



Dept of Economics
UNIVERSITY OF CRETE

SYLLABI OF DEPARTMENT'S OPEN SELECTIONS

ACADEMIC YEAR
2026/2027

Rethymno, 11 September 2026

INTRODUCTION TO RELATIONAL DATABASES FOR ECONOMISTS - OIK3501

Course objectives

This course is an introduction to the concepts of relational databases. Databases and especially relational databases have become one of the key tools in the field of computing and are used in a variety of applications. The course deals with the presentation of the design principles of the relational model and their feasibility, as well as the presentation of the basic features of the language used for relational databases, SQL. During the course, the students are introduced to open source database management systems and explore their operation through laboratory problem-solving exercises, which are performed under the supervision and guidance of the instructor in a computer laboratory. Upon successful completion of the course, the students will have acquired knowledge of design principles from both a theoretical and practical point of view.

Instructors

Pigounakis Kostis

Course webpage

https://econservices.soc.uoc.gr/econ_classes/course/view.php?id=7

Prerequisites

This course does not require knowledge of other courses taught in the Department. However, it is a prerequisite for the students to be familiar with the basic concepts of Set Theory and Mathematical Logic as well as with terms of information and communication technologies.

Learning outcomes and general competencies

Upon successful completion of the course, students :

- They will have acquired knowledge of design principles from both a theoretical and practical point of view, which will facilitate their understanding of the IT systems used to organize and operate a business.
- They will be able to assess the needs of a business and propose appropriate solutions.
- They will be able to use tools to create a technological infrastructure to collect and manage information

The general competencies that the student will acquire upon completion of the course are:

- Searching, analyzing and synthesizing data and information, using the necessary technologies.
 - Adapting to new situations.
 - Decision-making.
 - Autonomous work.
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Assessment

The assessment is based on a final computer-based examination with a theoretical and practical part, which is conducted according to the Department's examination schedule.

Tutorial sessions

Not exist.

Primary textbook

Supplementary material

Workload (in hours)	Lectures	Tutorials	Individual study	Total
	39	0	111	150

Lectures

Kehris, Ch. 1; Margaris, Ch. 1; Pigounakis, Ch.1

- Analysis of the concepts of information and data.
 - Ways of handling data in information systems.
 - Data Structures, Databases and Database Management Systems.
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Pigounakis, Ch. 2

- Principles of proper design of Database Management Systems (DBMS) and Databases.
 - Tiers and architectures used in the SDS.
 - Analysis of the database design process.
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Kehris, Ch. 2; Margaris, Ch. 2; Pigounakis, Ch. 3

- Logical design techniques for relational databases through the Entity and Relationship Diagram.
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Kehris, Ch. 4 (Sect. 4.1-4.7), 5; Margaris, Ch. 3

- Analysis of the concepts of the relational model.
 - Development of integrity rules.
 - Process of transfer from the entity diagram to the entity diagram.
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- Design tools that graphically render the Entity and Relationship Model.
 - Analysis of creating relational databases: data, entities, tables.
 - Solving exercises.
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Kehris, Ch. 8; Margaris, Ch. 4

- Objectives and results of the normalization process.
 - Normalization process of Relational Databases.
 - Features of each normal.
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- Associative dependencies and the canonical forms.
 - Normalization process.
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Xepapadeas, Ch. 1 (Sect. 1.1-1.3); Koletsos, Ch. 1

- Selected topics from set theory, mathematical logic and propositional calculus on which Relational Databases are based.
 - Use of Venn diagrams for set operations.
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Kehris, Ch.4 (Section 4.8); Margaris, Ch. 5

- Introduction to the concepts of relational algebra.
 - Examples of using relational algebra to extract results and operations on data.
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Kehris, Ch.6; Margaris, Ch.6

- Operation of SQL.
 - Analysis of the basic SQL commands for creating and managing relational databases.
 - SQL query structure.
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Familiarity with SQL through MySQL Workbench for:

- creating databases,
 - inserting data into the tables,
 - asking questions, and
 - evaluation of results.
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Kehris, Ch.9, 11

- Characteristics of DBMSs integrated into Office Application Suites.
 - Comparison of commercial and open source applications.
 - Presentation of Libre Office.
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GREEK ECONOMIC HISTORY I - OIK2304

<i>Course objectives</i>	This course aims to introduce the students to the fundamental operations for the constitution of the Greek economy from the Greek Revolution of 1821 till the European Integration. In this context, specific essential topics of green economic history will be analyzed according to records of the 19th century. Some of these, such as agricultural issues, merchant shipping, industrialization, railways, raisins matter, foreign loans, the bankruptcy of 1893, and international financial control of 1898 were instrumental for the Greek economy during the dawn of the century of extremes. In parallel, there will be highlighted the conditions of the Greek economy while entering the 20th century and thus, the Catastrophe of Asia Minor and socio-economic impacts of the two World Wars will be presented. Finally, the reconstruction of the Greek economy during the decade of 1950, the golden decades of 1960-1970, and the fluctuations during 1980 will be further analyzed.			
<i>Prerequisites</i>	This course does not require any prior knowledge of other courses provided by the Department			
<i>Learning outcomes and general competencies</i>	On successful completion of the course, the students will be able to: • Be Familiarized with important factors of the new and modern Greek economy (Greek Revolution, raisins matter, the bankruptcy of 1893, World Wars, European Union, etc). • Comprehend the particularity of Greek capitalism and the way it was connected with the economy of Western Europe. • Understand the economic transformations, social reproduction, and ideological alterations in Greece during the 19th and 20th centuries. • Evaluate the movement of the Greek economy in the context of historical transformations during the long history			
<i>Assessment</i>	The assessment is based on written exams at the end of the semester, while there will be optional assignments during the lectures that will account for 30% of the final grade (if it is higher than the grade of the final exam).			
<i>Tutorial sessions</i>	Not offered for this course.			
<i>Primary textbook</i>				
<i>Workload (in hours)</i>	Lectures	Tutorials	Individual study	Total
	39	0	111	150
<i>Lectures</i>	Week 1-2: From Turkish rule to Independence: alterations of economic and social relationships			

- During the first lectures, we will study the social and economic conditions that led to 1821, while in parallel, we will present the platforms that the Turkish inherited to newly formed Greek kingdom, as well as the development of trade and maritime activities that were fundamental for the beginning and success of Greek Revolution.
 - We will present the process of socio-economic establishment of Greek communities at the Greek centers of Ottoman Empire and Danube areas focusing on their role in the Greek Revolution,
 - We will highlight the importance of Greek communities during the construction of the Greek State.
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Week 3: The construction of the Greek state after the Turkish rule

- It will be presented (briefly) the procedure of the development of the greek state and the social and political conflicts that were raised by this development.
 - We will highlight the social reproduction of Greek social formation, while we will study the element of patronage and clientelism during the 19th century.
 - The early economic instability of the Ottoman period reaching the importance of 3rd September of 1843 and their impacts on the social, economic, and political conflicts of this period will be further analyzed.
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Week 4: The international economic relationship and politics during the 19th century, and their impact on the Greek state

- It will be presented the evolution of European capitalism during the 'long' 19th century and the role of Greek exclusion from the European stock markets during 1827-1878.
 - We will review the history and functionality of foreign loans during the 19th century and highlight the importance of the Crimean War and the naval blockade of Piraeus for the evolution of the Greek economy.
 - The importance of the new dynasty of George A' after 1864 will be analyzed as well as the economic alterations, the political adaptations, and ideological advances during the second half of the 19th century and how these were connected to the Great Depression (1848-1875)
 - It will be analyzed the ideological and political conflict between the parts of Trikoupi and Deligiannis regarding the pattern of economic development that needed to be followed by the Greek kingdom.
 - A thorough review of applied economic policy will be addressed.
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Week 5: The newly formed business centers: The case of Syros

- During this lecture, the great reclassifications regarding the sections of trade and marine of Greece after the official establishment of the Greek state in 1832 will be analyzed.
 - The transduction from the traditional trade and shipping centers before the period of the Revolution (Hydra, Spetses, Psara) to Syros was meant to be the most essential center of the Eastern Mediterranean during the 19th century.
 - The civil nature of the community of Syros and political characteristics of Greek trade capitalism will be presented.
 - Finally, we will investigate the decline of the Syrian trade after 1860 due to the sailing ship-to-steamship transmission and the transference of trade activities from Syros to Piraeus.
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Week 6: The Greek merchant shipping from the establishment of Greek state till the A' World War

- We will study the reformation of Sail after the establishment of the newly formed state, as well as the increase of the Greek merchant fleet due to the easy access to foreign business centers where Greek communities had inhabited.
 - The role of Greek trade centers established in foreign lands (Danube, Black Sea, Asia Minor coast) gave rise to Greek trade and shipping.
 - We will frame the transition of the Greek economy to the era of steam which apart from the difficulties it raised, also favored the high profits of Greek shipowners.
 - We will examine the emergence of Piraeus as one of the most important sailing centers of the Mediterranean as well as its important role in the industrialization of Greek social pattern
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Week 7-8: The productive-industrial transformation of Greek State: Streets, ports, railways in Greece during 19th century

- During these lectures, we will study the transformation of the Greek state as a response to the (post-dated) challenge of the Industrial Revolution
- Undoubtedly, the transformations that occurred at the infrastructure network, especially during the age of Trikoupis, were one of the most fundamental characteristics of modernizing of Greek social pattern.

- The generation of the internal market after 1832 and the emergence of native ports as centers of transit trade of the Eastern Mediterranean was correlated with essential government investments regarding the road network and the ports.
 - In addition, we will examine the construction of the Greek railway network that functioned as a requirement for the transformation of the capitalistic Greek economy based on the aspects of the plethora of politicians and intellectual elite of that period.
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Week 9: From the raisins matter to bankruptcy: Foreign loan and International Financial Control at the end of 19th century

- During these lectures, we will investigate the matter of raisins in the second half of the 19th century focusing on the incredible increase of production and exportation of raisins after the agricultural reform of 1871.
 - Raisin, until the beginning of the decade of 1890 and due to diverse historical conjuncture (phylloxera of French vines), was the major dynamic export product of the country. The return of French vines productivity to pre-phylloxera levels brought a severe decrease in external demand for raisin and provoked the matter of raisin over-production.
 - This crisis in combination with the disability of the Greek state to meet the interest payments of its foreign loans led to the bankruptcy of 1893
 - This bankruptcy together with the obligation of war reparation payments after the defeat of the Greco-Turkish war (1897) led to the International Financial Control of 1898
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Week 10: The economic thought during 19th century: Looking for the new developmental example

- We will examine the Greek economic thought during the 19th century focusing on the impact of classical political economy on the thought of Greek economists.
 - We will highlight the thought of Soutsos J., while we will focus also on the work of Oikonomos A. who transferred the thought of J.S.Mill and French utopians to the Greek social formation.
 - In this context, we will study the journal 'Oikonomiki Epitheorisi' (Financial Inspection) as the ground where the advances of Greek economic thought of the 19th century are recorded.
 - In parallel, we will discuss the engagement of Marxism to Greece and how this contributed to the formation of the Greek labor movement.
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Week 11: The bankruptcy of modern Greek state

- During this lecture, we will discuss the four bankruptcies of the Greek state (1827, 1843, 1893, and 1932).
 - We will analyze the link between these bankruptcies, which is the excessive and expensive loan from foreign resources.
 - In parallel, we will study the relationship between bankruptcy and national sovereignty which is recorded throughout the period until the Second World War. More specifically, the bankruptcy of 1843 was linked to the first financial control of Greece with major effects on the progression and social cohesion.
 - The third bankruptcy was linked to the fixation of basic resources of the Greek kingdom, while the fourth bankruptcy was at a high grade a reflection of the Great Depression of 1929.
 - In the context of the relationship of the Greek economy with foreign factors, we will discuss the dilemma between underdevelopment and dependent growth.
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Week 12: From the war conflicts to the reconstruction of the Greek economy

- During this lecture, we will investigate the progression of the Greek economy during the first half of the 20th century, so as from the first World War and Interwar up to the Great Depression in the decade of 1930, and the huge impacts of the Second World War to the productive forces of the Greek economy.
 - In addition, we will study the importance of the Catastrophe of Asian Minor for the Greek economy and we will present the integration process of refugees to the Greek social formation.
 - In parallel, we will highlight the importance of the Marshall Plan for the reconstruction of the Greek economy and the changing process of progression example of the Greek economy during 1950 and 1960
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Week 13: From the reconstruction of the Greek economy to the development of the Greek economy

- We will investigate the progression of the Greek economy during the golden decades of Greek capitalism in 1960 and 1970 and the process through which Greek capitalism modernized its production.
- There will also be presented the processes of monetary unification and how these processes influenced the progression of the Greek economy.

- Finally, we will discuss the dilemma about the type of industrialization of the Greek economy and we will present the political economy of modern Greek history.
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THEORIES OF EUROPEAN INTEGRATION - OIK2307

Course objectives --

Primary textbook

Supplementary material

<i>Workload (in hours)</i>	Lectures	Tutorials	Individual study	Total
	39	0	111	150

Lectures

INTRODUCTION TO PROGRAMMING LANGUAGES - OIK2502

Course objectives

The course introduces students to the fundamental principles of programming with the use of the programming languages Python and R. The primary objective of the course is to familiarize students with the approaches to solving simple problems that are amenable to automation. Python is a popular, modern general programming language, which can be used, among others, to develop applications, to solve mathematical problems, to analyze data and to create web pages. R concentrates on statistical analysis and scientific computing and it is popular among economist, while its knowledge is a prerequisite in many job openings relevant to economists. Examples of problems that will be analyzed in the course are collection of user data, automatic compilation and sending of personalized emails, statistical analysis and visualization of data and analysis of mathematical problems through the application of simple algorithms. The course is applied in nature, but includes many references to the theoretical underpinnings of computations and algorithms, emphasizing the approach taken to solving a problem.

Instructors

Emvalomatis Gregory

Course webpage

https://econservices.soc.uoc.gr/econ_classes/course/view.php?id=439

Prerequisites

Knowledge of basic principles of computer operation, as these are taught in Computers I (OIK1501), is necessary for following the course. Also, the course will use, after a short revision, some concepts covered in Mathematics I (OIK1001) and Statistics I and II (OIK1003 and OIK1006), as these are taught by the Department of Economics.

Learning outcomes and general competencies

After successful completion of the course students will be able to:

- Classify the most popular programming languages based on their attributes and chose these appropriate for solving specific problems.
- Analyze complex problems to their components and solve them using the programming languages Python and R.
- Apply modern programming frameworks and practices for the solution of new problems.

The general skills that students will have after completion of the course are:

- Solution of applied problems that are amenable to automation through programming .
 - Abstract and algorithmic thinking.
 - Understanding of the capabilities and limits of process automation.
 - Both autonomous, as well as teamwork.
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Assessment

The final mark for the course is determined by elements of continuous and summative assessment. Students are expected to attend the computer labs and, at the end of each lab, to present functioning code that solves the respective problem. Out of the 9 computer labs that are associated with assignments, students must be able to solve at least 7, so that they get 10% of the final mark (if

they fail to do so, they lose this 10% entirely). Two short, multiple-choice quizzes will take place during the computer labs, each one having a weight of 10% on the final mark. The dates of quizzes will be announced during the lectures, as well as on the course's website, at least one week prior to the quiz. The final exam for the course has a weight of 70% on the final mark and it will be administered in a computer lab. It will include short-response, open-ended questions and solving problems with the use of Python and R. The quiz and computer-lab marks **will continue to weight** on the final mark in the September resit exam.

<i>Tutorial sessions</i>	During the semester, nine (9) computer lab sessions are held to enhance students' understanding and assimilation of the material. In these labs, students solve applied problems using the Python and R programming languages.			
<i>Primary textbook</i>	Deitel, H.M. and Deitel, P.J. (2021). Εισαγωγή στην Python για τις Επιστήμες Υπολογιστών και Δεδομένων , Εκδόσεις Γκιούρδα & ΣΙΑ ΕΕ,			
<i>Supplementary material</i>	Guttag, J.V. (2022). Εισαγωγή στον Υπολογισμό και τον Προγραμματισμό με την Python (3η έκδοση) , Εκδόσεις Παπασπηρίου,			
	Πανέτσος, Σ. (2019). Εισαγωγή στον Προγραμματισμό Υπολογιστών με την Python , Εκδόσεις Τζιόλα,			
	Αβούρης, Ν., Κουκιάς, Μ., Παλιουράς, Β. και Σγάρμπας, Κ. (2018). Python – Εισαγωγή στους Υπολογιστές (4η έκδοση) , ΙΤΕ - Πανεπιστημιακές Εκδόσεις Κρήτης,			
	Σαμαράς, Ν. και Τσιπλίδης Κ. (2019). Το Βιβλίο της Python , Εκδόσεις Κριτική,			

<i>Workload (in hours)</i>	Lectures	Tutorials	Individual study	Total
	24	15	111	150

<i>Lectures</i>	1st Week: Introduction and fundamental concepts			
	Deitel and Deitel, Ch. 1; Guttag, Ch. 1			
	• Introduction to the course. • An automation problem (sending personalized emails) and the approach to solving it. • Programming languages and algorithms. • Classification of programming languages: 1. interpreted and compiled 2. procedural, object oriented, functional and markup			

3. general and domain specific

- Why Python and R?

2nd Week: Introduction to Python

Deitel and Deitel, Ch. 1, 2, 5 & 6; Guttag, Ch. 2

- Installation and development environments (IDLE, PyCharm and Jupyter).
- Input and output – the print and input functions.
- Accessing the operating system's command line from Python.
- Basic data structures in Python.

1. numbers – types and resource requirements

2. strings

3. booleans

4. tuples, lists and dictionaries

- Variables and assignment.
- Application: asking for user input and printing messages on the screen.

3rd Week: Program flow I – Conditionals and loops

Deitel and Deitel, Ch. 2 & 3; Guttag, Ch. 2 & 3

- Conditional execution and the if-else expression.
- Conditional execution and the match-case expression.
- Boolean operators.
- The for loop.
- The while Loop.
- The break and continue commands.
- Application: determining the rank of a matrix using Gaussian elimination.

4th Week: Program Flow II – Functions

Deitel and Deitel, Ch. 4; Gutttag, Ch. 4

- Defining and calling a function.
 - Parameters and return values of a function.
 - Organizing code in multiple files.
 - Application: is the matrix symmetric?
-

5th Week: Packages in Python I – Matrix algebra with NumPy

Deitel and Deitel , Ch. 7

- General introduction to packages in Python.
 - Defining matrices and vectors in NumPy.
 - Basic operations in matrix algebra.
 - Reading data into Python.
 - Transforming data.
 - Application: solving a linear system of equations.
-

6th Week: Packages in Python II – Statistical data analysis with statsmodels

Deitel and Deitel, Ch. 7; Gutttag, Ch. 23

- Overview of data.
 - Summary statistics.
 - Hypothesis testing using the t statistic.
 - Application: is the growth rate of Bitcoin's price positive?
-

7th Week: Packages in Python III – Statistical data analysis with pandas and SciPy

Deitel and Deitel, Ch. 7, Guttag, Ch. 23

- Double-entry tables and testing for correlation with the χ^2 statistic.
 - Linear regression with pandas.
 - Estimation of the parameters of a linear regression model using matrix algebra.
 - Application: are the Bitcoin and Ethereum prices correlated?
-

8th Week: Packages in Python IV – Plots with Matplotlib

Guttag, Ch. 13; Notes/Lecture slides

- Plotting mathematical functions.
 - Visualizing data: pie charts, bar charts, scatter plots.
 - Adjusting the plot attributes (size, colors, titles, etc.).
 - Application: plotting the results of a linear regression model.
-

9th Week: Debugging, profiling and organization of code

Deitel and Deitel, Ch. 9; Guttag, Ch. 8 & 9; Notes/Lecture slides

- Comments in code.
 - Exceptions and the try-except expression.
 - Which part of the code is taking time to execute?
 - Applications with many files and creating our own packages in Python.
-

10th Week: Introduction to R

Notes/Lecture slides

- Installation and development environment (RStudio).
- Basic data structures in R:
 1. numbers
 2. strings
 3. lists and collections
 4. dataframes and matrices
- Conditional execution and loops.
- Functions.

- Application: function for finding the roots of a 2nd degree polynomial.
-

11th Week: Data analysis in R

Notes/Lecture slides

- Reading data into R and summary statistics.
 - Plotting.
 - Estimation of the parameters of a linear regression model.
 - Packages in R.
 - Application: are the prices of Bitcoin and Ethereum correlated?
-

12th Week: Programming languages and the Internet

Notes/Lecture slides

- HTML and the Internet – why HTML today;
 - Cascading Style Sheets – CSS.
 - Dynamic web pages: purpose and capabilities of javascript and PHP.
 - WebAssembly: the future of the Internet;
 - Application: creating a personal web page.
-

13th Week: Revision and preparation for the final exam

ADVANCED ENGLISH I - OIK3401

Course objectives

The course delineates in 13 sessions and it has a two-fold aim: presentation of terminology and selected concepts necessary for the comprehension of microeconomics passages in English and, concurrently, development of strategies in analyzing unknown material and vocabulary within an accounting, business, finance, economic context.

The course gives special emphasis to concepts of microeconomic discipline such as “factors of production”, “supply and demand”, “elasticity”, “product and factor markets”, “consumer behaviour”, “production”, “costs”, “market structure”, “environmental economics”, “equity”. Terminology and notions on these fundamental microeconomics issues are presented by means of passages extracted from university textbooks or similar sources. Also, the course teaches elements of language use frequently found in scientific reading. Finally, it focuses on planning and organizing paragraphs, delineates E-mail messages and business letter writing.

A wide range of “Finance and Economics” and “Accounting” texts featuring richness of vocabulary and authenticity of content and style are incorporated. The course, therefore, also targets at Business English vocabulary and spotlights Finance-oriented material. “Vocabulary Building”, “Clarifying Terminology and Expanding Vocabulary”, “Useful Collocations” as well as “From Term to Text” sections blend effectively to solidify students’ awareness at a sentence - paragraph level.

To this end, the recommended textbooks are presented and elaborated in-class through tutor guidance. Supplementary handouts along with terminology analysis and visual aids are used for outlining related parameters.

Instructors

Papaioannou Jenny

Course webpage

http://econservices.soc.uoc.gr/econ_classes/enrol/index.php?id=25

Prerequisites

As OIK 3401 is a 3rd- 4th year English course, participation requires at least an introductory course in microeconomics in the students’ native language. It also presupposes English I & II (OIK 1401, OIK 1402), which are assessed as 1st year compulsory courses. The course aims at presenting terminology and selected concepts necessary for the comprehension of microeconomics passages in English.

Learning outcomes and general competencies

The learning outcome for students who systematically participate in this course incorporates the following targets:

- Comprehension of microeconomics passages and vocabulary as well as selected microeconomics terminology in English.
- Development of strategies in analyzing unknown material within a microeconomics context.
- Familiarization with complex C1 linguistic ability and advanced use of English.
- Selection of written forms of language like paragraph and summary writing with a view of improving writing skills.

Upon completion of the course students are expected to:

- Materialize group work or pair-work. Be competent in comprehending scientific textbooks and journal articles that make use of microeconomic concepts.
- Be able to apply terminology and vocabulary in suggested academic work.
- Unveil the phrasing and content of life-like material used in a daily business environment.
- Function critically in a variety of academic and professional settings.
- Enhance aggregate competency in English.
- Reach and attain a C1 or C2 level linguistic ability.

Assessment

• **Final Examination (100% of the grade - mandatory)**

The final examination of OIK 3401 is carried out in accordance with the schedule of the examination periods of tertiary education in Greece, i.e. in February, June and September. Assessment is based upon all components taught in class. Therefore, it encompasses microeconomic terminology, vocabulary, reading comprehension, language use, analysis of tables and figures in the form of multiple formulas, gap-filling exercises, transformations or open questions. The former, examined in written form, provides a maximum grade of 60% whereas 40% of the grade results from face-to-face oral assessment in translation skills carried out in-pairs. The latter focuses on C1 expanded vocabulary and collocation use related to elemental concepts of finance or business English.

• **Class Assignments (10% of the grade - optional)**

Partial or marginal evaluation based upon class performance requires a number of in-class assignments. These encircle: in-class quizzes or other forms of written exercises based on material already been analysed in class as well as work assigned from authentic sources or other related handouts. Tests are not normally announced in advance. This means that there will be no prior notice for them. All assignments and quizzes must be completed on time, during the session in which they are assigned. There are no make-up quizzes. The ultimate purpose of the allocated tasks, apart from the extra credit given, is to supplement and augment awareness in microeconomics, business and finance in English.

At the end of the semester, students who participate and successfully complete the maximum of in-class tests but one receive a 10% credit in the course as a weighted average on all required skills. However, evaluation based on the final examination both written and oral, a grade of 10 in the course overall, is obligatory for all students who do not participate in the in-class assignments and written tests.

Tutorial sessions

Not offered.

Primary textbook

Stefan, J. (2016). **English for Students of Economics: Microeconomics (Revised edition)**, Gutenberg Publishing, Athens.

Papaioannou, E. (2019). **Notes: Terminology, Vocabulary, Writing**, Rethymno.

Supplementary material

Karamitroglou, F. (2021). **Essential Business Terminology For Native Speakers of Greek**, Athens University of Economics and Business, Athens.

Sybridou, F. and Tombrou, Ch. (2013). **English for Advanced Studies in Economics and Business Management**, Faedimos Publishing, Athens.

<i>Workload (in hours)</i>	Lectures	Tutorials	Individual study	Total
	39	0	111	150

Lectures

1st Week: Introduction

Karamitroglou, ch. 2

- Introduction to Microeconomics in English.
 - Financial Accounting.
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2nd Week: What is Economics?

Stefan, Unit 1

- Text: The Study of Economics – The three problems of economic organization – Economic Systems
 - Related terminology and exercises : consumption, distribution, command economy, market economy, mixed economy, consumption goods, investment goods, input-output, invisible hand, normative economics, positive economics, resource allocation, scarcity.
 - Comprehension exercises related to the selected concepts of the unit.
 - Language use section : prepositions, sentence transformation, noun clauses, phrasal verbs.
 - Application: Text – Positive Versus Normative Economics
 - Writing: paragraph writing.
-

3rd Week: Factors of Production

Stefan, Unit 2, Karamitroglou, ch. 2

(a) Factors of Production

- Text: Inputs and Outputs

- Related terminology and exercises : allocative efficiency, capital, derived demand, entrepreneurship, factors of production, durable goods, final goods, intermediate goods, interest, labor, land, marginal product, production possibility frontier, productive efficiency, rate of return on capital, rent, utility, wages.
- Comprehension exercises related to the selected concepts of the unit. Affixes.
- Language use section : close passage, derivatives, negative inversion, gerunds, phrasal verbs.
- Application: Text – Production Possibility Frontier
- Writing: paragraph.

(b) Cost Accounting

4th Week: Supply and Demand

Stefan, Unit 3

- Text: The Essentials of Supply and Demand
- Related terminology and exercises : demand curve, excess demand, deregulation, equilibrium point, complementary goods, substitute goods, raw material, regulation, shortage, supply curve, excess supply, surplus, technological innovation.
- Comprehension exercises related to the selected concepts of the unit. Word formation.
- Language use section : reported speech, phrasal verbs, negative inversion.
- Application: Text – Movements Along a Curve Versus Shifts of the Curve
- Writing: paragraph.

5th Week: Elasticity

Stefan, Unit 4, Karamitroglou, ch. 1

(a) Elasticity

- Text: Elasticity of Demand and Supply
- Related terminology and exercises : arc elasticity of demand, cross elasticity of demand, elastic demand, elastic supply, inelastic demand, inferior goods, normal goods, income elasticity of demand, price elasticity of demand, price elasticity of supply, revenue, short run, total revenue, unit elasticity.
- Comprehension exercises related to the selected concepts of the unit. Word formation.

- Language use section: articles, verb tenses, sentence transformations, prepositions.
- Writing: business letter writing.

(b) Financial Markets

6th Week: Product and Factor Markets

Stefan, Unit 5

- Text: The Market Mechanism
 - Related terminology and exercises : assymetric information, collective bargaining, marginal benefit, marginal cost, market failure, market power, externality, public goods, income distribution, inventory, factor market, product market, poverty rights, public goods.
 - Comprehension exercises related to the selected concepts of the unit. Affixes.
 - Language use section: noun clauses, verb tenses, phrasal verbs, error analysis.
 - Application: Text – The Circular Flows in a Market Economy
 - Writing: summary writing.
-

7th Week: Consumer Behaviour

Stefan, Unit 6, Karamitroglou, ch. 1

(a) Consumer Behaviour

- Text : Marginal Utility and Consumer Choice
- Related terminology and exercises : budget constraint, budget line, consumer surplus, diminishing marginal utility, equilibrium for the individual consumer, expenditure, income effect, indifference curve, marginal rate of substitution, purchasing power, producer surplus, substitution effect, marginal utility, total utility.
- Comprehension exercises related to the selected concepts of the unit. Word formation.
- Language use section : reported speech, phrasal verbs, gerunds and infinitives.
- Application : Text – Consumer Surplus
- Writing : paragraph.

(b) Mathematics

8th Week: Production

Stefan, Unit 7

- Text: Production Theory
 - Related terminology and exercises : capital-output ratio, constant, diminishing returns, diseconomies of scale, economies of scale, fixed input, isocost line, isoquant, average product, total product, marginal rate of technical substitution, production function, productivity, returns to scale, variable, variable input.
 - Comprehension exercises related to the selected concepts of the unit, word formation.
 - Language use section: verb tenses, infinitives and gerunds, prepositions, sentence transformations.
 - Application: Text – Isoquants
 - Writing: Business Letters.
-

9th Week: Costs

Stefan, Unit 8, Karamitroglou, ch. 1

(a) Costs

- Text: Cost Concepts
- Related terminology and exercises : accounting, accounting profit, balance sheet, break-even point, average fixed cost, average variable cost, corporation, explicit cost, implicit cost, total cost, equilibrium for a firm, opportunity cost, normal profit, retained earnings.
- Comprehension exercises related to the selected concepts of the unit. Classifying Costs.
- Language use section: phrasal verbs, reported speech, error analysis.
- Application: Text – The Opportunity Cost of Your University Degree
- Writing: E-mail Messages.

(b) Applied Econometrics

10th Week: Market Structure

Stefan, Unit 9

- Text: Types of Market Structure

- Related terminology and exercises: antitrust policy, cartel, collusion, concentration ratio, imperfect competition, monopolistic competition, perfect competition, duopoly, freedom of entry, monopoly, monopsony, oligopoly, perfect information, market share, market structure, price discrimination, price leader, price taker, price war, product differentiation.
- Comprehension exercises related to the selected concepts of the unit. Word formation, Inference.
- Language use section: noun clauses, verb tenses, adverb clauses.
- Application: Text - The Diamond Market
- Writing: E-mail Messages.

11th Week: Environmental Economics

Stefan, Unit 10

- Text: The Economics of Pollution Control
- Related terminology and exercises: acid rain, carbon tax, cooperative equilibrium, fossil fuels, game theory, global warming, greenhouse effect, free goods, free riding, model, Nash equilibrium, social benefit, social cost, sustainability.
- Comprehension exercises related to the selected concepts of the unit, Inference.
- Language use section: phrasal verbs, noun clauses, reported speech, error analysis.
- Application: Text – Game Theory
- Writing: Paragraph.

12th Week: Equity

Stefan, Unit 11

- Text: Income Distribution
- Related terminology and exercises: coefficient, developed country, developing country, equity, frequency distribution, function, Gini coefficient, transfer payments, poverty threshold, standard deviation, standard of living, welfare state.
- Comprehension exercises related to the selected concepts of the unit. Matching. Word Formation.
- Language use section: infinitives and gerunds, prepositions, negative inversion.

- Application: Income Inequality Versus Poverty.
-

13th Week: Overview

- Overview of the most significant notions in Microeconomics.
 - Preparation for the final examination.
-

TEACHING ECONOMICS - OIK3601

Course objectives

The course aims to introduce students to the key issues in teaching Economics. In particular, it intends to help the prospective teacher to select and implement a teaching method to activate students' interests in the discipline, to introduce creative ways of handling economic concepts and their application in practice and to develop objective criteria of student assessment. The course is divided into two sections. The first section provides an overview of basic learning and teaching theories, presents the advantages and disadvantages of alternative teaching methods in economic science and alternative ways of assessing students. In the second section specific teaching approaches in the field of micro- and macro theory, econometrics and management are discussed.

Course webpage

http://econservices.soc.uoc.gr/econ_classes/enrol/index.php?id=72

Prerequisites

There are no strict prerequisites for attending the course but familiarity with economic theory and knowledge of economic analysis as taught in the compulsory courses of the Department of Economics.

Learning outcomes and general competencies

Upon successful completion of the course the student will be able to perform the following:

- ☐ Have an understanding of basic principles of didactics as well as the way in which the teaching of a course in economic education is planned and implemented
- ☐ Knowledge of appropriate pedagogical theories and educational techniques
- ☐ Know and be able to apply the basic and alternative methods and techniques of teaching economic courses

☐ Be ready for an internship in secondary education to be able to communicate satisfactorily the basic principles of economic theory

☐ Be able to do a micro-study (microtext)

The course is a prerequisite for the internship of students in high schools. Both the course and the internship are an integral part of the Certificate of pedagogical and teaching proficiency described in the Department's Study Guide.

Assessment

The course will be examined in writing at the end of the semester, and will include the preparation of compulsory work during the semester. Written exams at the end of the semester 60% of the final grade, and compulsory work 40% of the final grade.

Tutorial sessions

None

Primary textbook

Supplementary material

Workload (in hours)	Lectures 39	Tutorials 0	Individual study 111	Total 150
Lectures	Week 1: Introduction to the teaching of Economics. Learning, types of learning, the purpose of Economic Education			
	Week 2: Theories of learning and their teaching implications. Methods and means of teaching. Teaching economics as a learning process			
	Week 3: Nature and categories of economic courses. Design, organization and implementation of an economic course. Curriculum, teaching and pedagogical theories			
	Week 4: Teaching techniques and the use of new technologies. Teaching concepts and using the concepts of Economics			
	Week 5-6: Educational techniques and examples Educational techniques and examples: lecture, discussion, brainstorming, roles and simulation, research work (collaborative or cross-thematic), case studies. The concept and use of micro-study the use of visits to economic units, field surveys and the use of visitors-speakers, school conferences			
	Week 7: Principles and techniques for assessing student performance. Principles and techniques for assessing student performance.			

Week 8-9: Methods and techniques in teaching macroeconomic theory

Methods and techniques in teaching macroeconomic theory (GDP, public spending, unemployment)

Week 10-11: Methods and techniques in the teaching of microeconomic theory

Methods and techniques in the teaching of microeconomic theory (consumer Theory, producer theory, consumer and producer theory, enterprise theory state intervention in the market)

Week 12: Methods and techniques in teaching business administration (business environment)

Methods and techniques in teaching business administration (business environment)

Week 13: Lesson recapitulation and conclusions

Lesson recapitulation and conclusions

EUROPEAN ECONOMIC HISTORY I - OIK2306

Primary textbook

Workload (in hours)	Lectures	Tutorials	Individual study	Total
	39	0	111	150

Lectures

LAW OF THE EUROPEAN UNION - OIK2308

Course objectives

The aim of the course is to analyse the nature and law of the European Union (EU) and to gain an in-depth understanding of the functioning of the EU as a Community of law which formulates legally binding rules applicable to the public and private spheres of the EU Member States. Particular emphasis will be given to the classical EU freedoms, the principles governing the relationship between EU law and national law and the basic principles of competition law. After completing this course, students will be able to gain an in-depth understanding of the multi-dimensional role of the EU law and its main features. The teaching of the course aims to provide students with general competences/skills in promoting critical thinking, research effort, the development of creative thinking, independent work and the cultivation of cooperative effort. Regarding the Court of Justice of the European Union (CJEU) and the General Court of the EU, electronic texts of judgments of these Courts will be provided and thus through case law, issues addressed in the course will be answered. In addition, through the critical analysis of the case law of the CJEU students will try to highlight the nature, legal principles, hierarchy, form and substantive rules of EU law.

Prerequisites

There are no prerequisites for this course.

Learning outcomes and general competencies

After successfully completing the course, the student shall be in position to:

- be familiar with the history of the adoption/revision of the Treaties ("constitutional" history of the Union)
- understand the basic constitutional principles of the Union and how they are applied
- understand the application of the classical EU freedoms
- understand the concept of the rule of law in the European Union
- to understand the basic principles of competition law in the Union and their application
- communicate this knowledge by using well-structured arguments

Assessment

The assessment of the students is based on a final written exam at the end of the semester.

Tutorial sessions

N/A

Primary textbook

Pliakos, A. (2018). **Law of the European Union: Institutional and Substantive (2nd edition)**, Nomiki Bibliothiki, Athens.

Supplementary material

Spiliopoulos, O. (2020). **Economic Law of the European Union**, Sakkoulas Publishers, Athens – Thessaloniki .

Workload

(in hours)

Lectures

39

Tutorials

0

Individual study

111

Total

150

Lectures

1st Week: Introduction to the EU legal order

2nd Week: Aims and values of the Union, EU competences, sources and typology of EU law

3rd Week: Principle of direct effect (horizontal – vertical), principle of indirect effect

4th Week: Principle of supremacy of EU law, member state liability

5th Week: The rule of law in the EU

6th Week: Free movement of goods (abolition of custom duties, prohibition of discriminatory internal taxation, prohibition of quantitative restrictions)

7th Week: Free movement of capital

8th Week: Free movement of workers (EU citizenship, general freedom of movement, freedom of movement for workers, right of residence

9th Week: Freedom of establishment and freedom to provide services

10th Week: The EU Charter of Fundamental Rights with an emphasis in economic and social rights

11th Week: Principles of EU competition law (prohibited agreements between undertakings)

12th Week: Principles of EU competition law (abuse of dominant position)

13th Week: Revision and preparation for the exams

COMPARATIVE ECONOMIC SYSTEMS II - OIK4305

<i>Instructors</i>	Milonakis Dimitris
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<i>Workload (in hours)</i>	Lectures	Tutorials	Individual study	Total
	39	0	111	150

ADVANCED ENGLISH II - OIK3402

Course objectives

This demanding course is designed to cover a variety of terminological aspects through a wide range of texts that combine richness of vocabulary and authenticity of content and style. It is adjusted to serve specific terminological needs presented in 13 sessions. The course, primarily, epitomizes Business English vocabulary and incorporates Finance-oriented material like “Finance and Economics”, “Accounting”, “Business Administration”, “Marketing and Communication”, “The European Union”.

In the “Vocabulary Building” section, the language of texts is used as reference and students are asked to match a list of terms in Greek with their counterparts in English if the reference text is in English. If the reference text is already in Greek, selected Greek terms from the text are matched with multiple choice options of potential English equivalents, and the audience is required to identify the correct option. In the “Clarifying Terminology and Expanding Vocabulary” section, terms in the native language are used as starting points, wherefrom related secondary terms of the same semantic field or related usage are juxtaposed and contrasted. In the “Useful Collocations” section participants utilize nouns, verbs, adjectives, or adverbs to accompany or embrace terms and, therefore, acquire how to build correct collocations. In the “From Term to Text” section, the whole passage is translated into the other language solidifying, thus, sentence and paragraph level. All in all, in the coursebook used, units contain an aggregate of around 1360 primary terms, around 840 semantic fields that explode into almost 3450 primary and secondary terms, and approximately 800 collocations. On average, each Unit is about 580 words long and can be fully covered within 3 hours of teaching. Out of the whole book 15 units are extensively presented.

Except for the aforementioned material, the course simultaneously targets at preparing students to study and, therefore, gain a deep insight in extended economics passages in English. To this aim, it reviews microeconomics and macroeconomics terminology taught in earlier compulsory and optional levels of English emphasizing, thus, advanced vocabulary frequently found in economics texts. It practices effective strategies and develops skills in comprehending and extensively analyzing reading materials. This written component reviews paragraph and summary writing. Popular titles like “Economics as a Social Science”, “Microeconomic Theory”, “Macroeconomic Theory”, “Game Theory”, “European Economic Integration”, “Principles of Corporate Finance” and others, are included to signify lengthy extracts on applied economics.

Students, then, elaborate on texts by answering comprehension questions, by eliciting the meaning of advanced unknown words, paraphrasing and summarizing syntactically complicated structures through teacher guidance. Among the teaching methods used, there is a multitude of in-class worksheets based on already presented material aiming to further consolidation.

The course is also designed to assess the language ability of target groups who wish to professionally register or study where English is the language of communication at a postgraduate level.

The course necessitates competence in, at least, one introductory course in macroeconomics and/or microeconomics in the students’ native language. It can also be conceived as an elaboration of English I & II compulsory courses, namely OIK 1401, OIK 1402 as well as a continuation of OIK 3401 English III elective course.

<i>Instructors</i>	Papaioannou Jenny
<i>Course webpage</i>	http://econservices.soc.uoc.gr/econ_classes/enrol/index.php?id=26
<i>Prerequisites</i>	As OIK 3402 is a 3rd- 4th year English course, participation requires knowledge of terminology in finance and business in the students' native language. It also presupposes English I & II (OIK 1401, OIK 1402), which are assessed as 1st year compulsory courses but it does not necessarily require Elective Advanced English 1 (OIK 3401).
<i>Learning outcomes and general competencies</i>	The learning outcome for students who systematically participate in this course attains the following targets: • A deep insight in extended passages in economics and Business English. • Review of microeconomics and macroeconomics terminology taught in earlier levels of English emphasizing, therefore, advanced vocabulary frequently found in economic texts. • Familiarization with the structure of scientific writing. • Practice of effective strategies in comprehending and extensively analyzing reading materials. • Application of skimming, scanning, reverse outlining, identifying the main ideas, decoding meaning and collocations in context as well as responding to comprehension questions based on lengthy readings. • Ability to elicit meaning from extensive passages (induction). • Competency to extract the meaning of individual words or to define collocations (deduction). • Crafting coherent utterances. • Encouragement to paraphrase and summarize syntactically complicated paragraphs or structures through revision and teacher guidance. Upon completion of the course students are expected to be prepared to: • Materialize group or pair-work. • Filter information and concepts extracted from long scientific papers. • Elaborate on specialized terminology issues that appear in academic textbooks or business corpora. • Reproduce writing for specific purposes or business-related transactions. • Attain a C2 level linguistic ability in accordance with the Common European Framework of Languages. • Attend postgraduate studies inland or abroad with ease and without linguistic difficulty. • Shape business writing ethically in a variety of professional contexts, well-informed of the role of English language in intercultural business communication.
<i>Assessment</i>	• Final Examination (100% of the grade - mandatory)

Language course OIK 3402 is assessed in English by way of a final examination, both oral and written, which complies with the schedule of the examination periods announced by the Economics department, i.e. conducted in February, June and September. Oral and written assessment is based upon all components the way taught in class.

The initial part of OIK 3402 examination comprises a two-hour open book written test that examines extended passages in English. This means that notes and printed resources presented in-class, except for dictionaries, are allowed during the written examination process. The students, thus, are evaluated in their ability:

- to recognize and select advanced vocabulary
- to cope with multiple choice or open-gap filling exercises
- to elicit useful information from authentic material
- to provide appropriate titles
- to apply paraphrase and summary mechanisms to articles and extensive readings

The written examination section provides students with a maximum grade of 40% whilst 60% of the grade results from face-to-face oral assessment in translation skills carried out in-pairs. The latter aims for a C1-C2 linguistic ability examination, in which vocabulary and collocation use relates to elemental concepts of finance or business English. Therefore, oral examination extensively attends terminology questions.

<i>Tutorial sessions</i>	Not offered.			
<i>Primary textbook</i>	(2010). Applied Economics Readings: Course Notes (a collection of texts from a variety of popular economics textbooks) , University of Crete, Rethymno.			
<i>Supplementary material</i>	Sybridou, F. and Tombrou, Ch. (2013). English for Advanced Studies in Economics and Business Management , Faedimos Publishing, Athens.			
<i>Workload (in hours)</i>	Lectures 39	Tutorials 0	Individual study 111	Total 150
<i>Lectures</i>	1st Week: Economics as a Social Science I Karamitroglou, ch. 1, Applied Economics Readings, Reading 1 (from Economics, by Lipsey, R., Ragan, C.T.S and Courant, P.N.)			

(a) Investment Risk - Financial Institutions

(b) Economics as a Social Science

- The Distinction Between Positive and Normative Statements - The importance of the distinction. Positive and normative statements in economics.
 - The Scientific Approach in Economics – Is human behaviour predictable ? Group behavior versus individual behavior. The law of large numbers.
-

2nd Week: Economics as a Social Science II

Karamitroglou, ch. 1, Applied Economics Readings, Reading 1

(a) Trade Theory – Securities

(b) Economics as a Social Science

- The Scientific Approach in Economics - The importance of theories. The structure of theories. Variables, assumptions, predictions, expressing relations among variables. Economic models.
-

3rd Week: Microeconomic Theory I

Karamitroglou, ch. 1, Applied Economics Readings, Reading 2 (from the introduction in Microeconomic Theory, by Luenberger, D.G.)

(a) Investment Analysis - Stock Exchange

(b) Microeconomic Theory

- What Is Microeconomics ?
 - The Elements of Microeconomics – Production. Preferences and consumption. Markets.
-

4th Week: Microeconomic Theory II

Karamitroglou, ch. 2, Applied Economics Readings, Reading 2

(a) Tax Accounting

(b) Microeconomic Theory

- The Elements of Microeconomics – Welfare.
 - Methods – Calculus, Sets. Optimization and duality. Equilibria and fixed points. Gametheory.
-

5th Week: Macroeconomic Theory I

Karamitroglou, ch. 2, Applied Economics Readings, Reading 3 (from the 5th chapter of the well-known Macroeconomic Analysis, by Shapiro, E.)

(a) Financial Statements – Auditor's Report – Accounting Principles

(b) Macroeconomic Theory

- The Background of Macroeconomic Theory - Macroeconomics and Microeconomics.
-

6th Week: Macroeconomic Theory II

Karamitroglou, ch. 3, Applied Economics Readings, Reading 3

(a) Management

(b) Macroeconomic Theory

- The Background of Macroeconomic Theory – Macroeconomics, Classical and Keynesian. Gregory Mankiw and David Romer. What is New Keynesian Economics?
-

7th Week: Game Theory

Karamitroglou, ch. 3, Applied Economics Readings, Reading 4 (from Mathematical Optimization and Economic Theory, by Intriligator, M.D.)

(a) Organizational Behaviour

(b) Game Theory

- Classification and Description of Games.
 - Two-person Nonzero-sum Games.
-

8th Week: Welfare Economics and Public Policy I

Karamitroglou, ch. 3, Applied Economics Readings, Reading 5 (from the introduction in Applied Welfare Economics and Public Policy, by Just, R.E., Hueth, D.L. and Schmitz, A.)

(a) Compensation

(b) Welfare Economics and Public Policy

- Introduction.
 - Positive Versus Normative Economics.
 - Some Controversies in Welfare Economics.
-

9th Week: Welfare Economics and Public Policy II

Karamitroglou, ch. 3, Applied Economics Readings, Reading 5

(a) Human Resource Management - Product Management

(b) Welfare Economics and Public Policy

- Compensation in Welfare Economics.
 - Compensating and Equivalent Variations.
 - Efficiency and Equity.
 - Welfare Weightings.
-

10th Week: Exhaustible Resources

Karamitroglou, ch. 5, Applied Economics Readings, Reading 6 (chapter 1, from Economic Theory and Exhaustible Resources, by Dasgupta, P. and Heal, G.)

(a) Company Profile – Corporate Social Responsibility and Targets

(b) Exhaustible Resources

- A Preview.
-

11th Week: European Economic Integration I

Karamitroglou, ch. 5, Applied Economics Readings, Reading 7 (chapter 5 -The original community blueprint: the form and process of integration, from European Economic Integration, by Swann, D.)

(a) Company Profile – History, Strategy and Corporate Values)

(b) European Economic Integration

- The Three Communities.
 - The Concept of Economic Integration.
 - Forms of Integration.
-

12th Week: European Economic Integration II

Karamitroglou, ch. 6, Applied Economics Readings, Reading 7

(a) Institutions of the European Union

(b) European Economic Integration

- The process of Economic Integration.
 - The Status of the Original EEC.
 - The Advantages of Economic Integration.
-

13th Week: Principles of Corporate Finance

Karamitroglou, ch. 6, Applied Economics Readings, Reading 8 (chapter 1 - Why finance matters, from Principles of Corporate Finance, by Brealey, R.A. and Myers, S.C.)

(a) The European Central Bank

(b) Principles of Corporate Finance

- The Role of the Financial Manager.
 - Organizing a Business – Sole proprietorships, partnerships, corporations.
 - Who Is the Financial Manager?
 - Topics Covered in this Book.
 - Summary.
-

MARXIST ANALYSIS - OIK3303

Instructors

Lapatsioras Spyros

Course webpage

http://econservices.soc.uoc.gr/econ_classes/enrol/index.php?id=31

Primary textbook

Supplementary material

<i>Workload (in hours)</i>	Lectures	Tutorials	Individual study	Total
	39	0	111	150

Lectures

POLITICAL ECONOMY OF THE AGRICULTURAL SECTOR II - OIK4303

Course webpage

http://econservices.soc.uoc.gr/econ_classes/course/view.php?id=58

Primary textbook

*Workload
(in hours)*

Lectures

46

Tutorials

0

Individual study

119

Total

165

Lectures

INTRODUCTION TO PROGRAMMING USING R - OIK4502

<i>Course objectives</i>	The objective of this course is to introduce and give the basic knowledge to students to programming using R. Key actions, such as installation of R, data handling, vectors, lists, matrices, data frames, operators are taught. Further, plots and self-writing writing functions will be presented.			
<i>Instructors</i>	Tsagris Michail			
<i>Course webpage</i>	https://econservices.soc.uoc.gr/econ_classes/course/view.php?id=123			
<i>Prerequisites</i>	Sufficient knowledge of Statistics I (ECO1003) and II (ECO1006), Econometrics I (ECO2003) and II (2006), Computers for Economics I (ECO1501) and II (ECO2501).			
<i>Learning outcomes and general competencies</i>	On successful completion of the course, the students will be able to: • Install R. • Import and export data to and from R. • Distinguish terms as variable, object and their properties. • Be in a position to plot different types of data. • Be able to write functions and use the “while” and “for” loops.			
<i>Assessment</i>	The assessment is based on a final project submitted at the end of the semester. A presentation of the project follows at a later stage.			
<i>Tutorial sessions</i>	Not offered for this course.			
<i>Primary textbook</i>	Djoufras, I. and Karlis, D. (2016). Introduction to Programming and Staistical Analysis using R , Kallipos (Electronic Textbook), Athens (in Greek).			
<i>Supplementary material</i>	Fokianos, K. and Charalambous, Ch. (2010). Notes in R, https://cran.r-project.org/doc/contrib/mainfokianoscharalambous.pdf, Athens (in Greek). Fouskakis, D. (2013). Data Analysis using R, Tsotras Publishing, Athens (in Greek).			
<i>Workload (in hours)</i>	Lectures	Tutorials	Individual study	Total
	52	0	88	140

(Chapter 1)

- Description and seminar goals.
 - Installation of R.
 - Basic operations.
 - Libraries.
-

Week 1: Introduction

(Chapter 1)

- Description and seminar goals.
 - Installation of R.
 - Basic operations.
 - Libraries.
-

Week 2: Vectors and operators

(Chapter 2)

- Vectors and operators.
 - Simple calculations.
 - Commands, numbers, and characters.
-

Week 3: Data import/export, matrices, and data.frames

- Data import and export.
 - Matrices and data.frames.
 - Lists.
-

Week 4: Data visualization

(Chapter 5)

- Plots for continuous data.
 - Plots for categorical data.
 - Multiple plots in a window.
 - Export and store plots.
-

Week 5: For and while loops

- The for loop.
 - The while loop.
-

Week 6: Writing functions and project assignment

(Chapter 7)

- Writing functions.
 - Discussion of the projects.
-

Week 7: Basic commands for data analysis I

(Chapter 8)

- Comparison of two population means.
 - Comparison of 3 or more population means.
 - Pearson and Spearman correlations.
-

Week 8: Basic commands for data analysis II

(Chapter 8)

- Linear regression models.
-

Week 9: Project report meeting

Week 10: Project report meeting

Week 11: Project report meeting

Week 12: Project report meeting

Week 13: Presentation of the projects

EUROPEAN ECONOMIC HISTORY II - OIK4304

Course objectives

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Course webpage

<http://www.soc.uoc.gr/moodle/course/index.php?categoryid=7>

*Workload
(in hours)*

Lectures

24

Tutorials

0

Individual study

126

Total

150

Lectures

- ΣΚΕ611

<i>Instructors</i>	Milonakis Dimitris			
<i>Workload (in hours)</i>	Lectures 0	Tutorials 0	Individual study 0	Total 0

INTERNATIONAL POLITICAL ECONOMY - OIK3305

<i>Instructors</i>	Lapatsioras Spyros
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<i>Course webpage</i>	http://econservices.soc.uoc.gr/econ_classes/enrol/index.php?id=34
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<i>Primary textbook</i>	
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<i>Supplementary material</i>	
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<i>Workload (in hours)</i>	Lectures	Tutorials	Individual study	Total
	39	0	111	150

<i>Lectures</i>	
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COMPUTERS III - OIK4501

Course objectives

The purpose of the seminar is for students to apply the tools they have acquired in the courses of Computers, Statistics and Econometrics to an economic question of their choice. In the lectures that take place during the semester, an attempt will be made to apply economic theory to the study of the behavior of statistical data or estimators under different types of data and sample sizes. Part of the seminar will be devoted to the presentation of commercial and open-source software that students should adopt as analytical tools. Participants in the seminar will have the option of collecting data using questionnaires if they do not want data from relevant databases. The seminar is addressed to students who are interested in deepening their knowledge in applied statistical research and the possibilities of utilizing new innovative software and techniques. In addition, in the seminar will be used a LIMESURVEY server - open-source software. Using this software as a vehicle, students interested in this kind of research will be able to write surveys using questionnaires in real time.

Instructors

Drakos Periklis

Course webpage

http://econservices.soc.uoc.gr/econ_classes/enrol/index.php?id=6

Prerequisites

A student, in order to attend the seminar, it is necessary to have familiarity with computers, knowledge of the English language as well as with statistics and statistical tests of hypotheses. Familiarity with the multiple linear regression model and coefficient testing with linear constraints is also required. Due to the nature of the seminar, which concerns a large part of statistics and econometrics courses, it is required that the students applied, to have successfully completed the courses: Statistics II (ECON1006), Computers II (ECON2501), Econometrics I (ECON2003) and Mathematics I (ECON1001).

Learning outcomes and general competencies

Upon successful completion of the course, the student will be able of the following:

- Students have used extensively statistical analysis software (commercial and open source) and comprehend their connection with statistics, econometrics and courses that make wide use of quantitative and qualitative analysis in economics.
- Students acquired knowledge of the principles of statistical and econometric software from a theoretical and practical point of view.
- They are able to describe and interpret complex results of statistical concepts, hypothesis tests and specific econometric problems.
- Be able to design a questionnaire.
- Be able to draw up, codify and analyze a questionnaire of quantitative and qualitative survey.
- Search, analysis and synthesis of data and information, using the necessary technologies.
- Promotion of free, creative, and inductive thinking and writing.

Assessment

The evaluation of the students will be done in combination with the written assignment and the oral presentation of the results in class. The oral presentation will take place in the last two weeks of the course (with the mandatory use of presentation software), while the written assignment must be delivered on the last day of the regular examination period of the Department. The written assignment includes the following steps:

- Finding a topic related to the economic literature (Econlit).
- Find literature related to the topic.
- Finding data to do the empirical analysis. Analysis and interpretation of results.
- Presentation and writing of empirical work.

The work should concern the study of an economic or statistical problem or a method of estimation-analysis of data under real market conditions. For the realization of the assignment, students may write the required code in HTML, Eviews, SPSS, Gretl, R which will include the execution or calculation of specific statistical data that summarize the results and graphs. This code will be part of the written work as an appendix and not in the main text. Students must propose a specific topic for their work during the first meetings. Work items given in the previous two years are not allowed. The written assignment that will be delivered at the end of the semester should include the following parts:

- Summary: The purpose of the empirical work will be described.
- Theory: Basic hypotheses of the economic problem or research. Description of the effects arising in the analysis-assessment of the data.
- Description of the analysis: models, parameter values, sample size, number of simulations, etc.
- Results: tables, graphs, comments. Conclusions of empirical work.
- Bibliography.
- Annex with code used or software commands.

Tutorial sessions

Not offered.

Primary textbook

Supplementary material

Workload (in hours)

Lectures
47

Tutorials
30

Individual study
83

Total
160

the seminar.

- Basic operations and creation of complex data files. Basic functions and mathematical constants.
 - Series Transformations, Functions, and Dynamic Charts
 - Types of variables and parametric analysis. Series transformations and statistical functions. Functions of random variable distributions.
 - Dynamic graphs: plot and histograms.
-

Process of Empirical Research, description, and objectives of the seminar.

- Basic operations and creation of complex data files. Basic functions and mathematical constants.
 - Series Transformations, Functions, and Dynamic Charts
 - Types of variables and parametric analysis. Series transformations and statistical functions. Functions of random variable distributions.
 - Dynamic graphs: plot and histograms.
-

Econometric software for Advanced users I

- Creation of matrices and operations with matrices.
 - Import data from text files (problems - techniques). Econometric problems.
 - The use of the LS function to estimate the multiple linear regression model.
-

Econometric software for Advanced users II

- Residue checks. Stability tests.
 - Statistical Tests of Autocorrelation - Heteroscedasticity. Trends and Moving Average.
-

Econometric software for Advanced users III

- Use of pseudo-variables and problems. The problem of cointegration. Time series and unit root tests.
 - VAR models
 - VECM Models - ARDL
-

PANEL Data - Discussion on the Progress of Work

- Import and transform data.
-

Systems of Equations and Presentation of Different Estimation Methods

- Systems of Equations - Example of a Demand System. SURE estimation.
 - Imposition and incorporation of constraints on equations. Progress of work and questions.
-

Qualitative variables in field surveys.

- Construction and coding of questionnaires.
 - Construction of online surveys with code on the LimeSurvey server.
 - Export data from LimeSurvey to commercial and open-source software.
- Automatic descriptive analysis of questionnaires.
-

Multivariate Analysis of Questionnaire Results

- Correlations of quantitative and non-quantitative variables. Variance analysis of repeated measurements.
-

Presentation of open and commercial PRESENTATION software.

INSTITUTIONS OF THE EUROPEAN UNION - OIK2305

Course objectives

The aim of this course is to analyse the institutions of the European Union (EU) and to gain an in-depth understanding of how they function and the impact of their decisions on the economic, social and political life of the EU Member States. After completing this course, students will be able to gain an in-depth understanding of the multidimensional role of the EU institutions and their main characteristics. The teaching of the course aims to provide students with general competences/skills in promoting critical reflection, research effort, the development of creative thinking, independent work and the cultivation of cooperative effort. Thus, the structure, role, policies and operation in practice of the main institutions of the European Union will be highlighted, through their critical analysis.

Prerequisites

There are no prerequisites for this course.

Learning outcomes and general competencies

After successfully completing this course, the student shall be in position to:

- be familiar with the history of the adoption/revision of the Treaties ("constitutional" history of the Union)
 - distinguish the main functions and competences of the institutions of the Union
 - be familiar with the methods and procedures for decision-making in the EU
 - understand the evolution of EU policies
 - understand the implementation of EU policies
 - take a critical approach to the institutional structure of the Union and the European integration process in general
 - communicate this knowledge by using well-structured arguments
-

Assessment

The assessment of the students is based on a final written exam at the end of the semester.

Tutorial sessions

N/A.

Primary textbook

Liargovas, P., Papageorgiou, Ch. (2021). **The European Phenomenon: History, Institutions, Policies (3rd edition)**, Tziolas Publishers, Thessaloniki.

Tzemos, V. (2009). **The Political Institutions of the European Union: the Treaty of Lisbon**, Nomiki Bibliothiki, Athens.

Supplementary material

Maravegias, N. (2016). **European Union: Creation, Evolution, Prospects.**, Kritiki Publishers, Athens.

Workload

(in hours)

Lectures

39

Tutorials

0

Individual study

111

Total

150

Lectures

1st Week: Introduction to European integration

2nd Week: History of the Union

3rd Week: EU enlargement procedures, accession/exit of a member state

4th Week: The European Parliament (organisation – functioning – competences)

5th Week: The European Council (organisation – functioning – competences)

The Council (organisation – functioning – competences)

6th Week: The European Commission (organisation – functioning – competences)

7th Week: The Court of Justice of the European Union (organization – functioning) and the importance of the case law

8th Week: The European Central Bank – the Court of Auditors (organization – functioning – competences)

9th Week: Economic and Monetary policy

10th Week: Stability mechanisms (ESM), the European system of financial supervision

11th Week: The Area of Freedom, Security and Justice

12th Week: The Common Foreign and Security Policy

13th Week: Revision and preparation for the exams

SUSTAINABLE DEVELOPMENT - OIK3313

<i>Course objectives</i>	The notion of sustainability is an integral element of modern societies and placed high in the agenda of governments and international organizations globally. The aim of this module is to introduce students to the core terms, principles and values of sustainability, highlighting its ethical context, along with challenges and obstacles involved in its implementation. The module also provides information related to the measurement of sustainability through various benchmarks and practices, thereby offering ample knowledge on its implementation in the public, private and non-profit sphere. This module draws on both theories and practices through case studies from various sectors including tourism.			
<i>Prerequisites</i>	None			
<i>Learning outcomes and general competencies</i>	Upon the successful completion of the module, the student will be able to: • Appreciate the fundamental principles of sustainable development (SD). • Acknowledge the moral and political issues related to SD. • Recognise the challenges related to the implementation of SD and identify viable solutions to overcome them. • Critically evaluate its importance at the national, regional and local level. • Assess the key criticism against SD. Additional skills that the students will acquire after the successful completion of the module include: • Research, analysis and synthesis of data and information retrieved. • Work in a multi-disciplinary environment. • Work in an international environment.			
<i>Assessment</i>	One written exam (100% of the final grade). There is also the option of a project-based assignment, in teams of max 2 students, for an extra 2/10 grades.			
<i>Tutorial sessions</i>	Tutorials are not offered for this course.			
<i>Primary textbook</i>	Dimadama, Z. (2021). Sustainable Development: United Nations' 17 SDG , Papazisis Publishing, Athens (in Greek).			
<i>Supplementary material</i>	Sachs, J. D. (2019). The Age of Sustainable Development , Columbia University Press, USA.			
<i>Workload (in hours)</i>	Lectures 39	Tutorials 0	Individual study 111	Total 150
<i>Lectures</i>	1st Week: Introduction to development and SD			

- Introduction to the module.
 - The notion of development.
 - Sustainability: What is at stake?
 - Brief historical development of sustainability.
-

2nd Week: Universal challenges and issues

- Climate change and the environment.
 - Public participation.
 - Over-consumption.
 - Planet's limits.
-

3rd Week: Governance and SD

- Stockholm declaration.
 - Brundtland Report "Our Common Future" (1987).
 - Rio Summit.
 - "Agenda 21".
 - Kyoto protocol (1997).
 - "Agenda 2030".
-

4th Week: Stakeholders

- Whose responsibility?
 - Stakeholders and stakes.
 - Ethics and moral.
-

5th Week: Sustainable business practices

- Sustainable production.
 - Sustainable consumption.
 - SD and CSR.
-

6th Week: Measuring sustainability

- Sustainability benchmarks.
 - Practices, criteria, limits.
-

7th Week: Economic, social and environmental sustainability – The case of tourism

- Economic impacts.
 - Socio-cultural impacts.
 - Environmental impacts.
-

8th Week: SD and Economy

- All Inclusive.
 - Exploitation.
 - Poverty reduction through tourism.
-

9th Week: SD and society

- Tourism for all.
 - Community based tourism.
 - Local communities and governance.
-

10th Week: SD and environment

- Tourism and environmental degradation.
 - Alternative forms of tourism.
 - Nature based tourism.
 - Eco-tourism.
-

11th Week: SD in different parts of the World.

- Developed nations: Europe's responsibility.
 - Challenges for the developing countries.
-

12th Week: Criticism and challenges in its implementation

- Criticism.
 - Challenges in its implementation.
-

13th Week: Revision and preparation for the Exams
