental regulations (see degree requirements below). Students wishing to transfer to another Department of the University must apply during the second semester of their studies. Such transfers are subject to the approval of the Board of the admitting Department.

Each student of the Department has a member of the teaching staff as her/his academic advisor. Academic advisors provide students with advice on all matters related to their academic studies. They also follow the academic progress of their students and examine whether the courses chosen satisfy the degree requirements. Students are expected to consult with their academic advisor regularly throughout their studies and keep her/him informed about their academic progress.

Each semester students are required to attend 27-30 ECTS. Students can apply to the Board of the Department for permission to enrol to courses adding to more than 30 ECTS in one semester. The policy of the Department is to discourage students from over- burdening their studies in any one semester.

Students are responsible for selecting their semester courses and for consulting their advisor to confirm that their selection satisfies the formal degree requirements. Students can withdraw from a course and/or select more courses during the first three weeks of the semester. Withdrawal from a course before the seventh week of the semester is also possible; in this case however this will appear in the course transcript.

4. GRADING SYSTEM

The grading of students for a given course is based on written and/or oral final examinations, mid-term examinations, written or other assignments, class work and class participation and other methods decided by the instructor and approved by the Board of the Department. The particular combination and weighting of the grading methods applied to each course are defined in the course description handed to the students during the first week of the semester. The dates of the mid-term examinations are also announced in the course description.

The grading is on a scale 0-10 with .5 intervals. The lowest pass mark is 5. Marks between 5 and 5,49 are graded 'satisfactory', between 5,5 and 6,49 'good', between 6,5 and 8,49 'very good', between 8,5 and 9,49 'excellent' and between 9,5 and 10 'distinction'. The degree award is on the basis of the weighted average grade achieved in all courses. The marks obtained in each course are given in the course transcript. The weight given to each course in grading the degree award is described below.

A student can be given an 'incomplete mark' in a course only under substantiated exceptional circumstances (e.g. illness). The procedure for a mark to be deemed incomplete is as follows: (i) the instructor of the course, after obtaining the approval of the Head of Department, must complete and submit to the Board of the Department and the University the incomplete mark form and (ii) there must be provisions for completing the mark before the end of the following semester. If the mark is not completed by the time agreed, then the incomplete mark is changed to '0' and this becomes the final mark for the course.

Students must repeat compulsory courses they have failed. Students who failed an optional course are allowed to repeat the same course or choose another optional course. All course failures are reported in the student's academic transcript. Students wishing to attend a course for which there is a prerequisite that they failed must have the permission of the instructor of the course.

A student can appeal to the Department for her/his final course mark, requesting for his examination paper to be re-marked. This request has to be made in writing to the Chair of the Department. The instructor of the course re-examines the paper and makes a recommendation to the Board of the Department which communicates to the student its decision on her/her final mark for the course. The new mark awarded can be the same, higher or lower than the previous mark.

Students are expected to know of and abide by the University regulations. Plagiarism or other forms of examination deceit and attempts to influence in any way the instructor to secure a higher mark are considered punishable offences and will be referred to the University Disciplinary Committee for further action. The University regulations are available from the Student Affairs Office of the University.

Deferral of Academic Studies

Students who wish to defer their studies have to apply to the Board of the Department which decides whether to approve or disapprove the application with simple majority. The Chair of the Department informs the student in writing about the decision of the Board and also sends this information to the Academic Affairs and Students Welfare Service.

The process of granting deferral of studies should be completed by the end of the first week of classes. The total period of deferral of studies should not exceed two academic semesters. The academic semester(s) that the student deferred her/his studies does not count in the duration of her/his academic studies.

Temporary Interruption of Academic Studies

A student can apply for temporary interruption of her/his studies during the semester due to serious medical reasons. The application must be submitted to the Board of the Department and also send to the Academic and Students Welfare Service. The duration of the interruption of studies can be up to two academic semesters and afterwards the situation is re-examined. The academic semester(s) that the student interrupted her/his studies does not count in the duration of her/his academic studies.

5. PRIZES

The Department awards a number of prizes to the best students. The awards are made by the Board of the Department purely on the basis of academic merit.

6. UNDEGRADUATE DEGREE PROGRAMMES

The Department of Economics offers two undergraduate programs, one in Economics and one in Mathematics and Economics. It also offers to students in other programs the opportunity to obtain a minor in Economics.

1. Degree in Economics (ECO)

The Degree in Economics is a standard economics program, similar to those offered by many international universities. It provides a solid background in economics that prepares students who wish either to continue their studies in economics or to specialize in disciplines such as accounting, finance, administration, etc.

2. Degree in Mathematics and Economics

The Degree in Mathematics and Economics is an interdisciplinary program offered in collaboration with the Department of Mathematics and Statistics. Its graduates are particularly attractive in sectors that require very good mathematical and analytical skills, such as finance, actuarial and risk management.

DEGREE IN ECONOMICS

Degree requirements

In order to graduate with a Degree in in Economics students must complete at least 240 ECTS. The Economics program is flexible and allows students to either pursue general studies in economics or to specialize by choosing either a major or another minor. Specifically, students have the following options:

1. General Curriculum
2. Specialization in Economic Theory and Econometrics (ETE)
3. Specialization in International, European and Economic Studies (IEES)
4. General Curriculum with a Minor in a different field

All options above result in a degree in Economics.

The breakdown of credit units (ECTS) of the program for each specialization is shown in the table below:

	General Curriculum	Specialization ETE	Specialization IEES	General with a Minor
Compulsory Courses				
Economics Department	89	95	89	89
Other Departments	39	39	39	39
Restricted Elective Courses				
Economics Department	66	60	42	42
Economics Department or other Departments	24-26	24-26		
Other Departments			50	48-50
Unrestricted Electives	20-22	20-22	20	20-22
Total	**240**	**240**	**240**	**240**
Minimum ECTS from ECO	155	155	131	131

The first three semesters of study are common to all students. In the fourth semester two groups of microeconomic, macroeconomic and econometric courses are offered: ECO 261/262/263 for students who choose the ETE specialization and ECO 251/252/253 will for all other students. Students who choose the IEES or Minor will be able to start choosing electives in the fourth semester.

6.1. DEGREE IN ECONOMICS - Specialization: General

Degree Requirements:

To graduate in Economics students must complete at least **240*** ECTS. In addition, the following requirements must be fulfilled:

1. At least 155 ECTS must be in the Department of Economics (courses with code ECO) and concern compulsory ECO courses (89 ects) and restricted elective ECO courses (11 courses X 6 ects = 66 ects).

2. At least 24 ECTS can be either from the Department of Economics or from the list of restricted elective courses from AFN/BPA/MAS departments (see below). From the AFN and BPA departments, students can choose any courses. From the MAS department students can choose courses from the list below.

3. At least 20 ECTS must be elective courses taken from at least three different faculties of the University.
   Students are entitled to attend Sport courses up to 6 ECTS.

4. 24 ECTS must be come from courses MAS001, MAS061, CS003 and CS032, which students attend during the first year of studies.

5. 15 ECTS must be from the English Language courses (LAN 100, LAN 101, LAN 209).

* The sum of the minimum ECTS of requirements 1-5 is 238 ECTS. Therefore, one more course would have to be taken from requirements 1-3 in order to complete at least 240 ECTS that are required for the degree.

Academic Program per Semester

This section presents the Academic Program leading to the degree in Economics (General). The program is laid out by semester, and courses offered by the Department of Economics are coded by "ECO". The courses, which students will have to take from other Departments have analogous codes.

1ST YEAR		
Semester 1		**ECTS**
ECO 111	Principles of Microeconomics	7
MAS 001	Mathematics I	6
MAS 061	Statistical Analysis	6
CS 003	Computer Science and Information Systems	6
LAN 100	General Advanced English	5

Semester 2		
ECO 121	Principles of Macroeconomics	7
ECO 112	Application of Quantitative Methods in Economics (MAS 061)	7
ECO 113	Mathematics for Economists I (MAS 001)	7
LAN 101	Academic English	5
CS 032	Introduction to Computer Science & Information Systems	6
2ND YEAR		
Semester 3		
ECO 211	Microeconomic Theory (ECO 111)	7
ECO 221	Macroeconomic Theory (ECO 121)	7
ECO 222	Introduction to Econometrics (ECO 112)	7
ECO 223	Mathematics for Economists II (ECO 113)	7
Semester 4		
ECO 251	Topics in Microeconomics (ECO 211)	7
ECO 252	Topics in Macroeconomics (ECO 221)	7
ECO 253	Econometric Methods (ECO 222)	7
LAN 209	Advance English for Global Communications	5
Elective Course		5
3RD YEAR		
Semester 5		
4 Restricted Elective courses (4X6)		24
1 Elective Course		6
Semester 6		
4 Restricted Elective courses (4X6)		24
1 Elective Course		6
4TH YEAR		
Semester 7		
ECO 397	Research Methods in Applied Economics I (ECO112, ECO211, ECO221)	6
4 Restricted Elective courses (4X6)		24
Semester 8		
ECO 497	Research Methods in Applied Economics II (ECO397)	6
3 Restricted Elective courses (3X6)		18
1 Elective Course		5
Note: Courses in brackets are prerequisites		

6.2. DEGREE IN ECONOMICS - Specialization: Economic Theory and Econometrics

Degree Requirements:
To graduate in Economics students must complete at least **240*** ECTS. In addition, the following requirements must be fulfilled:

1. At least 155 ECTS must be in the Department of Economics (courses with code ECO) and concern compulsory ECO courses (95 ects) and restricted elective ECO courses (10 courses X 6 ects = 60 ects).

2. At least 12 ECTS must be a MAS course (from the Mathematics and Statistics Department, see list below) or an ECO course with code 5XX (ECO501, ECO502, ECO503, ECO551, ECO 552, ECO553).

3. At least 12 ECTS can be either from the Department of Economics or from the list of restricted elective courses from AFN/BPA/MAS departments (see below). From the AFN and BPA departments, students can choose any courses. From the MAS department students can choose courses from the list below.

4. At least 20 ECTS must be elective courses taken from at least three different faculties of the University.
   Students are entitled to attend Sport courses up to 6 ECTS.

5. 24 ECTS must be come from courses MAS 001, MAS 061 and CS 003, CS032 which students attend during the first year of studies.

6. 15 ECTS must be from the English Language courses (LAN 100, LAN 101, LAN 209).

__* The sum of the minimum ECTS of requirements 1-6 is 238 ECTS. Therefore, one more course would have to be taken from requirements 1-4 in order to complete at least 240 ECTS that are required for the degree.__

Academic Program per Semester

This section presents the Academic Program leading to the degree in Economics with specialization in Economic Theory and Econometrics. The program is laid out by semester, and courses offered by the Department of Economics are coded by "ECO". The courses, which students will have to take from other Departments have analogous codes.

1ST YEAR		
Semester 1		**ECTS**
ECO 111	Principles of Microeconomics	7
MAS 001	Mathematics I	6
MAS 061	Statistical Analysis	6
CS 003	Computer Science and Information Systems	6
LAN 100	General Advanced English	5
Semester 2		
ECO 121	Principles of Macroeconomics	7
ECO 112	Application of Quantitative Methods in Economics (MAS 061)	7
ECO 113	Mathematics for Economists I (MAS 001)	7
LAN 101	Academic English	5
CS 032	Introduction to Computer Science & Information Systems	6
2ND YEAR		
Semester 3		
ECO 211	Microeconomic Theory (ECO 111)	7
ECO 221	Macroeconomic Theory (ECO 121)	7
ECO 222	Introduction to Econometrics (ECO 112)	7
ECO 223	Mathematics for Economists II (ECO 113)	7
Semester 4		
ECO 261	Advanced Microeconomics (ECO 211)	7
ECO 262	Advanced Macroeconomics (ECO 221)	7
ECO 263	Advanced Econometrics (ECO 222)	7
LAN 209	Advance English for Global Communications	5
1 Elective Course		5
3RD YEAR		
Semester 5		
ECO 415	Game Theory (ECO251 or ECO261)	6
3 Restricted Elective courses (3X6)		18
1 Elective Course		6
Semester 6		
4 Restricted Elective courses (4X6)		24
1 Elective Course		6
4TH YEAR		
Semester 7		
ECO 397	Research Methods in Applied Economics I (ECO112, ECO211, ECO221)	6
4 Restricted Elective courses (4X6)		24

Semester 8		
ECO 497	Research Methods in Applied Economics II (ECO397)	6
3 Restricted Elective courses (3X6)		18
1 Elective Course		5
Note: Courses in brackets are prerequisites		

Restricted Electives from the Department of Economics		
Code	Course name	ECTS
ECO 305	International Trade (ECO 211)	6
ECO 306	International Finance (ECO 221)	6
ECO 308	Economic Development (ECO 221)	6
ECO 309	Economic Growth (ECO 221)	6
ECO 310	Money, Banking and Financial Markets (ECO 221)	6
ECO 311	Labour Economics (ECO 211)	6
ECO 312	Industrial Organisation (ECO 211)	6
ECO 313	Public Economics (ECO 211)	6
ECO 315	International Taxation and National Tax Policy (ECO 211)	6
ECO 316	Economics of the European Union (ECO 111)	6
ECO 317	Topics in European Economics Integration (ECO 221)	6
ECO 320	History of Economic Thought	6
ECO 324	Introduction to Political Economy and Public Policy (ECO 211)	6
ECO 327	Environmental Economics (ECO 211)	6
ECO 331	Productivity and Technology (ECO 211)	6
ECO 355	Topics in International Economics (ECO 211)	6
ECO 362	Structure and Strategy of Firms (ECO 312)	6
ECO 363	Regulation Theory and Policy (ECO 211)	6
ECO 370	Topics in Financial and Monetary Economics (ECO 111, ECO 221)	6
ECO 391	Placement in Organizations I	6
ECO 392	Placement in Organizations II	6
ECO 398	Topics on the Cyprus Economy (ECO 211, ECO 221)	6
ECO 415	Game Theory (ECO251 or ECO261) – **Compulsory for ETE**	6
ECO 473	Applied Econometrics (ECO253 or ECO263)	6
Note: The courses in brackets are prerequisites		

Restricted Elective courses offered by other departments:

- Students can select any elective courses offered from Accounting and Finance Department (AFN) and Business and Public Administration Department (BPA). Certain courses have prerequisites.

- The following courses from the Department of Mathematics and Statistics:

Code	Course name	ECTS
MAS 007	History of Mathematics	5
MAS 101	Calculus I	8
MAS 102	Calculus II	8
MAS 121	Linear Algebra I	8
MAS 131	Basic Mathematics	7
MAS 261	Probability I (MAS 101, MAS 102)	7
MAS 262	Statistics I	7
MAS 271	Numerical Analysis I	7
Courses in brackets are prerequisites		

Notes:

a. Elective courses in the Economics Department may not be offered when there is not sufficient demand or the required teaching staff.

b. *Restricted elective* courses include all courses offered by the Department ad selected courses from other departments of the University.

   Unrestricted elective courses can be any course offered by any other department of the University but must come from three different faculties.

   Students can choose their restricted or unrestricted electives in any semester based on their schedule/

   Courses can take more ECTS than listed in the examples above provided the total credit load does not exceed the permitted limits per semester.

c. Fourth year students can take up to <u>two</u> of the six postgraduate courses listed below, given that their grade point average is at least 7.5.

ECO 501 Microeconomic Analysis I (7.5 ECTS)
ECO 502 Macroeconomic Analysis I (7.5 ECTS)
ECO 503 Statistics and Econometrics I (7.5 ECTS)
ECO 551 Microeconomic Analysis II (7.5 ECTS)
ECO 552 Macroeconomic Analysis II (7.5 ECTS)
ECO 553 Statistics and Econometrics II (7.5 ECTS)

6.3. DEGREE IN ECONOMICS - Specialization: International, European and Economic Studies

To graduate with a degree in International, European and Economic Studies, students must complete at least **240*** ECTS. In addition, the following requirements must be fulfilled:

1. At least 131 ECTS must be from the Department of Economics (course codes ECO) from which 89 ECTS refer to compulsory courses and restricted elective ECO courses (7 courses X 6 ects = 42 ects). **At least 4** courses of the 7 courses must be chosen from the below list.

2. At least 20 ECTS as free electives. These courses have to be taken in at least three different Schools of the University.
   Students are entitled to attend Sport courses up to 6 ECTS.

3. At least 6 ECTS must be from a list of specific courses from the Department of Social and Political Sciences (course codes SPS).

4. At least 6 ECTS must be from a list of specific courses from the Department of Law (course codes LAW).

5. At least 5 ECTS must be from a list of specific courses from the Department of   History and Archaeology (course codes HIS).

6. At least 18 ECTS must be from the Departments AFN/BPA/HIS/LAW/SPS. From the Department of Accounting and Finance (course codes AFN) and from the Department of Business and Public Administration (course codes BPA), students can choose any courses. From the Departments HIS, LAW and SPS students can choose courses from the list below.

7. At least 15 ECTS from English Language courses.

8. At least 15 ECTS from courses of another foreign language (3 levels required).

9. 24 ECTS must be come from courses MAS 001, MAS 061 and CS 003, CS032 which students attend during the first year of studies.
   * If the sum of the minimum ECTS of the above requirements is less than 240 ECTS, one more course should be taken from requirements 1-6 in order to complete at least 240 ECTS that are required for the degree.

At least 16 restricted electives (92 ECTS) are required:

- **7 courses** (42 ECTS) must be ECO restricted electives. At least 4 of them must be chosen from the following list:

CODE	Course name	ETCS
ECO 305	International Trade (ECO 211)	6
ECO 306	International Finance (ECO 221)	6
ECO 315	International Taxation and National Tax Policy (ECO 211)	6
ECO 316	Economics of the European Union (ECO 111)	6
ECO 317	Topics in European Economics Integration (ECO 221)	6
ECO 320	History of Economic Thought	6
*Courses in brackets are prerequisites		

- **One course** (5 ECTS) from HIS Department from the list below.
- **One course** (6 ECTS) from SPS Department from the list below.
- **One course** (6 ECTS) from LAW Department from the list below.
- **Three courses** (15 ECTS) in **one** language other than English.
- **Three courses** (18 ECTS) from AFN/BPA/HIS/LAW/SPS departments. Any course from AFN and BPA can be chosen. HIS, LAW and SPS courses can only be chosen from the catalogues below.

Department of History and Archaeology (HIS):		
Code	Course name	ECTS
HIS 181	Introduction to European History (1789-1918)	5
HIS 281	European Diplomatic History, 20th century	5
HIS 283	European History 1945-1989 (HIS 181)	5
HIS 285	Europe 1918-1945 (HIS 181)	5
HIS 290	Institutions of Medieval Europe	5
*Courses in brackets are prerequisites		

Department of Social and Political Sciences (SPS):		
Code	Course name	ECTS
SPS 152	Comparative Politics	6
SPS 153	International Relations	6
SPS 156	European Integration	6
SPS 266	Political System of the European Union	6
SPS 361	Cyprus and the European Union	6
SPS 362	Politics of the European Union	6

Department of LAW (LAW):		
Code	Course name	ECTS
LAW 201	European Union Law I*	6
LAW 202	European Union Law II*	6
LAW 205	Public International Law I	6
LAW 206	Public International Law II	6
*Students who wish to pursue the course combination LAW 201 and LAW 202 are encouraged to take the introductory course LAW101 Introduction to legal Method and the Study of Law (6ECTS) as an elective course.		

Academic Program per Semester

This section presents the Academic Program leading to the degree in Economics with specialization in International European and Economic Studies. The program is laid out by semester, and courses offered by the Department of Economics are coded by "ECO". The courses, which students will have to take from other Departments have analogous codes.

1ST YEAR		
Semester 1		ECTS
ECO 111	Principles of Microeconomics	7
MAS 001	Mathematics I	6
MAS 061	Statistical Analysis	6
CS 003	Computer Science and Information Systems	6
LAN 100	General Advanced English	5

Semester 2		
ECO 121	Principles of Macroeconomics	7
ECO 112	Application of Quantitative Methods in Economics (MAS 061)	7
ECO 113	Mathematics for Economists I (MAS 001)	7
LAN 101	Academic English	5
CS 032	Introduction to Computer Science & Information Systems	6
2ND YEAR		
Semester 3		
ECO 211	Microeconomic Theory (ECO 111)	7
ECO 221	Macroeconomic Theory (ECO 121)	7
ECO 222	Introduction to Econometrics (ECO 112)	7
ECO 223	Mathematics for Economists II (ECO 113)	7
Semester 4		
ECO 251	Topics in Microeconomics (ECO 211)	7
ECO 252	Topics in Macroeconomics (ECO221)	7
ECO 253	Econometric Methods (ECO 222)	7
LAN 209	Advance English for Global Communications	5
1 Elective Course		5
3RD YEAR		
Semester 5		
4 Restricted Elective courses (4X6)		24
1 Elective Course		6
Semester 6		
2 Restricted Elective courses (2X6)		12
1 Restricted Elective course		7
1 Elective Course		6
LAN	Language – 1st level	5
4TH YEAR		
Semester 7		
ECO 397	Research Methods in Applied Economics I (ECO112, ECO211, ECO221)	6
2 Restricted Elective courses (2X6)		12
1 Restricted Elective course		7
LAN	Language – 2nd level	5

Semester 8		
ECO 497	Research Methods in Applied Economics II (ECO397)	6
2 Restricted Elective courses (2X6)		12
1 Elective Course		6
LAN	Language – 3rd level	5
Note: Courses in brackets are prerequisites		

6.4. DEGREE IN ECONOMICS - General Program with a Minor:

At least 90 ECTS in restricted electives are required:

- **At least 42 ECTS** (7 courses) from Economics.
- **At least 48 ECTS** from the department of the minor.

In order to complete the 60 ECTS required for a minor, students should take 12 ECTS from their free electives in courses for the minor.

6.5. DEGREE IN MATHEMATICS AND ECONOMICS

Degree Requirements:

To graduate with a degree in **Mathematics and Economics**, students must complete at least **240*** ects. In addition, the following requirements must be fulfilled:

1. At least 171 ects must be from compulsory courses of the Department of Mathematics and Statistics and the Department of Economics.

2. At least 32 ects must be from restricted elective courses from the Department of Mathematics and Statistics and the Department of Economics (in addition to those included in the 113 ects in (1) above.

3. At least 15 ects must be elective courses taken from at least two different Faculties of the University.
Students are entitled to attend Sport courses up to 6 ects.

4. 15 ects must be from the English Language courses (LAN 100, LAN 101, LAN 209).

* The sum of the minimum ects of requirements 1-4 is 233 ects. Therefore, one or two more courses would have to be taken from requirements 1-3 in order to complete at least 240 ects that are required for the degree.

Program of studies in Mathematics and Economics by Semester

This section presents the Academic Program leading to the degree in Mathematics and Economics. The program is laid out by semester, and courses offered by the Department of Economics are coded by "ECO". The courses, which students will have to take from other Departments have analogous codes.

1st YEAR		
1st Semester		**ΠΜ**
ECO 121	Principles of Macroeconomics	7
MAS 133	Sets and Algebraic Structures	7
MAS 131	Basic Mathematics I	7
LAN 100	General Advanced English	5
Elective course		5
2nd Semester		
MAS 101	Calculus I	8
MAS 132	Basic Mathematics II (MAS 131)	7
ECO 113	Mathematics for Economists I	7
ECO 111	Principles of Microeconomics	7
2nd YEAR		
3rd Semester		
MAS102	Calculus II (MAS 101)	8
MAS 121	Linear Algebra I	8
MAS 261	Probability I (MAS101, MAS 102)	7
ECO 221	Macroeconomic Theory (ECO 121)	7
4th Semester		
MAS 202	Multivariable Integral calculus	7
ECO 112	Application of Quantitative Methods in Economics (MAS 261)	7
MAS 262	Statistics I	7
ECO 262	Advanced Macroeconomics (ECO221)	7
Elective course		3

3rd YEAR		
5th Semester		
MAS/CS/ECO	Restricted Elective course: Option A1 (or B)	7
MAS/CS/ECO	Restricted Elective course: Option A1 (or B)	7
LAN101	Academic English	5
ECO 211	Microeconomic Theory (ECO111)	7
Elective course		
6th Semester		
ECO 261	Advanced Microeconomics (ECO211)	7
ECO 263	Advanced Econometrics (ECO112)	7
MAS 122	Linear Algebra II	8
MAS 203	Ordinary Differential Equations I	7
4th YEAR		
7th Semester		
MAS 350	Stochastic Processes (MAS261)	7
MAS 301	Real Analysis	8
ECO 397	Research Methods in Applied Economics I (ECO112, ECO211, ECO221)	6
Restricted Elective course: Option B		6
Elective course		3
8th Semester		
ECO 497	Research Methods in Applied Economics II (ECO397)	6
ECO/MAS	Restricted Elective course: Option B or A2	6
ECO/MAS	Restricted Elective course: Option B or A2	6
LAN 209	Advance English for Global Communications	5
Elective course or Restricted Elective course: Option (B or A1 or A2)		6
Note: Courses in brackets are prerequisites		

Option A1

MAS 191	Mathematics with computers	8
MAS 302	Complex Analysis I	7
MAS 303	Partial Differential Equations	7
MAS 304	Functional Analysis	7
MAS 321	Introduction to Algebra	7
MAS 361	Probability Theory	7
MAS 371	Numerical Analysis II	7
MAS 401	Measure theory and Integration	7
MAS 451	Linear Models I	8
MAS 456	Time Series	7
ECO 604	Analytical Methods in Economics	7,5
CS 031	Introduction to programming	7

Option A2

MAS 191	Mathematics with computers	8
MAS 303	Partial Differential Equations	7
MAS 304	Functional Analysis	7
MAS 321	Introduction to Algebra	7
MAS 331	Classical Differential Geometry	7
MAS 361	Probability Theory	7
MAS 362	Statistical Theory	7
MAS 371	Numerical Analysis II	7
MAS 401	Measure Theory and Integration	7
MAS 402	Complex Analysis II	7
MAS 418	Introduction to Fourier Analysis	7
MAS 425	Theory of Groups	7
MAS 431	Introduction to Differentiable Manifolds	7
MAS 451	Linear Models I	8
MAS 452	Linear Models II (MAS 451)	7
MAS 456	Time Series	7
CS 031	Introduction to programming	7

Option B

ECO 305	International Trade (ECO 211)	6
ECO 306	International Finance (ECO 221)	6
ECO 308	Economic Development (ECO 221)	6
ECO 309	Economic Growth (ECO 221)	6
ECO 310	Money, Banking and Financial Markets (ECO 221)	6
ECO 311	Labour Economics (ECO 211)	6
ECO 312	Industrial Organisation (ECO 211)	6
ECO 313	Public Economics (ECO 211)	6
ECO 315	International Taxation and National Tax Policy (ECO 211)	6
ECO 316	Economics of the European Union (ECO 111)	6
ECO 317	Topics in European Economics Integration (ECO 221)	6
ECO 320	History of Economic Thought	6
ECO 324	Introduction to Political Economy and Public Policy (ECO 211)	6
ECO 327	Environmental Economics (ECO 211)	6
ECO 331	Productivity and Technology (ECO 211)	6
ECO 355	Topics in International Economics (ECO 211)	6
ECO 362	Structure and Strategy of Firms (ECO 312)	6
ECO 363	Regulation Theory and Policy (ECO 211)	6
ECO 370	Topics in Financial and Monetary Economics (ECO 111, ECO 221)	6
ECO 398	Topics on the Cyprus Economy (ECO 211, ECO 221)	6
ECO 415	Game Theory (ECO251 or ECO261)	6
ECO 473	Applied Econometrics (ECO253 or ECO263)	6
ECO 503	Statistics and Econometrics I (ECO 303)	7.5

Notes:

a. Students may substitute up to two choices in economics with courses from the graduate program of the Department of Economics upon approval of the Chairman of the Department.

b. The courses in brackets are prerequisites.

c. Students are advised to take MAS 191 Mathematics with Computers (8 ects) as a free elective course. Taking any other free elective course with 8 ects and another free elective course with 7 ects will satisfy the requirements of 15 ects from free elective courses given that the courses are from two different schools.

7. MINOR IN ECONOMICS

Requirements for a minor in Economics

Students in other departments of the University wishing to obtain a Minor in Economics have to submit an application to the Department. The successful applicants will be awarded a Minor in Economics upon successful completion of the following courses:

Compulsory courses (42 ECTS)		
Code	**Course Name**	**ECTS**
ECO 111	Principles of Microeconomics	7
ECO 121	Principles of Macroeconomics	7
ECO 211	Microeconomic Theory (ECO 111)	7
ECO 221	Macroeconomic Theory (ECO 121)	7
ECO 112	Application of Quantitative Methods in Economics (MAS 061)	7
ECO 222	Introduction to Econometrics (ECO 112)	7
Optional courses (at least 18 ECTS)		
ECO 305	International Trade (ECO 211)	6
ECO 306	International Finance (ECO 221)	6
ECO 308	Economic Development (ECO 221)	6
ECO 309	Economic Growth (ECO 221)	6
ECO 310	Money, Banking and Financial Markets (ECO 221)	6
ECO 311	Labour Economics (ECO 211)	6
ECO 312	Industrial Organisation (ECO 211)	6
ECO 313	Public Economics (ECO 211)	6
ECO 315	International Taxation and National Tax Policy (ECO 211)	6
ECO 316	Economics of the European Union (ECO 111)	6
ECO 317	Topics in European Economics Integration (ECO 221)	6
ECO 320	History of Economic Thought	6
ECO 324	Introduction to Political Economy and Public Policy (ECO 211)	6
ECO 327	Environmental Economics (ECO 211)	6
ECO 331	Productivity and Technology (ECO 211)	6
ECO 355	Topics in International Economics (ECO 211)	6
ECO 362	Structure and Strategy of Firms (ECO 312)	6
ECO 363	Regulation Theory and Policy (ECO 211)	6
ECO 370	Topics in Financial and Monetary Economics (ECO 111, ECO 221)	6
ECO 398	Topics on the Cyprus Economy (ECO 211, ECO 221)	6
Note: The courses in brackets are prerequisites		

BRIEF DESCRIPTION OF COURSES

ECO 101 Introduction to Economics (6 ECTS)
Instructor: Mamuneas Theofanis
This course aims at introducing students to basic economic concepts. The first part of the course introduces microeconomic concepts such as the circular flow of money, the production possibility frontier, comparative advantage and trade, consumer demand and production function, price and income elasticity, consumer surplus, the functioning of markets, economic policy and welfare and economics of the public sector. The second part of the course covers macroeconomic concepts and includes the measurement of national income and cost of living, various types of unemployment, role of minimum income and trade unions, measurement, causes and effects of inflation and aggregate demand and aggregate supply.

ECO 111 PRINCIPLES OF MICROECONOMICS (7 ECTS)
Instructor: Louis Philippos/Michael S. Michael/Michaelides Marios
The course introduces the basic principles of individual decision making of consumers, firms as well as the government. After a short introduction of the basic concepts needed for understanding and analyzing economic problems, it examines the market forces of demand and supply and the calculation of elasticities. It then describes and analyses the impact of various government policies and explains how to evaluate the efficiency of market outcomes. The cost structure of firms and profit maximizing conditions, as well as, market structure is then analysed. Finally, it examines externalities and their impact on market outcomes and the gains from trade.

ECO 112 APPLICATION OF QUANTITATIVE METHODS IN ECONOMICS (7 ECTS)
(Prerequisite: MAS 061)
Instructor: Kourtellos Andros
Applied Quantitative Methods in Economics is the first course out of a series of courses in econometrics aiming at building the foundations for the empirical analysis of economic phenomena such the inflation, unemployment, economic growth, and inequality.
In this course we study the basic elements of probability theory and statistics, the specification and estimation of the linear regression model, the properties of LS estimators in the linear regression model, inference (hypothesis testing and confidence intervals) in the linear regression model. We also study model selection and misspecification tests to assess the statistical adequacy of the model. Furthermore, we study the topic of heteroskedasticity, nonlinearity, and temporal dependence. Finally, we cover simple time-series models and prediction. One of the central goals of this course is to introduce the students to econometric software package STATA in the empirical applications of linear regression model using real observable economic data.

ECO 113 MATHEMATICS FOR ECONOMISTS (7 ECTS)
(Prerequisite: MAS 001)
Instructor: Ziros Nicholas

The aim of the course is to provide a firm foundation of the mathematical concepts and techniques used in economics. The core topics of the module are the fundamentals of mathematics, univariate and multivariate calculus, unconstrained and constrained optimization. Moreover, economic applications will be discussed for each topic.

ECO 121 PRINCIPLES OF MACROECONOMICS (7 ECTS)
Instructor: Hassapis Christis/ Kyrizi Andri/Raoukka Katerina

This course provides an introduction to the tools and concepts of macroeconomics. It focuses on the performance of national economies and policies instituted by governments and central banks that affect economic performance. The course introduces the issues of economic growth, unemployment and inflation, money creation and determination of the interest rates.

ECO 211 MICROECONOMIC THEORY (7 ECTS)
(Prerequisite: ECO 111)
Instructor: Xefteris Dimitrios

Microeconomic theory analyze the behavior of consumers and firms, studies the ways in which they interact with markets and evaluates the performance of markets with respect to the effective use of available resources. The course studies the way in which consumer preferences, together with the constraints they face, determines demand for different goods, as well as the behavior of producers within the market framework they have to operate in. The course is concluded with the analysis of competitive markets.

ECO 221 MACROECONOMIC THEORY (7 ECTS)
(Prerequisite: ECO 121)
Instructor: Raoukka Katerina

The course begins with a short description of the main economic variables. Subsequently, the goods and money markets are analysed separately, and then, the closed economy IS-LM model is presented in detail to prepare students for understanding the differences between this and the more empirically relevant case of open macroeconomy models. The IS-LM model is then used for the analysis of fiscal and monetary policies. Next, the supply side of the economy is introduced. We analyse the labour market, the price setting and wage setting behaviour of firms and the medium-run equilibrium. At this point, the goods, money, and labour markets have been examined in great detail. The macroeconomic model that follows examines the simultaneous equilibrium in all markets, both in the short- and in the medium-run. Apart from the determination of the price level, nominal and real wages, interest rate and national income, this aggregate model is used for the analysis of fiscal and monetary policies, the inflation rate and the unemployment rate. The course then extends the IS-LM model to include the role of expectations, and to emphasize the open economy case. Finally, a basic economic growth model is introduced in order to help understand the main determinants of economic growth.

ECO 222 INTRODUCTION TO ECONOMETRICS (7 ECTS)
(Prerequisite: ECO 112)
Instructor: Theodoropoulos Nikos
The primary objective of the course is to provide a thorough understanding of the linear regression model and its correct estimation. Particular emphasis is given to the interpretation of the regression results. Another aim of the course is the understanding of the various data sources and their proper use. A further objective is to understand the concept of causality and how it can be proved. Finally, students will be able to further develop their skills in using the econometric package Stata.

ECO 223 MATHEMATICS FOR ECONOMISTS II (7 ECTS)
(Prerequisite: ECO 113)
Instructor: Aristodemou Eleni
This course is a continuation of ECO 113 Mathematics for Economists I and its aim is to present some advanced mathematical topics that are used in static and dynamic economic problems. With the use of theory and exercises, emphasis will be placed in developing the abilities that are necessary for the core economics courses of the program of studies.

ECO 251 TOPICS IN MICROECONOMICS (7 ECTS)
(Prerequisite: ECO 211)
Instructor: Tsakas Nikolaos
The course provides a deeper understanding of markets by studying monopolistic and oligopolistic markets, focusing on the features that differentiate them compared to perfectly competitive markets. It covers the basic models of oligopoly (Cournot, Bertrand, Stackelberg) as well as the issues of collusion between firms in oligopolistic markets. Subsequently it provides an introduction to game theory and its applications in Economics, where the concept of decision making on problems that contain strategic interactions is studied. Additionally, the course covers problems of decision making in the presence of uncertainty or asymmetric information, as well as the impact of externalities and public goods on markets.

ECO 252 TOPICS IN MACROECONOMICS (7 ECTS)
(Prerequisite: ECO 221)
Instructor: Tryphonides Andreas
The course provides students with a structured approach to selected topics of modern macroeconomic theory. The macroeconomic models that will be presented will typically be based on the microeconomic principles of rationality and individual optimization. Particular emphasis will be placed on general equilibrium theory within competitive markets and the theory of exogenous as well as endogenous economic growth. The sub-topics to be covered include the study of macroeconomic models that incorporate simple forms of heterogeneity, such us the OLG model, and a discussion of the concept of imperfect information and its importance for the macroeconomy.

ECO 253 ECONOMETRICS METHODS (7 ECTS)
(Prerequisite: ECO 222)
Instructor: Kasparis Ioannis
The Econometrics Methods course presupposes knowledge of the probability theory as covered in ECO 112, and builds upon the knowledge of the classical linear regression model and statistical inference techniques acquired in ECO 222. Topics covered include: Generalized least squares method; regression analysis for time series data and panel data; instrumental variable and two-stage least squares estimation; binary dependent variable models and simultaneous equation models. Emphasis is given to the application of theoretical concepts on practical economic issues through the extensive use of computer-based exercises in Stata. A major feature of this course is the development of the applied econometrics skills required for the successful completion of the undergraduate thesis.

ECO 261 ADVANCED MICROECONOMICS (7 ECTS)
(Prerequisite: ECO 211)
Instructor: Tsakas Nikolaos
The course begins with the analysis of markets in which there is not perfect competition. Monopoly market are analysed, focusing on the basic problems of price discrimination. Then, it covers the basic models of oligopoly (Cournot, Bertrand, Stackelberg) and provides an introduction to product differentiation. The basic concepts of general equilibrium are also presented, limited to problems of pure exchange. Subsequently, it provides an extensive introduction to game theory, covering static and dynamic games of complete information and repeated games. Finally, it covers problems of asymmetric information, providing a detailed analysis of adverse selection, moral hazard and signalling.

ECO 262 ADVANCED IN MACROECONOMICS (7 ECTS)
(Prerequisite: ECO 221)
Instructor: Tryphonides Andreas
The course provides students with a structured approach to selected topics of modern macroeconomic theory. The macroeconomic models that will be presented and analyzed will typically be based on the microeconomic principles of rationality and individual optimization. Particular emphasis will be placed on general equilibrium theory within competitive markets and the theory of exogenous as well as endogenous economic growth. The sub-topics to be covered include the study of macroeconomic models that incorporate simple forms of heterogeneity, such us the OLG model, and a discussion of the concept of imperfect information and its importance for the macroeconomy.

ECO 263 ECONOMETRICS METHODS (7 ECTS)
(Prerequisite: ECO 222)
Instructor: Kasparis Ioannis
Provide students a deeper theoretical understanding of modern econometric techniques, statistical inference and obtain sufficient technical background for following more specialized topics in econometrics such time series econometrics, financial econometrics and micro-econometrics. The course covers the following tropics: The linear model in matrix form. OLS

estimation, small sample and large sample inference. GLS estimation and HAC correction. Endogeneity, systems of equations and IV/GIV methods. Introduction to panel models.

ECO 305 INTERNATIONAL TRADE (6 ECTS)
(Prerequisite: ECO 211)
Instructor: Hadjiyiannis Costas/Michael S. Michael
The course examines the various theories and the issues associated with trade policy. It examines absolute and comparative advantage, specific factors, the Heckscher-Ohlin model and the impact of external economies of scale and imperfect completion on trade. It also analyses the various tools of trade policy, their impact on welfare as well as the political economy of trade. Finally, it examines trade policy in developing countries and trade agreements.

ECO 306 INTERNATIONAL FINANCE (6 ECTS)
(Prerequisite: ECO 221)
Instructor: Assiotis Andreas/Michael Michael
National income accounting and balance of payments. Foreign exchange market and exchange rate determination in the short run and long run. National income and exchange rate. Fixed exchange rates and foreign exchange intervention. International Monetary systems 1870-present. Macroeconomic policy and coordination under flexible exchange rates. Optimum currency areas and the European case. The global capital market and the developing countries, growth, crisis and reform.

ECO 308 ECONOMIC DEVELOPMENT (6 ECTS)
(Prerequisite: ECO 221)
Instructor: Zachariadis Marios
This course provides an introduction to the study of the main economic problems faced by developing countries. Among the topics covered we present a broad picture of what characterizes underdeveloped economies, what are the potential causes underlying such underdevelopment, and discuss what policies can be adopted to improve the living conditions in these countries. We present a wide array of macro and microeconomic models together with relevant empirical evidence.

ECO 309 ECONOMIC GROWTH (6 ECTS)
(Prerequisite: ECO 221)
Instructor: Chassamboulli Andri
The course starts with stylized facts in economic growth. Then, it examines the Solow growth model and its empirical applications. Then it focuses on models of endogenous growth including one-sector and two sectors of endogenous growth models such as the AK model, models of learning by doing, the Uzawa-Lucas model, models of technological change, models of Schumpeterian growth, directed technological change, and expanding variety models. Furthermore, it covers a number of topics in diffusion of technology, government sector and public spending, trade and growth, economic development and economic growth including the role of institutions. Finally, we also consider the topic of the origin of sustained economic growth.

ECO 310 MONEY, BANKING AND FINANCIAL MARKETS (6 ECTS)
(Prerequisite: ECO 221)
Instructor: Hassapis Christis/Assiotis Andreas
This course studies financial markets (shares, bonds, foreign exchange) and financial institutions (banks, insurance companies, mutual funds). Some of the issues to be addressed include: the Role and Importance of Financial Market, Money, Meaning and Functions. Interest Rates and Yields. Determination of Interest Rates. Market Shares and Determinants of Shares Price. Functions Financial Institutions. Banking and Non-Banking Financial Institutions.

ECO 311 LABOUR ECONOMICS (6 ECTS)
(Prerequisite: ECO 211)
Instructor: Theodoropoulos Nikos/Michaelides Marios
This course is devoted to the study of key issues of labour economics. First, the course covers the behavior of workers and employers in the labor market, and how their decisions affect labor supply and demand, employment, and wages. The course then examines various key topics, including unemployment, wage differences across workers, human capital and returns to education, labor market discrimination, compensating differentials, labor mobility, wage inequality, unions, and labor market policy. Throughout the course, relevant case studies and empirical evidence from various countries are discussed.

ECO 312 INDUSTRIAL ORGANISATION (6 ECTS)
(Prerequisite: ECO 211)
Instructor: Clerides Sofronis
Industrial organization is the branch of economics that studies imperfectly competitive markets. The course will analyze the basic theoretical models of competition in oligopolistic markets with homogeneous or differentiated products, under price or quantity competition, and in the presence of price leadership and capacity constraints. The models will provide the toolbox for the analysis of topics such as the relationship between technology and market structure, collusion and cartels, predatory behavior and entry deterrence, and auctions.

ECO 313 PUBLIC ECONOMICS (6 ECTS)
(Prerequisite: ECO 211)
Instructor: Lyssiotou Panayiota/ Mamuneas Theofanis
This course is an introduction of the microeconomics of the public sector. Initially, it examines the circumstances under which an economy without public sector achieves efficient allocation of resources. Subsequently it examines the problems that arise due to public goods, externalities and incomplete information and examines the means through which the government can intervene to lead to a more efficient allocation of resources. Finally, it examines the impact the public expenditure and taxation on the supply of factors of production, the efficient allocation of resources and the equitable distribution of income.

ECO 315 INTERNATIONAL TAXATION AND NATIONAL POLICY (6 ECTS)
(Prerequisite: ECO 211)
Instructor: Lyssiotou Panayiota
This course presents the stylized facts and concepts and outlines the main issues of international taxation and the implications for the international movements of goods and capital. The first part of the course introduces students to basic taxation concepts and describes the principles of direct and indirect optimal taxation in a closed economy. The second part starts with how the optical tax rules are modified in an open economy and considers how national tax policies affect the allocation of capital in an international context, and considers issues of international tax competition and harmonization, the behaviour of multinational firms and the international allocation of savings, investment and production.

ECO 316 ECONOMICS OF THE EUROPEAN UNION (6 ECTS)
(Prerequisite: ECO 111)
Instructor: Bozani Vaso
This course begins with a historical reflection on the need for a post-World War II union, the efforts to unify Europe as well as its enlargement. It examines the structure, functioning, institutions and competences of the European Union, such as the European Parliament, the Council of the European Parliament and the Court of Auditors. It then uses micro- and macro-economic models to examine issues such as: economic integration, customs unions and the common market, economic development, free movement of labour and capital. Additional topics cover the common agricultural policy, economics of comparative advantage and specialization, unemployment, economic geography and regional policies.

ECO 317 TOPICS IN EUROPEAN ECONOMIC INTEGRATION (6 ECTS)
(Prerequisite: ECO 221)
Instructor: Syrichas George
The course's goal is to understand the role of the euro, banking union and fiscal union for the economies that comprise the Eurozone. Moreover, to understand the proximate causes of the European Crisis.
The course examines various topics such as:
Similarities and differences between the Gold Standard and the Euro, Exchange Rate Regimes, Optimum Currency Areas, EMS, EMU, the Euro, Banks, and Banking Union, Fiscal Policy, the Stability Pact and Fiscal Union, Assessing Integration: Price level convergence within the Eurozone. The European (Fiscal) Crisis: (1) relation to the Financial Crisis (2) relation to structural problems of the economy (3) the role of overconsumption, budget deficits, trade deficits, and long-term Growth.

ECO320 HISTORY OF ECONOMIC THOUGHT (6 ECTS)
Instructor: Clerides Sofronis
The course describes the evolution of economic thought from antiquity to today. It focuses on economic ideas rather than general theories of economic systems, and it emphasizes the link between economic thought and other historical and social phenomena. The course can be divided into three units. The first unit seeks the origins of economic ideas in the work of the

ancients, the scholastics, the mercantilists and the physiocrats. The second unit focuses on the analysis of the market economy by the classical economists, and its critique by Marx and others. The third unit examines various economic currents of the 20th century (institutionalists, Keynesianism, Austrians, monetarism, etc.) and concludes with an overview of the state of economic thought today. The course is open to a general audience and does not require extensive knowledge of economic theory.

ECO324 Introduction to Political Economy and Public Policy 6ECTS)
(Prerequisite: ECO 211)
Instructor: Xefteris Dimitrios
This course is designed to provide students with an introduction to the economic approach to politics, also known as positive political theory or rational choice theory. Political economy seeks to understand and explain policy outcomes and political behaviour in an environment where political actors are rational and goal oriented. The course will focus on models of politics that build upon formal reasoning and mathematical expressions. Political outcomes are then explained by the interaction between these actors within the institutional particularities of their environment.

ECO 327 ENVIRONMENTAL ECONOMICS (6 ECTS)
(Prerequisite: ECO 211)
Instructor: Empora Neophyta
This course is designed to provide students with an introduction to the economic approach to politics, also known as positive political theory or rational choice theory. Political economy seeks to understand and explain policy outcomes and political behaviour in an environment where political actors are rational and goal oriented. The course will focus on models of politics that build upon formal reasoning and mathematical expressions. Political outcomes are then explained by the interaction between these actors within the institutional particularities of their environment.

ECO 331 PRODUCTIVITY AND TECHNOLOGY (6 ECTS)
(Prerequisite: ECO 211)
Instructor: Mamuneas Theofanis
The objective of the course is the presentation of different methods measuring Productivity and Technological change. It requires knowledge of producer theory and basic econometrics.

ECO 355 TOPICS IN INTERNATIONAL ECONOMICS (6 ECTS)
(Prerequisite: ECO 211)
Instructor: Michael Charalambos
The class examines the International Economy and the environment in which Multinational Corporations operate. It analyzes the purpose and rules of the World Trade Organization, as well as other international organizations. Regional Trade Agreements, like the European Union and NAFTA, are also examined. In addition, the class analyzes Foreign Exchange Markets and the

different strategies Multinational Corporations use to take advantage of the opportunities they are faced with.

ECO 362 STRUCTURE AND STRATEGY OF FIRMS (6 ECTS)
(Prerequisite: ECO 312)
Instructor: Tsakas Nikolaos

The course seeks to develop students' understanding of firm organization and strategic decision making. The first part of the course will focus on structure. It will review the main theories of the firm, examining questions such as: what is a firm, what are its objectives, what factors determine its scale and scope? Topics in this part include bilateral monopoly, bargaining and principal-agent relationships. The second part will focus on firms' strategic choices in various markets. Examples include mergers and acquisitions, vertical integration, pricing strategies, quality choice, tying and bundling, research and development, and standard setting.

ECO 363 REGULATION THEORY AND POLICY (6 ECTS)
(Prerequisite: ECO 211)

The course analyzes the motivation, methods and implications of state intervention in the economy. What is the purpose of state intervention? What tools do governments have at their disposal? What are the consequences – intended or unintended – of government intervention? The course examines the regulation of natural monopolies, methods of granting monopoly rights, and legal restrictions to market entry. The energy and telecommunications markets are examined as case studies. The role of competition policy – which is the broader policy that aims to promote competition in markets – in relation to regulation is also examined.

ECO 370 TOPICS IN FINANCIAL AND MONETARY ECONOMICS (6 ECTS)
(Prerequisite: ECO 111, ECO 221)
Instructor: Andreou Elena/Michael Charalambos

The aim of the course is to understand the notion of efficient markets and no arbitrage opportunities, understand the alternative ways of financing a corporation, understand the role of shareholders, creditors, and management of a firm. Evaluate investment opportunities using alternative investment criteria, apply stock and bond valuation methods. Understand the risk-return trade-off in choosing an optimal portfolio of stocks, understand how capital structure changes the value of the firm, predict exchange rate movements based on interest-rate differentials.

ECO 391 PLACEMENT IN ORGANISATIONS I (6 ECTS)
(Prerequisite: Successful completion of the compulsory courses of the second year of the academic studies and at least 120 ECTS of the corresponding academic program that the student attends. Required: Selection is based on the academic achievement of the student in the previous semesters 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 related to economics. Also, students will have the opportunity to develop communication and other skills.

ECO 392 PLACEMENT IN ORGANISATIONS II (6 ECTS)
(Prerequisite: Successful completion of the compulsory courses of the second year of the academic studies and at least 120 ECTS of the corresponding academic program that the student attends. Required: Selection is based on the academic achievement of the student in the previous semesters 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 related to economics. Also, students will have the opportunity to develop communication and other skills.

ECO 397 RESEARCH METHODS IN APPLIED ECONOMICS I (6 ECTS)
(Prerequisite: ECO 112, ECO 211, ECO 221)
Instructors: All faculty members
The course is an introduction to the fundamental tools necessary for research in economics or for work as a professional economist. The course covers different aspects of the research toolbox of modern economists such as Mathematics and Statistics, Academic Skills for Economists and Empirical Econometric Skills. The aim of these modules is to introduce or review the tools students need in order to master the material presented in the programme on the one hand and to enable progress towards independent research and for work as a professional economist on the other hand.

ECO 398 TOPICS ON THE CYPRUS ECONOMY (6 ECTS)
(Prerequisite: ECO 211, ECO 221)
Instructor: Matsis Symeon
The aim of the course is the systematic and in depth analysis of the Cypriot economy. The course is designed to combine the theory with practice by showing how economic principles can illuminate the workings of the Cypriot economy. Initially the course makes a historical review of the economic developments in Cyprus since 1960. Afterwards, it covers topics which concern the monetary policy, financial system, fiscal policy and social policy. Particular emphasis is given to current European issues. The course also examines the main problems and challenges that the economy is facing and policies that can be implemented.

ECO 415 GAME THEORY (6 ECTS)
(Prerequisite: ECO 251 or 261)
Instructor: Ziros Nicholas
The aim of the course is to present and analyze the basic tools of Game Theory. Game Theory deals with decision making of strategically interdependent agents. The course will present and analyze equilibrium concepts in static and dynamic games under complete and incomplete

information. Moreover, we will apply these tools in problems of economics, such as oligopolies, negotiations, auctions etc.

ECO 473 APPLIED ECONOMETRICS (6 ECTS)
(Prerequisite: ECO 253 or 263)
Instructor: Aristodemou Eleni
Brief overview of the classical linear regression model. Econometric models for cross-section data and space-series data. Economic applications and the use of specialized econometric software are emphasized. Topics will be drawn from: (1) Theory of production functions (2) Models of multiple equations, (3) Models of limited dependent variables, (4) elements of spatial analysis and models for macroeconomic data.

ECO 497 RESEARCH METHODS IN APPLIED ECONOMICS II (6 ECTS)
(Prerequisite: ECO 397)
Instructors: All faculty members
The course is the continuation of ECO397 and provides a deeper analysis of the fundamental tools necessary for research in economics or for work as a professional economist. The course covers different aspects of the research toolbox of modern economists such as Mathematics and Statistics, Academic Skills for Economists and Empirical Econometric Skills. The aim is to introduce or review the tools students need in order to master the material presented in the programme on the one hand and to enable progress towards independent research and for work as a professional economist on the other hand.

ECO 501 MICROECONOMIC ANALYSIS I (7.5 ECTS)
Instructor: Xefteris Dimitrios
This course covers microeconomic theory at an advanced level. The course provides detailed knowledge of the neoclassical theory of consumer and producer behavior. It also, develops the basic principles of game theory under conditions of both complete and incomplete information and applies these to the analysis of problems such as collusion, bargaining, auctions, moral hazard, and adverse selection.

ECO 502 MACROECONOMIC ANALYSIS I (7.5 ECTS)
Instructor: Tryphonides Andreas
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 503 STATISTICS AND ECONOMETRICS I (7.5 ECTS)
Instructor: Kasparis Ioannis

The aim of this course is to provide technical background in statistical distributional theory, inference and asymptotic analysis required for econometrics analysis. These techniques are applied in details for the finite and large sample analysis of the OLS and ML estimators. The technical background provided in this course enables students to follow in depth subsequently more specialized methods in econometrics such as IV, GMM as well as specialized courses in time series econometrics, financial econometrics and panel data.

ECO 551 MICROECONOMIC ANALYSIS II (7.5 ECTS)
(Prerequisite: ECO 501)
Instructor: Tsakas Nikolaos
The course is divided into three parts. The first part studies individual behavior in the presence of uncertainty. The second part serves as an introduction to general equilibrium theory and its extensions, and discusses the theorems of welfare economics. The analysis covers both pure exchange economies and economies in which production is available and introduces the notion of the core of an economy. The third part focuses on problems of asymmetric information. First, there is a brief introduction of the basics of mechanism design, focusing mainly on the comprehension of the nature of principal-agent models and the revelation principle. This is followed by detailed analysis of adverse selection (with applications both on price discrimination and insurance markets), signalling (including the standard models of education as signalling mechanism and cheap talk), and moral hazard.

ECO 552 MACROECONOMIC ANALYSIS II (7.5 ECTS)
(Prerequisite: ECO 502)
Instructor: Chassamboulli Andri
This course deals with the micro foundations of macroeconomics and with short run policy. The micro foundations include consumption, investment, labour supply and labour demand. Short run policy is about monetary and fiscal policy rules, what their basis is and what can they achieve. The main technique used in the course is dynamic optimisation.

ECO 553 STATISTICS AND ECONOMETRICS II (7.5 ECTS)
(Prerequisite: ECO 503)
Instructor: Kourtellos Andros
Eco 653 is a PhD course in statistics and econometrics. The course assumes a background in probability theory and statistical inference and some knowledge of linear regression. The course begins with the linear regression model and discusses issues of model selection and misspecification. The students master asymptotic theory (estimation and hypothesis testing) for both LS and MLE. Then the course focuses on bootstrap, GMM, and the problem of endogeneity. Finally, the course provides a brief introduction to time series analysis, limited dependent variable models, and panel models. Special attention will be given to applications using real data. For this purpose, we will use the econometric packages of GAUSS or MATLAB and STATA.

* * *

MAS 001 Mathematics I (6 ECTS)

The aim of the course is to understand calculus and to use basic methods to solve real problems.

MAS 061 STATISTICAL ANALYSIS I (6 ECTS)

The aim of the course is the students to obtain familiarity with the basic concepts of statistical analysis.

Course content: Descriptive Statistics, Probability (basic notions, conditional probability Bayes rule} Combinatorics, distributions, Central limit theorem, statistics, decision theory (confidence intervals, hypothesis testing, comparison between populations), etc.

MAS 101 Calculus I (8 ECTS)

Properties of real numbers. The supremum and infimum of a set and their basic properties. Sequences, limits of sequences, properties of convergent sequences, subsequences, basic theorems, nested intervals Property (briefly covered). Functions, limits of functions, sequential definition of limits. Continuous functions, intermediate value Theorem, extreme value Theorem, continuity of inverse functions, uniform continuity. Derivatives, basic theorems, derivatives of inverse functions, graphs of functions, Rolle's Theorem, Cauchy's mean value Theorem, l' Hopital's rule.

MAS 102 Calculus II (8 ECTS)

Partitions, upper and lower sums, Riemann integral on a closed interval. Basic existence theorems of integrals. Computation of volumes and areas. The Fundamental Theorems of Calculus, generalised integrals. Logarithmic and exponential functions. Basic methods of integration, integration by parts, substitution, induction formulas, integration of rational functions. Taylor's formula, computation of Taylor's formula for various basic functions. Approximation of smooth functions by polynomials, the irrationality of e. Series, comparison test, Cauchy's criterion, ratio test, nth root test, integral test, absolutely and conditionally convergent series, Leibniz's Theorem for alternating series, Abel's and Dirichlet's criteria, products of series.

MAS 121 Linear Algebra I (8 ECTS)

Numbers, equivalence relations. Groups, Examples (symmetric, cyclic, dihedral). Isomorphism. Rings and Fields. Examples. Vector spaces, basis, dimension. Linear maps. Matrices and linear maps. Rank, change of basis matrix. Determinant. Linear systems.

MAS 122 Linear Algebra II (8 ECTS)

Polynomial Ring. Eigen values, eigen vectors. Diagonalisation and applications. Theorem of Cayley – Hamilton, minimal polynomial. Generalised eigen spaces, nilpotent endomorphisms, Jordan canonical form. Inner product spaces (Gram – Schmidt). Orthogonal, self dual endomorphisms. Bilinear, quadratic forms.

MAS 131 Basic Mathematics (7 ECTS)

Methods and applications of differentiation. Methods of integration and applications. Improper Integrals. Power series. Fourierseries. Elements of analytic geometry on the place and in space. Functions and surfaces. Polar coordinates. Partial derivatives and Lagrange multipliers. Multiple integration and Jacobien.

MAS 132 - Basic Mathematics II (7 ECTS)

Analytic Geometry in R2: Vectors, inner product, length, distance between points. Equation for a line, tangent, vertical line to a curve. Circles, ellipses, parabolas, hyperbolas. Analytic Geometry in R3: Vectors, algebraic, geometric properties. Inner product, length, distance between points. Equation for a line (parametric-vector, cartesian format), distance of a point to a line. Regions in Euclidean space. Functions: Curves in the plane, regions between curves, curve intersections. Graphs of functions in R3, analytically and implicitly defined. Solids bounded by surfaces and intersections of surfaces. Transformations: Linear transforms, linear independence and geometric interpretation of determinant. Geometric transforms (translation, rotation, reflection, orthogonal transforms). Polar, cylindrical and spherical coordinates and regions defined in these coordinates. Curves: Curve parametrization in R2 and R3. Velocity, acceleration and tangent line. Arc length. Differentiation: Partial derivatives of multivariable functions. Tangent plane and linear approximation. Gradient and directional derivative. Integration: Double integrals over rectangles and general regions of R2.

MAS 133 - Sets and Algebraic Structures (7 ECTS)

Set Theory: Sets, subsets. Set operations, complement, De Morgan's laws, power set. Cartesian product. Relations, equivalence relations (equivalence classes modulo m, projective space, rational numbers). Venn diagrams. Elements of propositional logic (quantifiers, negation, truth diagrams). Functions: Image of a set, inverse image. Inverse function. Composition of functions, graphs. Sets of functions. Countable sets, uncountable sets. Diagonal procedure. Reductio ad absurdum and Mathematical Induction. Well Ordering Principle and Principle of Mathematical Induction. Examples from Number Theory and other areas of mathematics for understanding the procedure for proving a statement using these methods. Number Theory: Divisibility. Greatest common factor and least common multiple. Euclidean algorithm. Fundamental Theorem of Arithmetic. Applications to polynomials. Introduction to Algebraic Structures: Binary operations. Closure of operations. Properties of closed operations. Examples (composition of functions, matrix multiplication, inverse, congruence classes). Subgroups, groups (examples from cyclic groups (complex unit roots), symmetric group). The group (Zn , +) as a quotient. Rings, fields and solving first order equations ax = b.

MAS 191 - Mathematics with computers (8 ECTS)

MATLAB's environment. MATLAB functions. For, while and if loops. Graphics in two and three dimensions. Programming. Polynomials. Reading from and writing in files. Computer arithmetic and error propagation. Symbolic computing. Special topics and applications (solution of nonlinear algebraic equations and linear systems, eigenvalue problems, numerical integration, ordinary differential equations).

MAS 202 Multivariate Integral Calculus (7 ECTS)

Integrals of continuous functions with compact support (on $Q = I_1 \times I_2 \times I_3 \times \dots \times I_n$), step functions. Theorem of transformation of variables (for linear and C^1-invertible transformations). Integrable functions and sets, properties. Computation of volumes, Fubini's Theorem, Cavalieri's Principle (i.e. sphere, cylinder, cone). Convergence theorems (interchangeability of limit and integral). Transformations theorems (without proof), applications. Parametrised surfaces, partition of unity. Surface and curve integrals (computation of area of surfaces). Differential forms, Stokes' Theorem (Green, Gauss, Stokes), applications.

MAS 203 Ordinary Differential Equations (7 ECTS)

Basic notions. Solution techniques for first-order equations and physical applications. Theorems of Existence and Uniqueness. Linear systems and exponential of matrices. Higher order linear equations. Method of power series: Smooth and singular solutions. Smooth dependence of solutions on parameters.

MAS 261 Introduction to Probability (7 ECTS)

Probability, random variables, distribution functions, independence, expected value, moment generating functions, random rectors, conditional distribution, conditional expected value, laws of large numbers, central limit theorem.

MAS 262 Introduction to Statistics (7 ECTS)

Statistics. Sufficiency and completeness. Exponential families of distributions. Unbiasedness, unbiased estimators. Cramer − Raoinequality. Method of moments, maximum likelihood estimators, confidence intervals, hypothesis testing.

MAS 301 Real Analysis (8 ECTS)

The real number system R, the least upper bound property and its consequences. Countable and uncountable sets. The Cantorternary set. Introductory theory of metric spaces. The metric spaces R and Rn. Compact sets. Heine − Borel Theorem, Bolzano −Weierstrass Theorem. Sequences of real numbers, limit superior and inferior of a sequence. Cauchy sequences, series of real numbers. Complete metric spaces, Cantor intersection Theorem, the fixed point Theorem and applications. Continuous functions. Topological characterisation of continuity. Continuity and compactness. Uniform continuity, Lipschitz functions. Sequences and series of functions. Pointwise convergence, uniform convergence. Uniform convergence and continuity, uniform convergence and integration, uniform convergence and differentiation. The space C ([a,b]), the topology of uniform convergence.

MAS 302 Complex Analysis I (7 ECTS)
Complex numbers, Basic complex functions, Cauchy- Riemann equations, holomorphic functions, harmonic functions. (Exponential, trigonometric and logarithmic functions). Contontintegration, Cauchy's theorem, Cauchy's integral formula. Morera's theorem, Liouville's theorem, the fundamental theorem of algebra. The Maximum modulus theorem. Taylor series, Laurent series, calculus of residues. Conformal mapping, linear fractional transformation.

MAS 303 Partial Differential Equations (7 ECTS)
Separation of variables – Fourier series. First order Partial Differential Equations. Nonlinear first order Partial Differential Equations. Linear second order Partial Differential Equations. Elliptic, Parabolic and Hyperbolic Partial Differential Equations.

MAS 304 Functional Analysis (7 ECTS)
Metric spaces: Examples and elements of the theory of metric spaces. Banach spaces: Norm, dimension and compactness, bounded operators, linear functionals, dual space, the spaces lp,1≤ p ≤ ∞, Hilbert spaces: Inner products, orthogonal sums, orthonormal bases, the Riesz representation theorem, the adjoint operator, self – adjoint, unitary and normal operators. Fundamental theorems for Banach spaces: the Hahn–Banach theorem, reflexive spaces, the uniform boundedness theorem, weak and strong convergence, the open mapping and closed graph theorems. Applications: The fixed point theorem and its applications to the theory of linear, integral and differential equations, applications to the theory of approximation.

MAS 321 Introduction to Algebra (7 ECTS)
Basic properties of groups. Cayley's theorem. Subgroup and Lagrange's theorem. Normal subgroups and factor groups. First isomorphism theorem. Group actions. Basic properties of rings. Ideals. R – modules over principal ideal domain and the fundamental theorem of finitely generated abelian groups.

MAS 331 Classical Differential Geometry (7 ECTS)
Curves in R^n (parametrisation, orientation, length). Curves in R^2 (normal field, curvature, Frenet frame). Isoperimetric inequality. Curves in R^3 (curvature, torsion,

Frenet frame). Surfaces in R^3: parametrisation, tangent plane, first and second fundamental form, curvature (Gaussian, mean), geometric interpretation of curvature, examples. Intrinsic geometry of surfaces (local isometry, Christoffel symbols, Theorema Egrerium of Gauss, vector fields, parallel transport, geodesics). Gauss-Bonnet Theorem.
.
MAS 350 Stochastic Processes (7 ECTS)
Basic concepts, continuous and discrete time Markov processes, birth and death processes, Poisson processes, introduction tomartingales, Brownian motion.
6thSemester

MAS 361 Probability Theory (7 ECTS)

Measure spaces and σ-algebras, stochastic independence, measurable functions and random variable, distribution functions, Lebesque integral and mean value, convergence of sequences of random variables, laws of large numbers, characteristic function, central limit theorem, conditional probability, conditional mean value

MAS 362 Statistical Theory (7 ECTS)

Stochastic convergence, asymptotic properties of moments timators and maximum likelihood estimators, asymptotic normality and efficiency, hypothesis testing, asymptotic properties and efficiency of tests.

MAS 371 Numerical Analysis II (7 ECTS)

Preliminaries: Basic definitions and theorems of Linear Algebra –Lagrange and Hermite interpolation – Newton-Cotes quadrature rules. Vector and matrix norms: Basic definitions and properties –Induced matrix norms – Perturbed linear systems

(perturbation analysis) – Condition of linear systems – Iterative refinement. Methods for eigenproblems: The Gershgorin theorems – The Rayleigh quotient – The power and inverse iteration methods –Similarity transformation methods (Givens and Householder for symmetric matrices – Basic forms of the LR and the QR algorithms) – Sturm sequence property for the eigen values of symmetric tri-diagonal matrices. Iterative methods for linear systems: General iterative methods – The methods of Jacobi, Gauss-Seidel and SOR – Convergence theorems – Asymptotic rate of convergence – Introduction to the theory for the optimum SOR relaxation parameter. Orthogonal polynomials and Gauss quadrature rules: Zeros of orthogonal polynomials – Three-termrecurrence relation – Legendre, Chebyshev, Laguerre, Hermite and Jacobi polynomials – Gauss quadrature rules (Legendre, Chebyshev, Laguerre, Hermite and Jacobi.)

MAS 401 Measure Theory and Integration (7 ECTS)

General revision: Sets, orderings, cardinality, metric spaces. Measures: Algebras and σ- algebras, additive and σ- additive measures, outer measures, Borel measures on the real line. Integration: measurable functions, integration of positive functions, integration of complex valued functions, modes of convergence, product measures, the n – dimensional Lebesgue integral, integration in polar coordinates, signed measures, the Radon – Nikodym theorem, complex measures, differentiation on Euclidean space, functions of bounded variation. LP Spaces: The basic theory, the dual of LP , the useful inequalities, the distribution function, weak – LP spaces, interpolation.

MAS 402 Complex Analysis II (7 ECTS)

Compactness and convergence in the space of analytic functions. The space of meromorphic functions. Riemann mapping theorem. Weierstrass factorization theorem. Analytic continuation (Schwarz reflection principle, Monodromy theorem). Entire functions. Elements of Geometric theory.

MAS 418 Introduction to Fourier Analysis (7 ECTS)
Inner product spaces, Hilbert spaces, orthogonal systems, completeness, periodic functions, trigonometric polynomials and series, Fourier series, point wise convergence of Fourier series. Dirichlet's Theorem, Gibbs phenomenon, Parseval's Theorem. Cesàro and Abel summability, Fejér's Theorem, Poisson's Theorem, the Riemann-Lebesgue Lemma. Convergence of special trigonometric series. Riemann's local Theorem. Differentiation and integration of Fourier series. Fourier transform, inversion Theorem, Plancherel's formula, convolution. Applications to PDEs.

MAS 425 Theory of Groups (7 ECTS)
Generators and relations. Homomorphism theorems. Direct and semi direct products. Group actions. Sylow theorems and p –groups. Simple groups. Composition series and the Jordan – Hölder theorem. Soluble and 124 nilpotent groups.

MAS 431 Introduction to Differentiable Manifolds (7 ECTS)
Manifolds, Tangent space. Partition of unity. Theorem of Sard. Vector fields, flows. Frobenius Theorem. Differential forms. Theorem of Stokes. DeRham Theorem.

MAS 451 Linear Models I (8 ECTS)
The Simple Linear Regression Model: Estimation, Confidence Intervals, Hypothesis Testing. The Multiple Linear Regression Model: Estimation, Confidence Intervals, Hypothesis Testing. Model Adequacy and Model Selection. Polynomial Regression.

MAS 452 Linear Models II (7 ECTS)
Analysis of variance with one or more fixed-effects, Analysis of variance with one or more random-effects, Analysis of covariance, Generalised linear models: estimation in (for example) logistic or logarithmic regression, asymptotic properties.

MAS 456 Time Series (7 ECTS)
Stationary processes, second order moments. ARMA and ARIMA processes. Maximum likelihood estimation, least squares estimators, Yule-Walker estimators. Prediction of stationary processes. Introduction to model selection.

* * *

CS003 Computer Science and Information Systems (6 ECTS)
Familiarization with the most basic concepts in Computer Science, Information Systems and Computer Systems. Touch with the current trends in the practice of Computer Science. Practical experience in the use of various software packages that are useful in the academic and professional worlds.

CS031 Introduction to Programming (7 ECTS)

Introduction of the basic principles of programming with emphasis on structured programming, abstraction, and the design, implementation, checking and debugging of modular programs. Application of these principles using the FORTRAN 90/95 programming language.

Content: Computers and binary system. Hardware and software. Program development cycle, algorithms and flow diagrams. Alphabet and syntax of FORTRAN. Operators. Selection structures and loops. Arrays. Functions and subroutines. Recursion. Formatted input-output. Files. Dynamic data.

CS032 Introduction to Computer Science & Information Systems (6 ECTS)

Objectives: Programming is examined as a problem-solving method. In particular the course presents the fundamentals of algorithmic thought and the implementation thereof through a programming language. Also, a high level programming language is introduced. Upon completion of the course students are expected to be able to cast problem solutions into an algorithmic form, and will have obtained a basic exposure to a widely used programming language such as C or Python.

Content: Introduction to the principles of programming with emphasis on structured programming, abstraction, and the design, implementation, checking and debugging of modular programs. Mastering the material through laboratory exercises in the C programming language.

* * *

LAN 100: General Advanced English (5 ECTS)

This course is designed to guide students in building the required writing, vocabulary and grammar skills to function in an academic setting. Ongoing exposure to reading materials, as well as required vocabulary and grammar activities, assist students in enhancing their writing skills. Specific writing assignments guide students in understanding the academic writing process and academic writing conventions. Through close and critical reading of texts, students analyze ideas, question sources and communicate their thoughts in a clear and effective way. Students are also required to deliver an informative oral presentation. The learning outcomes, tasks and assessment of this course are aligned with the B2/C1 level of the Common European Framework of Reference for Languages (CEFR).

LAN 101 Academic English (5 ECTS)

In this course, students continue to develop their critical thinking and writing skills by working on extensive complete essays. They get acquainted with numerous elements of the argumentative essays, such as making claims, summarizing arguments, lending support, providing evidence and presenting counterarguments. The ongoing reading requirements also expose students to a variety of argumentative texts, which can assist them in composing their own essays. Academic

vocabulary and grammar building, as well as listening and speaking, are also core components of the course which aim to further enhance student writing and oral skills. The learning outcomes, tasks and assessment of this course are aligned with the C1 level of the Common European Framework of Reference for Languages (CEFR).

LAN 209 Advanced English for Global Communication (5 ECTS)

This course is designed to encourage the practice of the English language in a social, academic, and professional context. The course focuses on advanced level readings, such as the United Nations Human Development Report and other topics based on authentic material, as well as listening, all of which serve as a catalyst for discussion and writing tasks, i.e. note-taking and summary writing. The course is task-based, aiming at students in achieving fluency and developing concise and coherent text production; students are required to work on a case study towards compiling a group opinion report and an individual podcast. Extensive vocabulary specific to Economics will be practiced throughout the course, in order to enhance students' overall language competence. The learning outcomes, tasks and assessment of this course are aligned with the C1+ level of the Common European Framework of Reference for Languages (CEFR).

* * *

HIS 181 INTRODUCTION TO MODERN EUROPEAN HISTORY (1789-1918) (5 ECTS)

This is an introductory survey of the history of Europe from the French Revolution to the end of the First World War. What is attempted is a "broad brush" survey of developments (mainly but not exclusively political and diplomatic) that have shaped the course of developments in Europe. Themes that are developed in the course include:

The French Revolution – Napoleonic Europe – The Congress of Vienna – The Revolutions of 1830 and 1848 – Napoleon III – The Franco-German War of 1870 and the unification of Germany – the scramble for empire – the origins of the first world war – the outbreak and the course of first world war – the Russian Revolution – the end of the war.

HIS 285 EUROPE 1918-1945: FROM THE TREATY OF VERSAILLES TO THE FALL OF NAZI GERMANY (5 ECTS)

The Treaty of Versailles – victors and vanquished – the new Europe. Revolutionary movements 1919-21. The 1920s: in search of a new balance. Cooperation and collective security. The League of Nations. The Great Economic Crisis and its consequences. Fascism and Nazism in Europe. Authoritarian models and their spread in the rest of Europe. Towards war: power politics and alliances. Dress rehearsal: The Spanish civil war. European Culture in the inter-war years. The Second World War.

* * *

SPS 152 Comparative Politics (6 ECTS)

The course aims to introduce the basic approach of Comparative Politics and to examine basic concepts like the state and democracy as well as political, party and electoral systems. It applies these concepts to the case studies of the United Kingdom, France, Germany and the United States.

SPS 153 International Relations (6 ECTS)

This course introduces students to international relations and how it is being transformed under conditions of globalization. Specifically, it examines the evolution of the modern international society, the foundational events of international political history, the basic theories of international relations, the actors, structures and processes of the international system, as well as specific themes like international peace and security, international economy and development, human rights, and the international aspects of communication, culture and the environment.

SPS 156 European Integration (6 ECTS)

Introduction to European integration. The European Treaties. European law and finances. European institutions. Customs union. Common market. Economic and monetary union. Towards a political union in Europe. External policies. Conclusions.

SPS 266 Political System of the European Union (6 ECTS)

On the whole, the course seeks to provide students with the necessary knowledge base that will enable them to become familiar with and understand the political system and institutional functioning of the European Union (EU). In particular, it analyzes the role of the key institutions of the Union, emphasizing on the interplay between institutions, external interventions by other actors and relations between member states and the Union. The main objective is to analyze the dynamics of integration both in the present context and over time. Special mention is also made on the economic governance system and how it's been modified as a result of the ongoing economic crisis. The analysis of the EU's political system will be undertaken with the support of analytical tools from European integration theories, public policy production theories and economic theories.

SPS 361 Cyprus and the EU (6 ECTS)

The course aims to:
- familiarize (students) with the phenomenon of European integration through the study of a Southern European country's pursuits;
- a critical analysis of Cypriot, "European" policy,
- a deeper comprehension of the Europeanization process through the case of Cyprus comprehend the key problematic posed by the contemporary Cypriot and European crisis.

SPS 362 Policies of the European Union (6 ECTS)

The course seeks to provide students with the necessary knowledge background that will allow them to become familiar with and understand the main policies of the European Union (EU). The course examines the process of producing and implementing public policies in the context of the European construction.

* * *

LAW 201 European Union Law I (6 ECTS)

The module introduces the organizational structure of the EU and focuses on its legal system. Specifically, the emphasis is placed on the constitutional principles, that the Court of Justice has formulated, and on the peripheral and interconnected legal premises, that complement the procedural law of the Union. Finally, the approach is one that examines simultaneously the legal response of the national legal orders, on the basis of the analytical hypothesis stating that the evolution of EU law is the product of judicial dialogue.

LAW 202 European Union Law II (6 ECTS)

The module concentrates on the substantive law of the EU and on the four fundamental freedoms, with the emphasis being placed on the free movement of goods. In addition, the procedural law of the Union is fully explored and explained, as well as the different aspects of the jurisdiction of the Court of Justice.

LAW 205 Public International Law I (6 ECTS)

The course concentrates on the function, the basic concepts and fundamental principles of the international legal system, the means of international law-making and enforcement. It gives an overview of the traditional and contemporary theoretical approaches to international law, and examines the relationship between international law and domestic law in Cyprus and in other jurisdictions, the subjects of international law (states, international organizations, individuals, etc.) and its sources (treaties, custom, etc.). Using the Cyprus problem as a case study, the course emphasizes the fundamental principles of international law, most notably the prohibition on the use of force and its controversial exceptions.

LAW 206 Public International Law II (6 ECTS)

The module focuses on the territorial dimension of International Law, with an emphasis on the sovereignty of the Republic of Cyprus and its jurisdiction in maritime zones. It further examines the means and mechanisms of implementing and enforcing international law, the rules of state responsibility, as well as the United Nations and its multiple functions.