HELLENIC OPEN UNIVERSITY

ADDRESS
18, Parodos Aristotelous 263 35 PATRA

Tel.: (+30) 2610 367300
Fax: (+30) 2610 367650

e-mail: info@eap.gr,

URL: www.eap.gr
LEGAL FRAMEWORK

The HOU was legally founded with article 27, par. 1, pas. a of Act 2083/1992 as an independent and wholly self-governed higher education institute. It operates as a Legal Person of Public Law under the supervision of the Hellenic State, as exercised by the Minister of Education.

The institute's headquarters are in Patras.

The HOU's mission is to provide distance education at both undergraduate and postgraduate level. For that purpose, it develops and implements appropriate learning material and methods of teaching. The promotion of scientific research as well as the development of the relevant technology and methodology in the area of distance learning fall within the scope of the HOU's objectives.
ADMINISTRATIVE STRUCTURE

- Senate
- Rector
- Vice Rector

Secretary General

Administration
- Head of Administration
- 9 Departments
  - Registration
  - Educational Planning
  - Personnel
  - Financial
  - Premises
  - Library
  - Educational Committees
  - Special Funds
  - Accounts
  - Public International Affairs

Offices

Learning Material Educational Methodology Laboratory

Faculties
- Humanities
- Social Sciences
- Sciences and Technology
- Applied Arts

Courses
- Course Coordinators

Module Coordinators
- Professors
- Tutors

Internal Assessment Evaluation Unit
The Hellenic Open University offers undergraduate and postgraduate courses through open and
distance education using a variety of methods for distance learning.
Undergraduate students are allowed to register for a maximum of three (3) modules per academic year
while postgraduate students are allowed to register for a maximum of two (2) or three (3) modules
depending on the course, be it a regular registration or a registration for examinations.

Students are provided with various learning materials that can be used from home to study: printed
course material, set books, audio and video material, cd-roms/software, specially prepared for distance
learning. Students are advised to study for approximately 10 hours per week for each course module.
The syllabus is approximately 800 pages per undergraduate course module and 1,000 pages per
postgraduate course module.

Students must plan their own time to study course material, work on course activities, and hand in
assignments by the due date.

Course Material is accompanied by a Study Guide, that provides guidance on studying course
materials, information on the aims, the syllabus, and study plan of each course module. It is important
for students to follow this Study Guide and meet assignment deadlines.

Students are continuously supported by the Academic Staff and are contacted regularly. The ratio of
Tutor/Advisor to student is approximately one to thirty.

Students participate in five to six Contact Sessions during the academic year.

Each Contact Session is coordinated by the Tutor. There are approximately 30 students per tutorial
group. These four hour tutorials are held in Athens, Peiraeus, Patras, Larissa, Thesaloniki, Heraklion,
Ioannina, Komotini and Ksanthi for undergraduate courses, and in Athens, Patras and Thessaloniki for
postgraduate courses.

Although the contact sessions are not compulsory they are strongly recommended. Tutorials provide
students with the opportunity to solve problems and clear up misunderstandings, improve student
understanding and performance, and promote tutor-student and student-student communication.

Module courses require 4 to 6 written assignments of 6 to 10 pages, according to the subject area, and
are evaluated by the tutor. Written assignments are compulsory for all students and must be sent to the
tutor by the due date referred on the study plans.

Students also take a final course module examination at the end of each 10 month academic year.

Course Module Final Grade

Each course has a number of written assignments and a final examination. A student's final grade is a
weighted sum of these two components. Students may take final course module examination if they
have successfully completed written assignments with an average grade of at least 50 percent.
Students who do not successfully complete assignments are not entitled to take the final course module
examination. Written Assignments constitute a 30 percent of each student's grade.

It is a requirement for every course module that students pass the final module examination, with a
grade equal or higher than 5, in order to pass the course, regardless of assignment grades. After all
assignments and the final examination are successfully completed, the final course grade is determined. Final exam grades constitute a 70 percent of the students final course grade.

**The Qualifications the HOU offers**

**Undergraduate degrees**

Students are awarded a degree upon the successful completion of twelve course modules. Applicants to a course must possess a High School Certificate from a Greek Unified Upper Secondary School (Eniaio Lykeio) or an equivalent Greek or Foreign High School Certificate.

**Postgraduate degrees (Masters)**

Applicants to a postgraduate degree at the HOU must possess a undergraduate degree in a relevant field from a Greek Public University or an equivalent greek or foreign degree. Individual detailed course requirements apply for each course. Students are awarded a Masters degree upon the successful completion of four course modules and a dissertation, which has to comply with the university regulations for dissertation preparation and submission.

**Doctoral Degree**

Applicants to a Ph.D. program at the HOU must possess a Master's degree in a related field, from a Greek Public University or an equivalent degree. Doctoral theses are supervised and constructed according to the Provision of Public Higher Education and the HOU Ph.D. study regulations.

**Tuition Fees - Scholarships**

**Tuition Fees**

The students at the HOU are liable for fees relating to the cost of the necessary learning, information and evaluation material they receive from the University as well as the communication costs inherent in the distance education system.

The amount of fees payable as well as the social and performance criteria applicable for a scholarship are determined by a Decree issued by the Minister of Education.

**Scholarships**

Student scholarships are offered, on the provision that certain economic, social and academic criteria are met. The scholarships awarded by the HOU cover either the full amount or part of the fees payable by the students for the academic year they apply for a scholarship and provided a combination of economic, social and academic criteria are met.
SCHOOLS AND COURSES

SCHOOL OF HUMANITIES

First cycle courses (240 ECTS)

- Studies in Greek Civilization
- Studies in European Civilization
- Hispanic Language and Civilization Studies

Second Cycle – Master courses (120 ECTS)

- Master's in Education (M.Ed.)
- Master's in Adult Education (M.Ed.)
- Master's in education (M.Ed.) in Teaching English to Speakers of Other Languages (TESOL)
- Master's in Teaching German as a Foreign Language (M.Ed.)
- Master's in Teaching French as a Foreign Language (M.Ed.)
- Orthodox Theology Studies (M.A.)

SCHOOL OF APPLIED ARTS

Second Cycle – Master courses (120 ECTS)

- Graphic Arts – Multimedia (M.A.)
- Lighting Design and Multimedia (M.A.)

SCHOOL OF SOCIAL SCIENCES

First cycle courses (240 ECTS)

- Business Administration

Second Cycle – Master courses (120 ECTS)

- Health Care Management (MSc)
- Cultural Organisations Management (MSc)
- Tourism Business Administration (MSc)
- Banking (MSc)
- Master in Business Administration (MBA)

SCHOOL OF SCIENCE AND TECHNOLOGY

First cycle courses (240 ECTS)

- Studies in Natural Sciences
• Computer Science

Second Cycle – Master courses (120 ECTS)

• Environmental Design of Infrastructure Works (MSc)
• Environmental Design of Cities and Buildings (MSc)
• Master in Information Systems (MSc)
• Waste Management (MSc)
• Engineering of pervasive computing systems (MSc)
• Master in Mathematics (MSc)
• Master in Teaching Natural Sciences (MSc)
• Quality Assurance (MSc)
• Construction Engineering Management (MSc)
• Earthquake Engineering and Seismic-Resistant Structures (MSc)
• Catalysis and Environmental Protection (MSc)
  Advanced Studies in Physics (MSc)
SCHOOL OF HUMANITIES

UNDERGRADUATE COURSES

Studies in European Civilization

Description
The course focuses on the many aspects of European development and the nature of European civilization and culture. It is an innovative course offered by the School of Humanities of the Hellenic Open University, which opens new ground in Greek Higher Education. Interdisciplinary in nature, it incorporates a variety of established and modern subjects and aims at analyzing the basic elements, processes and agents, which have interacted over time to make up what is understood today as Europe. The course: provides knowledge and skills; builds up critical ability; contributes to historical and comparative analysis; helps highlight the multi-faceted kaleidoscope of Europe. The books (study-guides) specially written by HOU for the course are complemented both by general textbooks and by a series of shorter texts, all of which are also stocked and provided by the University Library. They refer to central themes and debates formulated by disciplines such as history, philosophy, art, geography, all of which highlight processes of continuity and change, of identity and nation-building, of supra-nationalism, across most of what is today considered Europe in geographical terms. The course is based on over twelve modules among which, central ones are: European General History (IX-XX c.), European Economic and Social History (IX-XX c.), Philosophy, Social Science, History of Art, European Literature, Geography, Medieval and Byzantine culture. Completion of this course allows students to deepen their knowledge of European civilization and culture and to specialize in one or more of the many aspects discussed. At the same time, they acquire basic skills necessary in any work environment. A European citizen should be the educated citizen, who would have equal opportunities in a united Europe. This course provides such fundamentals.

Requirements
Applicants to the European Cultural Studies course must possess a High School Certificate from a Greek Unified Upper Secondary School (Eniaio Lykeio), a b’ level Technical Vocational Educational School (TEE) or an equivalent Greek or Foreign High School Certificate.
Basic computer and Internet skills and good knowledge of English are necessary for the successful participation in HOU courses.

Minimum study duration
4 academic years

ECTS credit points
240

Learning Material
Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise.
Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

Contact
Registry
Tel.: 2610 367330, 2610 367349 - Fax: 2610 367322 - e-mail: epo@eap.gr
Course Structure

1st Year
EPO10 General History of Europe
EPO21 History of European Literature
EPO31 The Natural and Human Sciences in Europe

2nd Year
EPO11 Social and Economic History of Europe
EPO12 Geography, Human Geography and Material Culture of Europe
EPO22 Philosophy in Europe

3rd Year
EPO20 The History of Arts in Europe
EPO30 Byzantine and the Western World
EPO32 Institutions Shaping European Civilization
EPO33 Formation and Development of European Communities
EPO42 Special Topics in European Civilization
EPO43 Political ideologies in 20th century Europe

4th Year
EPO41 Developments in European Civilization in the 20th Century
EPO30 Byzantine and the Western World
EPO32 Institutions Shaping European Civilization
EPO33 Formation and Development of European Communities
EPO42 Special Topics in European Civilization
EPO43 Political ideologies in 20th century Europe

The degree is awarded on completion of 12 course modules.

Course Modules

**EPO10 General History of Europe**
*Module code:* EPO10  
*ECTS Credit Points:* 20  
*Module Type:* Compulsory  
*Year:* 1st  
*Language:* Greek  
*Subjects covered:*  
1. Introduction to the History of Europe  
2. General overview: 6th to 20th century CE.  
*Evaluation:* Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**EPO21 History of European Literature**
*Module code:* EPO21  
*ECTS Credit Points:* 20  
*Module Type:* Compulsory  
*Year:* 1st  
*Language:* Greek  
*Subjects covered:*
1. Introduction to the history of literature
2. History of European Literature from the 6th to the 20th century CE
   **Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**EPO31 The Natural and Human Sciences in Europe**
Module code: EPO31  
ECTS Credit Points: 20  
Module Type: Compulsory  
Year: 1st  
Language: Greek  
**Subjects covered:**  
1. History and Theory of Sciences during the Middle Ages  
2. History and Theory of Sciences in modern Europe  
3. Positivism and its Overcome  
   **Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**EPO11 Social and Economic History of Europe**
Module code: EPO11  
ECTS Credit Points: 20  
Module Type: Compulsory  
Year: 2nd  
Language: Greek  
**Subjects covered:**  
1. Introduction to the Social and Economic History of Europe  
2. Social and Economic developments from the 6th to the 20th century.  
   **Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**EPO12 Geography, Human Geography and Material Culture of Europe**
Module code: EPO12  
ECTS Credit Points: 20  
Module Type: Compulsory  
Year: 2nd  
Language: Greek  
**Subjects covered:**  
1. Geography  
2. Human Geography and Material culture of Europe  
   **Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**EPO22 Philosophy in Europe**
Module code: EPO22  
ECTS Credit Points: 20  
Module Type: Compulsory  
Year: 2nd  
Language: Greek  
**Subjects covered:**  
1. Philosophy from the 6th to the 16th century  
2. The Enlightenment (17th - 18th century)
3. Modern and Contemporary Philosophical trends (19th - 20th century)

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students’ final course grade.

**EPO20 The History of Arts in Europe**

- **Module code:** EPO20
- **ECTS Credit Points:** 20
- **Module Type:** Compulsory
- **Year:** 3rd
- **Language:** Greek

**Subjects covered:**
1. Fine Arts from the Middle Ages to the Late Renaissance
2. Fine Arts from the late Renaissance (Mannerism 1530) to the end of the 20th century
3. Music in Europe

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students’ final course grade.

**EPO30 Byzantine and the Western World**

- **Module code:** EPO30
- **ECTS Credit Points:** 20
- **Module Type:** Optional
- **Year:** 3rd or 4th
- **Language:** Greek

**Subjects covered:**
1. Byzantine and Western Civilization: Convergence and divergence
2. Renaissance and Humanism
3. Reformation and Counterreformation

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students’ final course grade.

**EPO32 Institutions Shaping European Civilization**

- **Module code:** EPO32
- **ECTS Credit Points:** 20
- **Module Type:** Optional
- **Year:** 3rd or 4th
- **Language:** Greek

**Subjects covered:**
1. Education
2. Church and Monasticism

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students’ final course grade.

**EPO33 Formation and Development of European Communities**

- **Module code:** EPO33
- **ECTS Credit Points:** 20
- **Module Type:** Optional
- **Year:** 3rd or 4th
- **Language:** Greek

**Subjects covered:**
1. The postwar formation of the European Communities and their development
2. Formation of Institutions, policies and successive expansions until today
**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**EPO42 Special Topics in European Civilization**
- **Module code:** EPO42
- **ECTS Credit Points:** 20
- **Module Type:** Optional
- **Year:** 3rd or 4th
- **Language:** Greek
- **Subjects covered:**
  1. Weber's protestant work ethic thesis
  2. Liberal radicalism and revolutionary movements during the 19th century
  3. Colonialism and rivalry

**EPO43 Political ideologies in 20th century Europe**
- **Module code:** EPO43
- **ECTS Credit Points:** 20
- **Module Type:** Optional
- **Year:** 3rd or 4th
- **Language:** Greek
- **Module general description:** After completing this module, students will be expected to,
  - Demonstrate a good understanding of the concept of ideology and its multiple role in political and social life.
  - Be able to assess issues concerning the relationship between ideology and theory and engage themselves in the ‘end of ideology’ debate.
  - Be familiar with the main features liberalism, socialism, conservatism, fascism, anarchism, nationalism.
  - Be able to present and analyse the underlying principles of each ideology and critically assess their mutual criticisms.
  - To assess the ideological origins of alternative public policy choices.
- **Subjects covered:**
  European political ideologies during the 20th century: with emphasis on the most recent ideological currents, especially during the post-Soviet period

**Studies in Greek Civilization**

**Description**
The course aims to provide students with knowledge and understanding of the Hellenic Civilisation, its particular characteristics as well as its contribution through time, with an academic education in Hellenic culture and historical events (ancient, medieval and modern), reflecting the connection between historical circumstances with social components. The course explores Hellenic history, the Hellenic intellectual life (literature, philosophy and sciences) and arts (theatre, music, etc), therefore encouraging the examination of the cultural events that occurred across the Hellenic territory within the broader European area.

**Requirements**
Applicants to the Hellenic Cultural Studies course must possess a High School Certificate from a Greek Unified Upper Secondary School (Eniaio Lykeio), a b' level Technical Vocational Educational School (TEE) or an equivalent Greek or Foreign High School Certificate.

Basic computer and Internet skills and good knowledge of English are necessary for the successful participation in HOU courses.

**Minimum study duration**

4 academic years

**ECTS credit points**

240

**Learning Material**

Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise. Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

**Contact**

**Registry**
Tel.: 2610 367331, 2610 367339 - Fax: 2610 367350 - e-mail: elp@eap.gr

**Call Centre for General Inquiries**
Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr

**Course Structure**

**1st Year**
ELP10 Introduction to Greek Civilization
ELP11 Greek History
ELP12 Arts I: Hellenic Fine Arts, Review of the Greek Architecture and Town Planning

**2nd Year**
ELP20 Public and Private Life in Greece I: From Antiquity to Post-Byzantine Times
ELP21 Literature I: Ancient Greek and Byzantine Literature
ELP30 Letters II: Modern Greek Literature (19th and 20th c.)

**3rd Year**
ELP22 Greek Philosophy and Science from Antiquity to the Twentieth Century
ELP31 Ancient Greek Theatre
EPO20 History of Arts in Europe
EPO21 History of European Literature
EPO22 Philosophy in Europe

**4th Year**
ELP40 Arts II: Overview of Greek Music and Dance
ELP41 Public and Private Life in Greece II: Modern Times
ELP42 Archaeology in Greece
ELP43 The Greeks of Diaspora
ELP44 Modern Greek Theatre (1600 - 1940) - Cinematography
ELP45 Modern Greek Literature, from the Beginning to the 18th Century
EPO20 History of Arts in Europe
The degree is awarded on completion of 12 course modules.

Course Modules

**ELP10 Introduction to Greek Civilization**

<table>
<thead>
<tr>
<th>Module code:</th>
<th>ELP10</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECTS Credit Points:</td>
<td>20</td>
</tr>
<tr>
<td>Module Type:</td>
<td>Compulsory</td>
</tr>
<tr>
<td>Year:</td>
<td>1st</td>
</tr>
<tr>
<td>Language:</td>
<td>Greek</td>
</tr>
<tr>
<td>Subjects covered:</td>
<td></td>
</tr>
</tbody>
</table>
1. The concepts of culture and civilization: Aspects of Greek civilization
2. Milestones in Greek civilization |
| Evaluation: | Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade. |

**ELP11 Greek History**

<table>
<thead>
<tr>
<th>Module code:</th>
<th>ELP11</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECTS Credit Points:</td>
<td>20</td>
</tr>
<tr>
<td>Module Type:</td>
<td>Compulsory</td>
</tr>
<tr>
<td>Year:</td>
<td>1st</td>
</tr>
<tr>
<td>Language:</td>
<td>Greek</td>
</tr>
<tr>
<td>Learning Outcomes:</td>
<td>Upon successful completion of module ELP11, which is a foundational module of the ELP course, students will have gained knowledge on the following topics of Ancient, Byzantine and Modern Greek History,</td>
</tr>
</tbody>
</table>
| A) | Social and political organization and forms of communication in the Greek area during prehistoric times. 
-Transition from palatial societies to the "city-state" 
The institution of the "city-state" (origin and development) 
The Kingdom of Macedonia, Macedonians' hegemony, Alexander's conquests 
Hellenistic kingdoms, political - economic - social structures of the Hellenistic world. 
The Greek world under Roman rule. |
| B) | Aspects of the history of institutions of the Byzantine Empire (origin, evolution, organization and function). 
-Relations between Byzantium and the Muslim and Slavic peoples. 
-History of Greek areas of the empire during the Latin and Ottoman domination. |
| C) | Terms and conditions (political, ideological, social) of the formation and development of New Hellenism in the broader context of Europe and the Ottoman Empire in the 18th century and early 19th century. 
The Modern Greek Enlightenment and the ideological preparation of the Revolution. 
-Organization and conduct of the Greek Revolution of 1821 
-Constitution of the modern Greek State (institutions, political and social structures, economy). 
-National ideology and national historiography. 
-Overview of the political history of the 19th and 20th centuries. 
They will also have acquired the following skills and abilities: 
-To study further in depth all the issues that have been taught and other aspects of Greek history with reference to the relevant literature 
-To pose questions and analyze them by leveraging sources and information 
-To produce work of academic standards. 
-To be familiar with and understand key historical terms and concepts as well as some basic methodological issues of historical research. |
Subjects covered:
1. The Ancient Greek World
2. Byzantium and Hellenism
3. Modern and Contemporary Greek History

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

ELP12 Arts I: Hellenic Fine Arts, Review of Greek Architecture, Urban Planning, and Urban Design
Module code: ELP12
ECTS Credit Points: 20
Module Type: Compulsory
Year: 1st
Language: Greek

Learning Outcomes: Upon successful completion of ELP12, students will be able to,
1. Recognize the dominant role of art in the formation of Greek culture and civilization, more precisely the function, character, form, influence, symbolic role and multidimensional content of Greek art, architecture and urban planning/design per category, period (prehistoric, classical, Byzantine, post-Byzantine/learned and popular, modern and contemporary from the 19th century until the present), and currents of thought.
2. Understand in synthetic manner the central points of aesthetic outlooks, ancient, Byzantine and contemporary, Greek but also Western and Eastern, through the contribution of aesthetic theory and philosophy of art.
3. Perceive critical approaches and dimensions of the relation between art, space, the urban and regional landscape and society as much from the standpoint of the historical background pertaining at each time as from the standpoint of the present through the contribution of the appropriate theory.
4. Recognize the gaze as the beginning (artist), the fulfillment (through the social body) and as narrative representation of the creative praxis.
5. Be aware of basic elements of the visual arts from all periods of the Greek art, thematic axes, techniques and materials, ancient and modern, including technologies of the present time.
6. Be aware of the local and international contribution of modern Greek creators and theoreticians of art, architecture and urban planning/design with reference to artistic trends and styles and their social and theoretical contribution.
7. Locate continuities and mutual influences among the arts in various depths of the Greek temporal stratification and on various spatial scales, from the scale of the isolated artwork to the architectural and urban design-planning, considered as artistic and temporal convergences in the Greek space and, after Byzantium, as such convergences among Greece, the wider Mediterranean space and the West.
8. Compare art, architectural and urban planning/design works of different periods in regard to their form, content and function.
9. Understand the social, aesthetic and developmental components of the protection of artworks and monuments, of monumental complexes and monumental networks. Also, the influence of the above and of the management of visual memory towards the production of new artistic, architectural and urban planning/design works.
10. Prepare academic essays applying their critical faculties, make competent use of the right terminology, pursue originality and employ varied bibliographical resources as well as visual materials of various kinds (images, videos, digital materials, etc.) in a critical manner.
11. Apply acquired foundational and critical skills and abilities as well as their aesthetic education in subsequent modules of the Study Program in synthetic manner.

Subjects covered:
1. Principles, values and ideal of the Greek art, categories, periods, essential elements of the figurative work, themes, techniques and materials, function and character per period.
2. Aesthetic outlooks, "ekphraseis" from antiquity to the present time.
3. The postwar profile of Greek art, the international presence of Greek artists.
4. Periods of Greek urban planning/urban design and architecture (prehistoric, classical, Byzantine and
popular architecture, modern and contemporary architecture 19th-20th century).

* An ekphrasis (ekphraseis in pl.) is the aesthetic experience of qualified spectators acquired by means of a trajectory through space, enclosed or open.

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**ELP20 Public and Private Life in Greece I: From Antiquity to Post-Byzantine Times**

**Module code:** ELP20  
**ECTS Credit Points:** 20  
**Module Type:** Compulsory  
**Year:** 2nd  
**Language:** Greek  

**Learning Outcomes:** Upon successful completion of module ELP20 students, A) will be able to understand:

I  
1) The characteristics of the ancient Greek city-state and the status of the (free) citizen who participated in its authorities and government.  
2) The social and political organization of Athens and Sparta and the institutions associated with the marriage, the oikos, and the family of the citizen.  
3) The ritual character, the polytheistic system and the central role of ancient Greek religion within the ancient Greek city.  
II  
4) The institution and role of the Byzantine emperor and his court, the organization of the state mechanism, and the manner of administration of the Byzantine Empire.  
5) The nature and features of the Byzantine society and economy, and the urban development of Byzantine cities in the early, middle and late Byzantine period.  
6) The religiosity of the Byzantine people, the phenomena and manifestations of religious life, the history of the Church and the clergy.  
III  
7) The manner in which the Ottoman state was handling its Greek subjects and the Ecumenical Patriarchate, and the living conditions of the enslaved Greeks during the Ottoman domination.  

B) will have acquired the skills and abilities:

8) to distinguish primary from secondary historical sources.  
9) to understand translated passages from ancient Greek and Byzantine sources, in which they can trace and analyze institutions, practices, traditions, concepts and theories, based on the knowledge they have acquired.  
10) To compose a written paper with scholarly claims, drawing information from various sources, and to present certain conclusions.  

**Subjects covered:**  
1. The concept of the "free citizen"  
2. Ancient public life  
3. Ancient private life  
4. Public and private life in the Byzantine Empire  
5. Religious life in Byzantium  
6. Everyday life in Post-Byzantine Times  

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**ELP21 Literature I: Ancient Greek and Byzantine Literature**

**Module code:** ELP21  
**ECTS Credit Points:** 20  
**Module Type:** Compulsory
Year: 2nd
Language: Greek
Subjects covered:
1. Ancient Literature
2. Medieval Literature

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**ELP30 Letters II: Modern Greek Literature (19th and 20th c.)**
Module code: ELP30
ECTS Credit Points: 20
Module Type: Compulsory
Year: 2nd
Language: Greek
Subjects covered:
1. Greek Romanticism: Poetry of the Ionian and the Athenian School
2. Memoirs
3. The 1880s generation
4. Cavafy - Sikelianos - Kazantzakis - Karyotakis
5. The 1930s generation
6. Postwar and contemporary literature

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**ELP22 Greek Philosophy and Science from Antiquity to the Twentieth Century**
Module code: ELP22
ECTS Credit Points: 20
Module Type: Compulsory
Year: 3rd
Language: Greek
Subjects covered:
1. Principles of Greek Philosophy. Differences from other ancient civilizations, such as those of India and China. Questions and evolution of ideas.
2. The Presocratic Philosophers, Plato and Aristotle.
5. Neoplatonism and Aristotelism during the Byzantine Era.
6. Science in Antiquity: Mathematics, Astronomy, Physics, Medicine, Geography, Art of War.

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**ELP31 Ancient Greek Theatre**
Module code: ELP31
ECTS Credit Points: 20
Module Type: Compulsory
Year: 3rd
Language: Greek

Learning Outcomes: Successful completion of this course will equip students with the ability to,
1. Place ancient Greek drama within the broader context of ancient Greek culture.
2. Describe the structure of the ancient theatre building and its development, as well as further developments regarding theatrical masks, costumes and scenography.
3. Be familiar with both the history of ancient drama and its genres (tragedy, comedy and satyr drama) and its modern theatre reception.
4. Study comparatively the genres of ancient drama and to point out their similarities and differences.
5. Analyze and critically compare the key concepts, ideas and techniques in the plays of Aeschylus, Sophocles, Euripides, Aristophanes and Menander.
7. Successfully apply for and participate in MA studies in Greek theatre.

Subjects covered:
1. Introduction to Ancient Greek Theatre
2. Ancient and modern theoretical approaches
3. The origins of Ancient Greek Tragedy
4. Aeschylus - Sophocles - Euripides - Minor Tragedians
5. The Old Comedy and Aristophanes
6. Middle and New Comedy. Menander. Phlyax plays
7. Satyr play. Mime
8. Ancient Drama since the Hellenistic period. Ancient Greek Theatre and the Romans. The textual tradition. Commentaries
9. Modern Greek translations of ancient Greek tragedies and comedies
10. Directors' approaches to Ancient Greek Drama in Modern Greece

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

---

**EPO20 History of Arts in Europe**
Module code: EPO20  
ECTS Credit Points: 20  
Module Type: Optional  
Year: 3rd / 4th  
Language: Greek  

Subjects covered:
1. Fine Arts from the Middle Ages to the Late Renaissance  
2. Fine Arts from the late Renaissance (Mannerism 1530) to the end of the 20th century  
3. Music in Europe  

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

---

**EPO21 History of European Literature**
Module code: EPO21  
ECTS Credit Points: 20  
Module Type: Optional  
Year: 3rd / 4th  
Language: Greek  

Subjects covered:
1. Introduction to the history of literature  
2. History of European Literature from the 6th to the 20th century CE  

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

---

**EPO22 Philosophy in Europe**
Module code: EPO22  
ECTS Credit Points: 20
Module Type: Optional
Year: 3rd / 4th
Language: Greek
Subjects covered:
1. Philosophy from the 6th to the 16th century
2. The Enlightenment (17th - 18th century)
3. Modern and Contemporary Philosophical trends (19th - 20th century)
Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

ELP40 Arts II: Overview of Greek Music and Dance
Module code: ELP40
ECTS Credit Points: 20
Module Type: Compulsory
Year: 4th
Language: Greek
Learning Outcomes: Upon successful completion of the module, students,
A) will be able to understand:
1) The role and importance of music as an educational and cultural good during the ancient period.
2) The distinction between the Pythagorean and Aristoxenic vision of music and its effects on subsequent Greek philosophers.
3) The correlation between music and the official functions as well as the everyday life of ancient Greeks on the basis of songs and instrumental music, be it related to worship or not.
4) The distinction between the Byzantine music and the music of the Byzantine Empire and their interactions.
5) The different genres of folk song and the special features of the Kleftiko song, urban-folk song and rembetiko song as well as their ideological components.
6) The special features of heterolinguial and minority groups and their interactions with the native musical tradition.
7) The perceptions of the music of the Eptanisian and the (Greek) 'National Music School'.
8) The work of the Pioneers and the Greek "Avant-garde"
9) The commercialization of the song and music as a result of technological evolution, from the appearance of discography to date.
10) The different position of dance with reference to the classical and Byzantine period.
11) The variety and diversity of the Greek music-dance tradition, with reference to individual geographical regions of Greece.
12) The perception of dance as a symbol of identity, as a ritual and a spectacle.
13) The specific characteristics of the western dance as an art form and its individual genres.
14) The characteristics and social dimensions of European, Latin American, modern and "popular" dances.

B) will have acquired the skills and abilities to:
15) understand complex concepts such as identity, tradition, folk culture, and make adequate use the relevant terminology
16) critically assess the relevant literature and to be able to select suitable references in support of their positions and arguments.
17) adequately employ their writing skills and to produce essays on issues related to the content of the module.

Subjects covered:
1. Mathematical theory of ancient music (Byzantine theory, dialectical correlations with the East, Greek and Western music in the modern world, modern trends)
3. Theoretical approach to the rhythmology of Greek dance

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**ELP41 Public and Private Life in Greece II: Modern Times**

**Module code:** ELP41  
**ECTS Credit Points:** 20  
**Module Type:** Optional  
**Year:** 4th  
**Language:** Greek  
**Subjects covered:**  

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**ELP42 Archaeology in Greece**

**Module code:** ELP42  
**ECTS Credit Points:** 20  
**Module Type:** Optional  
**Year:** 4th  
**Language:** Greek  
**Learning Outcomes:** Upon successful completion of module ELP 42, students will be able to,  
Ia. be aware of the historiographical development of the science of Archaeology in general and particularly in Greece, as well as the definition, basic principles, and subject-matter of the scientific field of archaeology.  
Ib. recognize the direct as well as the indirect contribution of the science of archaeology to the knowledge of the prehistoric and historic past, its contribution to the evolution of the Greek state, but also to be aware of contemporary parameters and problems concerning aspects of archaeology in present-day social reality.  
Ic. be aware of the notion of Museology as a science and its links with the recording, protection, and aesthetic enhancement of Greek antiquities.  
Id. cultivate their sensibility to, and involvement – both personal and social – in, issues related to the understanding and protection of the cultural heritage of any field in which they are actively engaged in.  

**Subjects covered:**  
1. A historiography of the discipline of Archaeology in Greece.  
2. Greek Archaeology: Definition, subjects and basic principles.  
4. Main scientific fields in Greek archaeology and their cultural value.  

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**ELP43 The Greeks of Diaspora**

**Module code:** ELP43  
**ECTS Credit Points:** 20  
**Module Type:** Optional
Learning Outcomes: Upon the successful completion of ELP 43 (Hellenism of Diaspora), students will be able to understand and handle scholarly issues concerning:
- the history of the Greek diaspora from 1600 BC until today
- the features of modern Greek diasporic flows and diasporic stock
- the causes and factors leading to the creation and continuity of the Greek diaspora
- contemporary economic, social, political and cultural mobility of the Greek diaspora, as well as problems its members face
- how the process of migration has affected the members of the Greek diaspora, the host countries and the homeland
- Greek diasporic public policy and the multifaceted relations between the diaspora and the ancestral homeland

Subjects covered:
1. History of Greek diaspora. Immigration - Refugees - Return migration - Political, social, economic and cultural dimensions.
2. Greek populations in the Balkans and the Danube countries. Vlachs of Moschopolis, Sarakatsani
3. Greeks in the Caucasus and Black Sea countries
4. Greek communities in the central European and Mediterranean urban centers
5. The Hellenism of North and South America. Historical development and their contemporary role
6. Greeks of South Africa and Australia. Historical development and their contemporary role
7. Greek-speaking and ethnic Greeks (S. Italy, Spain, Syria, Palestine, Sea of Azov)

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**ELP44 Modern Greek Theatre (1600 - 1940) - Cinematography**

Module code: ELP44
ECTS Credit Points: 20
Module Type: Optional
Year: 4th
Language: Greek

Learning Outcomes: Upon successful completion of module ELP44, students will be able to,
1) evaluate and analyze the whole typological features and fundamental concepts of the studied objects
2) describe their historical evolution
3) handle the study objects (as well as the relative literature) in a critical and original manner
4) identify and highlight the vital and essential components of these
5) compare and analyze different periods of the subject-matters under consideration
6) Compare and analyze the two subject-matters of this module (similarities, differences, interaction, etc).
7) Sufficiently understand and analyze the main differences / similarities between concepts such as drama / theatre / performance, and the differences / similarities between concepts such as performance / representation, image, live presence, art / technology
8) carry out comparisons and analyses employing aesthetic and sociological criteria
9) link the past of modern Greek theatre and cinema with their present and future.
10) have experiential contact with the subject-matter (transition from theater to cinema and attendance of performances and films)
11) know how institutions can affect the final result (grants, interferences, practices)
12) discuss, based on the knowledge gained, terms such as folk and high art, high and popular taste
13) produce a written paper that is well documented from a scientific point of view, up-to-date and well structured.

Subjects covered:
1. The modern theatre until the 2nd World War
2. Greek cinematography
**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**ELP45 Modern Greek Literature, from the Beginning to the 18th Century**

**Module code:** ELP45  
**ECTS Credit Points:** 20  
**Module Type:** Optional  
**Year:** 4th  
**Language:** Greek  
**Subjects covered:**  
1. At the turning point of modern times: Ethics, Love poetry, Satire, Dreams.  
2. Greek literature during occupation by the Franks: Eptanissa, Cyprus Cretan literature.  
3. From the fall of Crete to the Greek Revolution (1669 - 1821): Diaspora, Eptanissa, Fanariotes Modern Greek Enlightenment, Folk music  

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

---

**Hispanic Language and Civilisation Studies**

**Description**  
The course aims to provide knowledge and understanding of the Spanish Language, its evolution and the rich, multidimensional culture of Hispanic people

**Requirements**  
Applicants to the Hispanic Culture Studies course must possess a High School Certificate from a Greek Unified Upper Secondary School (Eniaio Lykeio), a b’ level Technical Vocational Educational School (TEE), a recognised Hispanic High School Certificate or an equivalent Greek or Foreign High School Certificate.  
All candidates must provide evidence of an intermediate / B2 Level in Hispanic or any qualifications recognised by the Hispanic embassy or the Instituto Cervantes as equivalent to the B2 level.  
Basic computer and Internet skills and good knowledge of English are necessary for the successful participation in HOU courses.

**Minimum study duration**  
4 academic years

**ECTS credit points**  
240

**Learning Material**  
Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise.  
Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.
Contact
Registry
Tel.: 2610 367338 - Fax: 2610 367350 - e-mail: isp@eap.gr
Call Centre for General Inquiries
Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr

Course Structure

1st Year
ISP10 Spanish Language LEVEL I
ISP11 Spanish Language LEVEL II
ISP12 Understanding the Language and Civilization: From Latin to Modern Spanish

2nd Year
ISP20 Spanish Language LEVEL III
ISP21 History of Spain
ISP22 Civilisation of Spain

3rd Year
ISP30 Spanish Literature I
ISP31 Latin American Civilisation
ISP32 History of Latin American Countries

4th Year
ISP40 Spanish Literature II
ISP41 Latin American Literature I
ISP42 Latin American Literature II

The degree is awarded on completion of 12 course modules.

Course Modules

**ISP10 Spanish Language LEVEL I**
Module code: ISP10
ECTS Credit Points: 20
Module Type: Compulsory
Year: 1st
Language: Greek
Subjects covered:
1. Integration of reading, writing, speaking and listening skills through simple authentic texts
2. Communication methodology through an integrated teaching of grammar, structure and pronunciation
3. Study and drills in the spanish language.
Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students’ final course grade.

**ISP11 Spanish Language LEVEL II**
Module code: ISP11
ECTS Credit Points: 20
Module Type: Compulsory
Year: 1st
Language: Greek
Subjects covered:
1. Integration of reading, writing, speaking and listening skills through more complex authentic texts
2. Communication methodology through an integrated teaching of grammar, structure and pronunciation
3. More extensive use of the Spanish language in studying and carrying out the exercises required

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**ISP12 Understanding the Language and Civilization: From Latin to Modern Spanish**

- **Module code:** ISP12
- **ECTS Credit Points:** 20
- **Module Type:** Compulsory
- **Year:** 1st
- **Language:** Greek
- **Subjects covered:**
  1. Introduction to linguistics
  2. Language evolution from Latin to Modern Spanish
  3. Introduction to the understanding of civilizations
  4. Latin literature influences to Spanish literature

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**ISP20 Spanish Language LEVEL III**

- **Module code:** ISP20
- **ECTS Credit Points:** 20
- **Module Type:** Compulsory
- **Year:** 2nd
- **Language:** Greek
- **Subjects covered:**
  1. Integration of reading, writing, speaking and listening skills through high level authentic texts. Vocabulary is now very extensive.
  2. Communicating through an integrated teaching of grammar, structure and pronunciation
  3. Instructions, study and drills in Spanish

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**ISP21 History of Spain**

- **Module code:** ISP21
- **ECTS Credit Points:** 20
- **Module Type:** Compulsory
- **Year:** 2nd
- **Language:** Greek
- **Subjects covered:**
  1. From the Prehistoric times to the end of the Middle Ages, Arab Kingdoms.
  2. From Renaissance to the 19th century.
  3. From the 19th century to date.

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**ISP22 Civilisation of Spain**

- **Module code:** ISP22
- **ECTS Credit Points:** 20
- **Module Type:** Compulsory
- **Year:** 2nd
Language: Greek

Subjects covered:
1. From the ancient times to the Arab Kingdoms
2. From Renaissance to the 19th century
3. From the 19th century to modern times.

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**ISP30 Spanish Literature I**
- Module code: ISP30
- ECTS Credit Points: 20
- Module Type: Compulsory
- Year: 3rd

Language: Greek

Subjects covered: Spanish Literature: from the Middle Ages until the 19th century (poetry, prose, theatre)

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**ISP31 Latin American Civilisation**
- Module code: ISP31
- ECTS Credit Points: 20
- Module Type: Compulsory
- Year: 3rd

Language: Greek

Subjects covered:
1. Pre-Colombian Civilisations (Majas, Aztec, Incas)
2. The Colonial Period: 16th - 19th century
3. Modern period: 19th century to date

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**ISP32 History of Latin American Countries**
- Module code: ISP32
- ECTS Credit Points: 20
- Module Type: Compulsory
- Year: 3rd

Language: Greek

Subjects covered:
1. The Pre- Colombian Period (Majas, Aztec, Incas)
2. The Colonial Period: The struggle for independence
3. 19th century to date. Formation and development of the member countries.

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**ISP40 Spanish Literature II**
- Module code: ISP40
- ECTS Credit Points: 20
- Module Type: Compulsory
- Year: 4th

Language: Greek
Subjects covered: Spanish Literature: 19th century to date (poetry, prose, theatre)
Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

ISP41 Latin American Literature I
Module code: ISP41
ECTS Credit Points: 20
Module Type: Compulsory
Year: 4th
Language: Greek
Subjects covered: Latin American Literature: from the colonial period until the 19th century (poetry, prose, theatre)
Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

ISP42 Latin American Literature II
Module code: ISP42
ECTS Credit Points: 20
Module Type: Compulsory
Year: 4th
Language: Greek
Subjects covered: Latin American Literature: from the 19th century to the modern times (poetry, prose, theatre)
Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

SCHOOL OF HUMANITIES
POSTGRADUATE COURSES

Master's in Education MEd

Description
The course aims to provide specialized pedagogical knowledge to teachers in both levels of compulsory education (Primary and Secondary) and to Tertiary graduates who plan to teach.

Requirements
Applicants to the Master in Education must possess an undergraduate degree in a related field from a Greek Public University, a Technical Educational Institute or an equivalent degree. The equivalency to a Greek qualification is recognized by the Hellenic NARIC (Hellenic National Academic Recognition and Information Center / DOATAP), which verifies the validity and equivalence of the acquired degree with those awarded by Greek institutions of higher education. Applicants must possess documents issued by DOATAP. A list of recognised degrees is available from DOATAP, and a prerequisite course list for applicants to HOU courses may be given by the HOU's registration department.
Applicants to the course must have received their degree at least five years prior to draw date. All candidates must provide evidence of their ability in a foreign language, preferably English.
Minimum study duration
3 academic years

ECTS credit points
120

Learning Material
Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise. Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

Contact
Registry
Tel.: 2610 367337, 2610 367325, 2610 367323 - Fax: 2610 367350 - e-mail: ekp@eap.gr

Call Centre for General Inquiries
Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr

Course Structure

EKP50 Child Development in Families, Schools and Society
EKP51 Educational Research in Action
EKP60 Education: Cultural Diversities and Social Inequalities
EKP61 Language Society and Education
EKP62 Management of educational organizations
EKP63 Science Education
EKP64 Introduction to Adult Education
EKP65 Open and Distance Learning

DISSEATION

Course Modules

EKP50 Child Development in Families, Schools and Society
Module code: EKP50
ECTS Credit Points: 22
Module Type: Optional
Year: 1st or 2nd
Language: Greek

Learning Outcomes: Upon completion of this course, the student should be able to,
- Demonstrate an understanding of the core issues related with human development from the prenatal period to adolescence.
- Recognize the major milestones in every stage and sub-stage of children’s development as well as in all the domains of human growth and development (biological and motor, cognitive, language, socio-emotional, and moral development).
- Evaluate the role and significance of the formal and informal educational environments in children’s development such as family, preschool contexts (day care centres, kindergartens), and school.
- Critically assess the theories and evidence on the ways children learn to think, develop language competencies, manage social interactions and relationships, and gain knowledge.
- Utilize the theoretical propositions and empirical findings from published research studies in the evaluation and management of situations that are related with children’s development.
- Evaluate the efficiency of developmental theories and assumptions in understanding and interpretation
of issues related with children’s development in different socio-cultural environments.
- Demonstrate an understanding of the importance of socio-cultural context in human development.

Subjects covered:
1. Cultural worlds of early childhood
2. Relationships and learning within classroom
3. Understanding social development

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

EKP51 Educational Research in Action
Module code: EKP51
ECTS Credit Points: 22
Module Type: Optional
Year: 1st or 2nd
Language: Greek
Learning Outcomes: Upon completion of the course the student will be able to,
1. Identify a certain aspect of an educational subject to be studied through empirical research
2. State the appropriate research questions or research hypotheses
3. Specify the theoretical framework of the study
4. Perform a thorough literature review to substantiate (a) the necessity and the originality of the study, (b) the study’s theoretical framework and (c) the methodological choices
5. Adopt the appropriate approach (quantitative and/or qualitative) to draw inferences from the empirical data
6. Construct the appropriate research design for the empirical study
7. Discuss the research findings with respect to the existing literature and the adopted theoretical framework
8. Determine the limitations of the study
9. Offer suggestions for further study
10. Put in writing a report of the empirical study suitable for publication in a scientific journal

Subjects covered:
Educational research (Approaches and evaluation of educational research, Methods in educational research, Examples of educational research, Critical evaluation of methods).

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

EKP60 Education: Cultural Diversities and Social Inequalities
Module code: EKP60
ECTS Credit Points: 22
Module Type: Optional
Year: 1st or 2nd
Language: Greek
Learning Outcomes: Following the completion of the Thematic Unit the student will be able to,
1. Distinguish amongst diverse social groups do the reduction of social behaviors and positions/attitudes to the classification of individuals in social groups, to grasp the concept of ‘social identities’ of the relativist theory and its influence in the formation of beliefs, in order to acquire a view of society which encounters the historical dimension, therefore realising the continuous movement, changes and evolution.
2. Acquire a view of the stratification of society, where the division of possessions/ or wealth and privileges are not equally distributed so to distinguish between the ‘nature’ and society therefore be able to place all kinds of beliefs about society and social groups to their social dimension. Hence, be capable to recognise that various subordinations are attributed to individuals not because of ‘nature’ but formatted through hierarchies and stereotypes that derive from the position of individuals in the social scale.
3. Comprehend that all social discriminations regarding to gender, social class and consequently result in social groups of different national/ethnic, religious or cultural identities are build upon arbitrary, non-scientific classifications and prejudices. Those hierarchies are not legitimate in the scientific context, according to the valid documentation which is overwhelmingly recognised as scientific by the vast majority of academics in the international, contemporary scientific discourse.

4. Approach the educational institution in line with the above theoretical framework and scientific knowledge so to avoid interpreting difference in achievement of students from different social backgrounds with appeals on the presence or absence of inherence of intellectual capacity and consequently, to recognise the influence of social factors on the excellent or deficient performance to the cognitive demands of school.

5. Be aware of the differences between the versions of national language and its official form, which acquaintance is closely linked with achievement as well as to understand the relation between first and second language in cases of bilingual students and its importance for the formation of the 'academic language'. Furthermore, to know that the academic performance of students of different ethno-cultural characteristics does not exclusively relates to those, but is highly linked with overall social inequalities.

6. Recognise the significant impact of educational institution on the formation of ideas of the oncoming generations and understand that the knowledge that is transmitted from school it is not neutral i.e. is not exclusively based upon scientific criteria and therefore changes from time to time, according to each periods’ ideological factors and its relation with ‘social control’.

**Subjects covered:**
1. Social Identities/Social Differences
2. Social Inequalities
3. Bilingualism and Education
4. Ethnic and Cultural Diversities in Education

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

---

**EKP61 Language Society and Education**

**Module code:** EKP61

**ECTS Credit Points:** 22

**Module Type:** Optional

**Year:** 1st or 2nd

**Language:** Greek

**Learning Outcomes:** On successful completion of the unit, students will be able to,
- View language analysis from different perspectives: structuralist and generative linguistics, sociolinguistics, ethnography and critical discourse analysis.
- Understand the nature of oral and written language and how they differ to each other and be able to view the notion of "text" from a modern and wider perspective.
- Know the social, cultural and political processes that govern language use by native and non-native speakers.
- Gain an understanding of the theoretical ideas and educational applications of the notion of "literacy", drawing particularly on multilingual and multicultural environments.
- Apply all acquired knowledge to language teaching and learning.
- Carry out theoretical and/or empirical research in issues regarding language and its relation to society and education, by combining theory with practice.
- Critically evaluate ideas and practices regarding language and its relation to society and education.
- Apply advanced skills in academic writing and qualitative research methods.

**Subjects covered:**
A modern approach to the use of oral and written language within the contexts of educational practice and policy

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.
**EKP62 Management of educational organizations**

**Module code**: EKP62  
**ECTS Credit Points**: 22  
**Module Type**: Optional  
**Year**: 1st or 2nd  
**Language**: Greek

**Learning Outcomes**: The learning outcomes of the module 'Management of Educational Organizations' are,  
i) the development of students' knowledge, skills and attitudes concerning the scientific management of educational organizations, and  
ii) students' preparation in order to take managerial roles implementing the managerial functions.  
After successful completion of the process of learning, students are expected to be able to,  
i) realize the special peculiarities of the educational organizations in all educational levels (elementary, secondary, higher) and understand the meaning and the span of managing educational organizations, within the framework of the national and European educational system.  
ii) Coordinate, define, implement and develop educational policy and educational innovations.  
iii) Effectively carry out the management functions of planning, organizing, administrating, and controlling in educational organizations.  
iv) Manage the human resources by adopting effective policies and practices concerning motivation, personnel development and performance appraisal.  

**Subjects covered**:  
1. Educational Management and Policy  
2. Human Resources Management  
3. Social and European Dimension of Educational Management  

**Evaluation**: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**EKP63 Science Education**

**Module code**: EKP63  
**ECTS Credit Points**: 22  
**Module Type**: Optional  
**Year**: 1st or 2nd  
**Language**: Greek

**Subjects covered**:  
1. Significance of the systematic exploration of science teaching  
2. Conceptual framework of Science Education  
3. Contemporary methods of science teaching: general characteristics of science teaching, criteria for the selection of content, learning processes, pacing of teaching and assessment, design and development of teaching material  

**Evaluation**: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**EKP64 Introduction to Adult Education**

**Module code**: EKP64  
**ECTS Credit Points**: 22  
**Module Type**: Optional  
**Year**: 1st or 2nd  
**Language**: Greek

**Learning Outcomes**: Upon the successful completion of this Course students should be able to acquire knowledge, develop skills and competences as well as adopt attitudes on issues related to,  
1. the main theoretical approaches to adult education  
2. the way in which adults learn  
3. basic theories of adult learning
4. the role of adult educator
5. Factors that have contributed in the growth of adult education in Greece from 19th century until today
6. the contribution of adult education in the socio-economic and cultural development of Greece
7. the process of planning, organization, implementation and evaluation of adult education programs
8. the process of planning and concretization evaluation of adult education programs
9. basic educational methods and techniques used in adult education programs
10. types and function of curriculum and teaching materials in adult education
11. the importance of educational space and the obstacles encountered
12. the basic principles of communication in coaching an educational group
13. the dynamics of relations developed in an educational group
14. programs of Continuing Professional Training implemented in Greece, and the role of trainers and organizers in these
15. good practices in the planning, implementation and evaluation of adult education programs

Subjects covered:
1. The field, the learning principles and the stakeholders of adult education
2. The social and economic function of adult education
3. Planning, organisation and evaluation of adult education programmes
4. Teaching methods - the learning group
5. The provision of education for adults in Greece

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

EKP65 Open and Distance Learning
Module code: EKP65
ECTS Credit Points: 22
Module Type: Optional
Year: 1st or 2nd
Language: Greek
Subjects covered:
1. Familiarizing the students with Open and Distance Education Systems
2. The role of the tutors
3. Development of learning material (either printed or based on modern technology), suitable for distance learning

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

Master's in Adult Education Med

Description
The course aims to provide specialized knowledge and skills sufficient to enable them to design, organise and evaluate adult educational programmes as well as to teach adults using modern and distance education methods.

Requirements
Applicants to the Master in Adult Education must possess an undergraduate degree in a related field from a Greek Public University, a Technical Educational Institute or an equivalent degree. The equivalency to a Greek qualification is recognized by the Hellenic NARIC (Hellenic National Academic Recognition and Information Center / DOATAP), which verifies the validity and equivalence of the acquired degree with those awarded by Greek institutions of higher education. Applicants must possess documents issued by DOATAP. A list of recognised degrees is available from DOATAP, and a
prerequisite course list for applicants to HOU courses may be given by the HOU’s registration department. All candidates must provide evidence of their ability in a foreign language, preferably English.

**Minimum study duration**
3 academic years

**ECTS credit points**
120

**Learning Material**
Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise. Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

**Contact**

**Registry**
Tel.: 2610 367337, 2610 367325, 2610 367323 - Fax: 2610 367350 - e-mail: eke@eap.gr

**Call Centre for General Inquiries**
Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr

**Course Structure**

**1st Year**
EKE50 Methodology of adult education  
EKE51 Planning, management and evaluation of adult education programmes  
EKP51 Educational Research in Action

**2nd Year**
EKE52 Contemporary Approaches on Adult Education  
EKE51 Planning, management and evaluation of adult education programmes  
EKP51 Educational Research in Action

**DISSERTATION**

**Course Modules**

**EKE50 Methodology of adult education**

- **Module code:** EKE50  
- **ECTS Credit Points:** 22  
- **Module Type:** Compulsory  
- **Year:** 1st  
- **Language:** Greek  
- **Learning Outcomes:** Students who complete EKE 50 will,  
  - know the principles and the theoretical framework of adult education  
  - know the methods that are appropriate for adult education  
  - be able to apply these principles and methods in various educational contexts  
  - know and be able to apply the principles and coordination methods to learners' group  

**Subjects covered:**
1. Theories and Preconditions of Learning
2. Educational methods
3. Learning basic skills
4. Communication and group dynamics
5. Case studies

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**EKE51 Planning, management and evaluation of adult education programmes**

- **Module code:** EKE51
- **ECTS Credit Points:** 22
- **Module Type:** Compulsory
- **Year:** 1st or 2nd
- **Language:** Greek

Learning Outcomes: Upon completion of the Course, students will be able to,
1. Analyze the evolution of Adult Education in Greece, in respect to the relevant socio-economic circumstances.
2. Define the characteristics of main Adult Education institutions in Greece and the relevant educational policies, in comparison with the European ones.
3. Present the steps of educational needs analysis procedures.
4. Apply the steps for planning and design adult education programs.
5. Analyze the managerial and administrative characteristics of an adult education organization.
6. Define the ways in which basic principles and procedures of educational management are applied towards the effective operation of adult education organizations.
7. Program the activities implemented in the framework of an adult education organization.
8. Analyze the steps for the recruitment of employees and the decision making procedures in an adult education program.
9. Identify the content of evaluation types and models.
10. Present the steps of the evaluation procedures in an adult education organization.

Subjects covered:
1. Socio-Economic Purpose and Institutional Framework of adult education
2. Management of adult education units
3. Evaluation of adult education programmes

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**EK51 Educational Research in Action**

- **Module code:** EKP51
- **ECTS Credit Points:** 22
- **Module Type:** Compulsory
- **Year:** 1st or 2nd
- **Language:** Greek

Learning Outcomes: Upon completion of the course the student will be able to,
1. Identify a certain aspect of an educational subject to be studied through empirical research
2. State the appropriate research questions or research hypotheses
3. Specify the theoretical framework of the study
4. Perform a thorough literature review to substantiate (a) the necessity and the originality of the study, (b) the study’s theoretical framework and (c) the methodological choices
5. Adopt the appropriate approach (quantitative and/or qualitative) to draw inferences from the empirical data
6. Construct the appropriate research design for the empirical study
7. Discuss the research findings with respect to the existing literature and the adopted theoretical framework
8. Determine the limitations of the study
9. Offer suggestions for further study
10. Put in writing a report of the empirical study suitable for publication in a scientific journal

Subjects covered:
Educational research (Approaches and evaluation of educational research, Methods in educational research, Examples of educational research, Critical evaluation of methods).

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

EKE52 Contemporary Approaches on Adult Education
Module code: EKE52
ECTS Credit Points: 22
Module Type: Compulsory
Year: 2nd
Language: Greek

Learning Outcomes: Students who complete EKE 52 will,
- know in depth the theoretical approaches of the field of adult education and especially the latest ones
- be able to distinguish in depth the similarities and differences between the ideas of the main founders of adult education (Freire, Mezirow) and ways to apply these ideas in practice
- will know the recent concerns and trends developed within the Transformative Learning theory's framework

Subjects covered:
1. Contemporary Foundational Views of adult education
2. The Critical Approach to adult education
3. Transformative Learning theory
4. Trends and Developments in adult education in Greece

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

Master's in education (M.Ed.) in Teaching English to Speakers of Other Languages (TESOL)

Description

The aim of this Course is to help holders of a first degree in English Literature and Philosophy enhance their professional development as English language teachers by engaging them in theoretical and practical studies concerning language teaching methodology, and in accordance with the demands of the modern local and international labour market.

Learning outcomes
Upon completion of the Master's programme, students will be expected to be able to:
1. analyze, perform and communicate teacher level research related to English language teaching;
2. comprehend and demonstrate specialized language teaching knowledge and skills in the language skills and elements by: Examining, selecting, and using methods conducive to effective learning of particular language skills (Listening, Speaking, Reading, Writing) and elements (Culture, Grammar, Vocabulary, Pronunciation) and by examining, evaluating, and creating materials to support effective language teaching and learning;
3. critically analyzing research in language acquisition and teaching, and applying it to classroom contexts;
4. design, develop and evaluate curricula and materials for English language teaching;
5. create, analyze and interpret effective measures of language ability of their students;
6. locate and select appropriate teaching resources to use computer technology to assist their learners' needs;
7. comprehend and apply the principles of English for specific purposes instruction relative to the linguistic background and work environment of their students;
8. demonstrate understanding of intercultural approaches in language teaching;
9. identify, design and employ recognized principles of effective English language teacher development and training program operation.

Requirements
Applicants to the Master in education in Teaching English to Speakers of Other Languages course must possess an undergraduate degree in English studies from a Greek Public University, a Technical Educational Institute or an equivalent degree.
The equivalency to a Greek qualification is recognized by the Hellenic NARIC (Hellenic National Academic Recognition and Information Center / DOATAP), which verifies the validity and equivalence of the acquired degree with those awarded by Greek institutions of higher education. Applicants must possess documents issued by DOATAP. A list of recognised degrees is available from DOATAP, and a prerequisite course list for applicants to HOU courses may be given by the HOU's registration department.
Applicants to the course must have received their degree at least three years prior to draw date. The course assignments are linked to teaching English as a Foreign Language and although teaching is not a prerequisite, it is considered helpful.

Minimum study duration
3 academic years

ECTS credit points
120

Learning Material
Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise.
Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

Contact
Registry
Tel.: 2610 367344 - Fax: 2610 367350 - e-mail: agg@eap.gr
Call Centre for General Inquiries
Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr

Course Structure

1st Year
AGG52 Language Learning Skills and Materials - Reading, Writing, Listening and Speaking
AGG53 Course design, implementation and evaluation in English language teaching

2nd Year
AGG65 Assessment in English language teaching
AGG66 Educational Technology for ELT
AGG67 Teaching English to Young Learners
AGG68 Teaching English for Specific Purposes
AGG69 Teacher Education in ELT
AGG70 Intercultural Approaches to the Teaching of English
**Course Modules**

**AGG52 Language Learning Skills and Materials - Reading, Writing, Listening and Speaking**

- **Module code:** AGG52
- **ECTS Credit Points:** 22
- **Module Type:** Compulsory
- **Year:** 1st
- **Language:** English and Greek

**Learning Outcomes:** Upon completion of this module, students will be expected to be able to:

1. consolidate and expand their knowledge of the basic elements of foreign language teaching and learning, with a focus on English;
2. identify the processes involved in the production and perception of language (spoken and written);
3. demonstrate a working awareness of the methodological processes involved in the teaching of the four language skills (listening, speaking, reading and writing);
4. understand what is involved in the communicative teaching of listening, speaking, reading and writing by familiarizing themselves with key concepts such as: authenticity, process/product and autonomous learning in the context of teaching English as a foreign language;
5. design, implement and evaluate original lessons integrating the communicative teaching of listening, speaking, reading and writing on the basis of relevant theorising;
6. adapt and evaluate published courseware on the teaching of the four language skills on the basis of their learners' proficiency levels and learning needs;
7. engage in critical thinking and demonstrate skills in practising reflective teaching;
8. demonstrate an initial awareness of the distinct functions and characteristics of foreign language teaching, learning, assessment and testing;
9. reflect on learner processes in the production and comprehension of the foreign language by engaging in similar processes themselves as part of their teacher training.

**Subjects covered:**

1. An introduction to basic concepts in TESOL
2. The teaching of listening, speaking, reading and writing skills - theory and practice

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**AGG53 Course design, implementation and evaluation in English language teaching**

- **Module code:** AGG53
- **ECTS Credit Points:** 22
- **Module Type:** Compulsory
- **Year:** 1st
- **Language:** Greek and English

**Learning Outcomes:** Upon completion of this module, students will be expected to be able to:

1. describe existing curricula, syllabi, courses and identify their main features and underlying principles and develop criteria for evaluating them;
2. design/adapt/revise courses for various teaching contexts on the basis of student needs and features of their teaching context;
3. demonstrate a working awareness of the evolution of language curriculum and course design and of the factors which influence them;
4. identify a ‘coherent communicative’ curriculum / syllabus;
5. Appreciate determine/evaluate the importance of the educational context and other factors in managing curriculum change;
6. demonstrate a working awareness of the importance of evaluation for curriculum development and the introduction of curriculum change / innovation;
7. discuss the development of skills for evaluation of curricula and materials;
8. portray an understanding of the role of the teacher in the curriculum / course design process
9. identify the need for the development of a critical stance towards existing pre-set curricula and attempts for innovation.

Subjects covered:
1. Learners' needs
2. Selection and adaptation of learning materials
3. Aims and objectives
4. Evaluation and marking

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**AGG65 Assessment in English language teaching**

Module code: AGG65
ECTS Credit Points: 22
Module Type: Optional
Year: 2nd
Language: English and Greek

Learning Outcomes: Upon completion of this module, students will be expected to be able to,
1. describe and define the fundamental principles and practicalities involved in the area of language testing and assessment;
2. distinguish between formal and informal testing as well as compare and analyse two major functions of Evaluation: formative and summative assessment;
3. interpret the evolution of language testing from the 1960s onwards;
4. identify and categorise the various language test types and compare their functions;
5. define and measure the various principles of language testing;
6. identify and estimate some of the characteristics of ‘good’ language tests and relate these to the different types of language tests;
7. develop, apply and reflect on appropriate language tests for their own curricular situation and learners;
8. define and discuss on principles and processes of alternative assessment, as well as compare alternative assessment with testing.

Subjects covered:
1. Principles of language testing
2. Language testing techniques
3. Testing of the reading, writing, listening and speaking skills

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**AGG66 Educational Technology for ELT**

Module code: AGG66
ECTS Credit Points: 22
Module Type: Optional
Year: 2nd
Language: English and Greek

Learning Outcomes: Upon completion of this module, students will be expected to be able to,
1. demonstrate a working understanding of the ways in which technology is being used to enhance language learning;
2. describe the different phases of the development of educational technology in the field of language teaching and learning;
3. identify ways of overcoming barriers in the use of technology;
4. identify ways of using resources such as video, the internet and electronic networking tools at school or in self-access;
5. evaluate software and learning activities carried out with the help of technologies that promote
language learning, lifelong learning, critical thinking, learning strategies, and multiliteracies;
6. demonstrate a working understanding of the ways in which computers are used in the foreign language classroom and become aware of how different types of available software might contribute to the language syllabus;
7. demonstrate a working understanding of the ways in which the Internet can be used as a tool in the language classroom;
8. combine more than one social networking application and software for the creation of cross-curricular projects which enhance the student's ability to comprehend meanings and consolidate previously acquired knowledge.

Subjects covered:
1. Using video in English Language Teaching
2. Language learning skills with the use of video
3. Information banks and PC software in the language classroom
4. Authoring and word processing as a tool in teaching writing
5. Using email, CD-ROM and the Internet in language learning

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**AGG67 Teaching English to Young Learners**

**Module code:** AGG67  
**ECTS Credit Points:** 22  
**Module Type:** Optional  
**Year:** 2nd  
**Language:** English and Greek
1. Naturalistic and school-based learning
2. English language learning and its role and purpose in primary education
3. Good teaching practices and frameworks
4. Materials design and evaluation in TEYL
5. Using video and PC technology in TEYL

**Learning Outcomes:** Upon completion of this module, students will be expected to be able to,
1. recognize the importance of the different contexts in which TEYL takes place and examine the various parameters shaping them;
2. identify the most influential theories of thinking and learning put forward in the last fifty years or so, mainly in the West (including the work of theorists such as Thorndike, Skinner, Piaget, Vygotsky, Bruner and Gardner), and demonstrate a working understanding of their implications for TEYL;
3. critically relate theorizing from the fields of First Language Acquisition and Second Language Acquisition to their own teaching context;
4. identify the factors which facilitate oracy development with children and demonstrate the skills of developing activities appropriate for their particular teaching and learning context;
5. demonstrate a working understanding of first language literacy development and identify the basic principles of reading and writing in second or foreign language in relation to children's learning;
6. differentiate between approaches for very young learners and upper age level ones and apply the principles of teaching reading and writing skills in the development of activities for their context;
7. identify issues which concern the assessment of Young Learners' English;
8. evaluate materials specifically designed for Young Learners.

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**AGG68 Teaching English for Specific Purposes**

**Module code:** AGG68  
**ECTS Credit Points:** 22  
**Module Type:** Optional  
**Year:** 2nd
Language:

Learning Outcomes: Upon completion of this module, students will be expected to be able to,
1. develop a working awareness of the principal issues involved in the teaching of ESP;
2. identify different facets of the evolution of ESP both globally and in Greece;
3. demonstrate knowledge of the processes and trends in English for Academic Purposes and Business English;
4. describe the different types of needs analysis in ESP and perform needs analysis research;
5. distinguish between the different types of discourse, register and genre analyses in ESP;
6. identify issues in ESP course design, implementation and evaluation;
7. demonstrate a critical understanding of current methodologies in teaching adults and the pedagogical roles of the adult/teacher trainer;
8. identify assessment and testing trends in ESP.

Subjects covered:
1. Approaches to the teaching and learning of oracy
2. Needs analysis in ESP
3. Learning-centred approaches

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

AGG69 Teacher Education in ELT
Module code: AGG69
ECTS Credit Points: 22
Module Type: Optional
Year: 2nd
Language: English and Greek

Learning Outcomes: Upon completion of this module, students will be expected to be able to,
1. identify key concepts and models in teacher education training and development;
2. demonstrate a working understanding of the basic constituents of teacher education programmes (knowledge, skills, attitudes and awareness);
3. demonstrate an awareness of the foreign language teacher's roles as analyst, teacher and user and the ways of improving teachers' language awareness;
4. demonstrate a working understanding of teacher observation techniques;
5. design and evaluate teacher training courses for pre-service and in-service teachers.

Subjects covered:
1. The content and process of teacher training courses
2. Language Development for teachers
3. Teacher education models
4. Teacher education principles in TESOL
5. Theory, practice, knowledge, skills, and reflective development in teacher education
6. Observation and evaluation in teacher education and training

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

AGG70 Intercultural Approaches to the Teaching of English
Module code: AGG70
ECTS Credit Points: 22
Module Type: Optional
Year: 2nd
Language: English and Greek

Learning Outcomes: Upon completion of this module, students will be expected to be able to,
1. use key terminology (including: 'culture', 'communication', 'intercultural communication', and 'cultural learning') in order to position TESOL as an area of intercultural practice as well as a type of language education;
2. demonstrate an understanding of the complicated character of the English language phenomenon in the world today with regard to its diverse varieties, its functions in different societies, and its role in social forces including colonialism and globalisation;
3. demonstrate an understanding of English’s international lingua franca function and the characteristics of the intercultural communication that is conducted through it;
4. reflect on the most effective and appropriate ways of teaching English to speakers of other languages in different contexts given its complicated character and diverse functions;
5. use both a cultural dimensions approach and a small cultures approach to consider the TESOL practitioner’s on-going quest for methodological appropriateness;
6. distinguish how the cultural content of the TEFL classroom might be most effectively and appropriately approached with a view to developing not just cultural understanding but also intercultural awareness and the skills of engaging with cultural texts and phenomena;
7. demonstrate an understanding of the construction of the intercultural space as a site for developing intercultural and multicultural awareness among pupils and teachers in multicultural schools in Greece;
8. demonstrate an understanding of the potential of newer technologies for developing intercultural awareness through English;
9. demonstrate an understanding of the potential of intercultural communication and intercultural communication training as sources of enrichment for existing TESOL practices in order to better prepare students to use English interculturally;
10. examine the practical issues related to intercultural communication training in a number of teaching contexts.

**Subjects covered:**
1. Culture- Anthropology-Psychology- Sociology and Linguistics: An interdisciplinary approach to culture
2. Language Teaching and Culture
3. Intercultural Communication

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

---

**Master's in Teaching German as a Foreign Language MEd**

**Description**

Aim of this Course is to help holders of a first degree in German Language and Philology to acquire specialized knowledge on "Teaching German as a Foreign Language" within a scientific framework according to the demands of the modern local and international labour market.

**Requirements**

Applicants to the Master in education in Teaching German as a Foreign Language course must possess an undergraduate degree in German Language and Literature or Foreign Languages, Translation and Interpreting from a Greek Public University, a Technical Educational Institute or an equivalent degree. The equivalency to a Greek qualification is recognized by the Hellenic NARIC (Hellenic National Academic Recognition and Information Center / DOATAP), which verifies the validity and equivalence of the acquired degree with those awarded by Greek institutions of higher education. Applicants must possess documents issued by DOATAP. A list of recognised degrees is available from DOATAP, and a prerequisite course list for applicants to HOU courses may be given by the HOU's registration department.

The course assignments are linked to teaching German as a Foreign Language and although teaching is not a prerequisite, it is considered helpful.

**Minimum study duration**

3 academic years

**ECTS credit points**
Learning Material
Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise. Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

Contact
Registry
Tel.: 2610 367344 - Fax: 2610 367350 - E-Mail: ger@eap.gr
Call Centre for General Inquiries
Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr

Course Structure

1st Year
GER50 Oral Skills in German Language
GER51 Writing Skills in German Language

2nd Year
GER60 Course Design in German Language Teaching
GER61 Assessment in German Language Learning
GER62 Teaching Grammar in the German Language
GER63 Teaching Phonetics/Phonology and pronunciation in the German Language

DISSERTATION

Course Modules

GER50 Oral Skills in German Language
Module code: GER50
ECTS Credit Points: 22
Module Type: Compulsory
Year: 1st
Language: German and Greek
Subjects covered:
1. Listening comprehension
2. Speaking skills
Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

GER51 Writing Skills in German Language
Module code: GER51
ECTS Credit Points: 22
Module Type: Compulsory
Year: 1st
Language: German and Greek
Subjects covered:
1. Reading comprehension
2. Writing skills

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**GER60 Course Design in German Language Teaching**
- **Module code:** GER60
- **ECTS Credit Points:** 22
- **Module Type:** Optional
- **Year:** 2nd
- **Language:** German and Greek
- **Subjects covered:**
  1. Theoretical principles of German Language Teaching
  2. Methodology in German Language Teaching
  3. Lesson planning based on textbooks and other materials
  4. Course design

**GER61 Assessment in German Language Learning**
- **Module code:** GER61
- **ECTS Credit Points:** 22
- **Module Type:** Optional
- **Year:** 2nd
- **Language:** German and Greek
- **Subjects covered:**
  1. Pedagogical principles of assessment
  2. Testing techniques
  3. Assessing communication skills
  4. Assessing grammatical, lexical etc knowledge

**GER62 Teaching Grammar in the German Language**
- **Module code:** GER62
- **ECTS Credit Points:** 22
- **Module Type:** Optional
- **Year:** 2nd
- **Language:** German and Greek
- **Subjects covered:**
  1. Theories of grammar and their application in teaching German as a foreign language
  2. Linguistic and pedagogical grammar
  3. Structures and communicative functions of grammar in teaching German as a foreign language
  4. Principles of grammar and activities

**GER63 Teaching Phonetics/Phonology and pronunciation in the German Language**
- **Module code:** GER63
- **ECTS Credit Points:** 22
- **Module Type:** Optional
- **Year:** 2nd
Language: German and Greek

Subjects covered:
1. Phonetics and phonology of the German language
2. The influence of the Greek language in learning the pronunciation of the German language
3. Teaching pronunciation
4. Methodology and strategies of pronunciation teaching

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

Master's in Teaching French as a Foreign Language Med

Description
This Course caters for those involved in the teaching of languages and civilization in the new multilingual and multicultural European Community and who are called upon to play an important role to the formation of the identity of the student as a citizen of Europe.

Aim of this Course is to help holders of a first degree in French Literature and Philosophy to acquire specialized knowledge on "Teaching French as a Foreign Language" within a scientific framework and according to the demands of the modern local and international labour market. The learning material included in this Course is innovative and designed according to distance learning methodology aiming at covering the needs of the Greek people. The educational features of the material as well as the concentration on utilising the mental and emotional capacities of the learner during the teaching/learning practice are obvious throughout the modules of this Course. Through strategies of interaction between the material and the student an approach is attempted of those inter and extra-lingual, psychological and ideological factors affecting the education process. Special emphasis is placed on the dialectic relationship between theory and practice by means of examples, case studies, self-assessment questions, also by continuously deriving from the tutor's teaching experience.

Requirements
Applicants to the Master in education in Teaching French as a Foreign Language course must possess an undergraduate degree in French Language and Literature from a Greek Public University, a Technical Educational Institute or an equivalent degree.

The equivalency to a Greek qualification is recognized by the Hellenic NARIC (Hellenic National Academic Recognition and Information Center / DOATAP), which verifies the validity and equivalence of the acquired degree with those awarded by Greek institutions of higher education. Applicants must possess documents issued by DOATAP. A list of recognised degrees is available from DOATAP, and a prerequisite course list for applicants to HOU courses may be given by the HOU's registration department.

Applicants to the course must have received their degree at least one year prior to draw date. The course assignments are linked to teaching French as a Foreign Language and although teaching is not a prerequisite, it is considered helpful

Minimum study duration
3 academic years

ECTS credit points
120

Learning Material

Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education.
Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise. Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

Contact
Registry
Tel.: 2610 367344 - Fax: 2610 367350 - e-mail: gal@eap.gr
Call Centre for General Inquiries
Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr

Course Structure

1st Year
GAL50 Course and Curriculum Design in French language Teaching
GAL51 Speaking Skills in French Language Teaching

2nd Year
GAL60 Writing skills in French Language Teaching
GAL61 Intercultural Education in French Language Teaching
GAL62 Educational Technology in French Language Teaching
GAL63 Teaching phonetics in French Language Teaching
GAL64 The Teaching of French in Primary Education

DISSERTATION

Course Structure

GAL50 Course and Curriculum Design in French language Teaching
Module code: GAL50
ECTS Credit Points: 22
Module Type: Compulsory
Year: 1st
Language: French and Greek
Subjects covered:
1. Language teaching: theoretical principles
2. Methods and techniques of language teaching
3. Course design (handbooks, tasks, materials)
4. Curriculum design: principles and typology
5. Approaching French language teaching through the pedagogical principle of differentiation.
Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

GAL51 Speaking Skills in French Language Teaching
Module code: GAL51
ECTS Credit Points: 22
Module Type: Compulsory
Year: 1st
Language: French and Greek
Subjects covered:
1. Listening
2. Speaking
Evaluation: Completion of four written assignments during the academic year, the average grade of
which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**GAL60 Writing skills in French Language Teaching**
- **Module code:** GAL60
- **ECTS Credit Points:** 22
- **Module Type:** Compulsory
- **Year:** 2nd
- **Language:** French and Greek
- **Subjects covered:**
  1. Reading
  2. Writing

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**GAL61 Intercultural Education in French Language Teaching**
- **Module code:** GAL61
- **ECTS Credit Points:** 22
- **Module Type:** Optional
- **Year:** 2nd
- **Language:** French and Greek
- **Subjects covered:**
  1. Description of culture and its relationship with language
  2. The relationship between Language Acquisition/Teaching and Culture Acquisition/Teaching
  3. Design material for the Teaching of culture/interculture
  4. Contribution of educational Technology

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**GAL62 Educational Technology in French Language Teaching**
- **Module code:** GAL62
- **ECTS Credit Points:** 22
- **Module Type:** Optional
- **Year:** 2nd
- **Language:** French and Greek

**Learning Outcomes:** Knowledge & understanding - On successful completion of the module, students will be able to,
- Identify the theories of learning that are implicit in their various uses of ICT for foreign language instruction
- Understand the challenges and controversies linked to the integration of ICT in formal, non formal and informal language learning settings.
- Understand political, educational and historical reasons leading to the use and expansion of ICT in foreign language education.
- Develop an understanding of the field of Computer Assisted Language Learning and also with regard to the research in Anglo-Saxon and French speaking countries.

Intellectual (thinking) skills: application - On successful completion of the module, students will be able to,
- Apply pedagogically sound learning scenarios including ICT applications in various language learning contexts (face-to-face, online and blended settings, adult learning contexts, special needs settings etc.)
- Master ICT applications including social networking tools (web 2.0 technologies)

Intellectual (thinking) skills: analysis - On successful completion of the module, students will be able to,
- Analysis of pedagogical scenarios using ICT from a critical perspective, including learning resources,
the role of the teacher, teacher-learner interaction, sociolinguistic and pragmatic elements to be taken into account
- Critical review of bibliography in the area of Computer Assisted Language Learning
- Intellectual (thinking) skills: synthesis - On successful completion of the module, students will be able to,
- Synthesize data and analyze them before, during and after a language teaching interventions
- Intellectual (thinking) skills: evaluation - On successful completion of the module, students will be able to,
- Evaluate the potential of language teaching interventions
- Explain the added-value of ICT in particular language learning setting.

Subjects covered:
1. The exploitation possibilities of technological tools (video, computers, etc.) in the foreign language classroom
2. Introduction to the use of technological tools
3. Exploitation and assessment of pedagogical digital content (CD-Rom, software, educational radio programmes, video tapes, etc.)
4. Collection of useful content-specific bibliography

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

GAL63 Teaching phonetics in French Language Teaching
Module code: GAL63
ECTS Credit Points: 22
Module Type: Optional
Year: 2nd
Language: French and Greek

Subjects covered:
1. Phonetics and phonology of the French language
2. The Importance of mother tongue in Teaching French Pronunciation
3. Principles of Teaching Pronunciation
4. Methods and Strategies for Teaching Pronunciation

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

GAL64 The Teaching of French in Primary Education
Module code: GAL64
ECTS Credit Points: 22
Module Type: Optional
Year: 2nd
Language: French and Greek

Subjects covered:
1. Definition of general and specific objectives and their relation to school-age children's cognitive and emotional competence
2. Utilization of children's psychological and communication needs in the learning process
3. Utilization of the assimilative capability of school-age children
4. Foreign language contribution and the intercultural dimension of children's personality development
5. Methodology, strategies / activities aiming at creating psychological incentives
6. Course Design
7. Curriculum Design

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.
Orthodox Theology Studies MA

Description
The aim of the course is to enable clerics, university graduates of Theology, of all religions, as well as various other university graduates, to further their studies in Orthodoxy. The course is also available in English.

Requirements

Applicants to the Orthodox Theology Studies must possess an undergraduate degree from a Greek Public University, a Technical Educational Institute or an equivalent degree.

The equivalency to a Greek qualification is recognized by the Hellenic NARIC (Hellenic National Academic Recognition and Information Center / DOATAP), which verifies the validity and equivalence of the acquired degree with those awarded by Greek institutions of higher education. Applicants must possess documents issued by DOATAP. A list of recognised degrees is available from DOATAP, and a prerequisite course list for applicants to HOU courses may be given by the HOU’s registration department.

All candidates must provide evidence of their ability in a foreign language, preferably English.

Minimum study duration
3 academic years

ECTS credit points
120

Learning Material
Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise. Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

Contact
Registry
Tel.: 2610 367337, 2610 367325, 2610 367323 - Fax: 2610 367350 - e-mail: orth@eap.gr

Call Centre for General Inquiries
Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr

Course Structure

1st Year
ORTH50 Orthodoxy as Heritage
ORTH60 Orthodox Faith and Way of Life

2nd Year
ORTH51 Orthodoxy in the 20th Century
ORTH61 Orthodoxy as a Cultural Achievement and the Problems of the Modern Man
Course Modules

**ORTH50 Orthodoxy as Heritage**
Module code: ORTH50
ECTS Credit Points: 22
Module Type: Compulsory
Year: 1st
Language: Greek

Subjects covered:
1. The first historical origins of the Orthodox Church
2. The Orthodox Church and Western Christianity
3. The Orthodox Church during the Turkish Occupation and the modern times

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**ORTH60 Orthodox Faith and Way of Life**
Module code: ORTH60
ECTS Credit Points: 22
Module Type: Compulsory
Year: 1st
Language: Greek

Learning Outcomes: Upon completion of this module, the student should be able to,
1. Know and describe diachronically the historical, biblical and patristic context which forms and determines the fundamental aspects of Orthodoxy, such as theology, worship, way of life and experience, acknowledging and recalling in a systematical rather than fragmentary way the distinctive elements which determine its identity.
2. locate and understand hermeneutically the fundamental axes, the prerequisites and the criteria by which orthodox theology draws and presents the basic elements of the Orthodox Church's faith and life, explaining and reformulating furthermore the theological principles that condition her dogma and experience in an ecumenical perspective.
3. Apply, exploit and interpret reflectively the criteria of orthodox theology, beyond the historical context of their composition and appearance, within the contemporary situation and the living conditions of the Church, in dialogue with the modern world and culture.
4. Distinguish, analyze and correlate the individual elements, which constitute the theological and experiential faith and the liturgical tradition of Orthodoxy, in order to be able undertake new and creative approaches of its past and the living present as well, and indeed in a dialogical manner with the ecumenical Christian experience.
5. Compose and systematize in a single unity the content and the particular subunits of dogmatic theology, church experience, way of life and worship of Orthodoxy, by rearranging and redeveloping anew the contents of the thematic module with fruitful and creative ideas, which take into account the diachronic but also the modern aspects of Christian theology.
6. Assess and evaluate by virtue of the diachronic criteria of Orthodoxy the theological, historical and cultural factors which have shaped the theological and experiential features of the orthodox faith, worship and life of the Church, by reconsidering various absolutizations and ideological constructs of the historical past, comparing and evaluating the theological issues and the ecclesiological conditions in different historical periods and mainly by illuminating the modern problems of the Church in dialogue with the world and the human culture.

Subjects covered:
1. The basic Orthodox Dogmas
2. Worship in the Orthodox Church
3. Monasticism and the spirituality of Orthodoxy
**ORTH51 Orthodoxy in the 20th Century**

**Module code:** ORTH51  
**ECTS Credit Points:** 22  
**Module Type:** Compulsory  
**Year:** 2nd  
**Language:** Greek  

**Learning Outcomes:** Upon completion of module "ORTH51- Orthodoxy in the 21st Century" the student will have acquired knowledge on the following issues,

1. The role, as well as the cultural and spiritual message of Orthodoxy in a "post-ecclesial" world in a post-modern 21st century.
2. The Universal Church and Globalization. The Foundations of the Church's universality and its interrelations with globalization in our contemporary environment.
3. Orthodoxy and National Identity: The establishment of the Orthodox autocephalous Churches; their relations with each other, with the nations and nation states, as well as with Mother-Church of the Ecumenical Patriarchate of Constantinople.
4. The Ecumenical Patriarchate of Constantinople: orthodox communities in Diaspora Apply analytical frameworks and theories to compare different Orthodox communities.
5. The Preconditions, framework and role of the Dialogue with the other two Christian Confessions and with non-Christian Religions, monotheist (e.g. Judaism, Islam) or not.
6. Understanding the identity and role of the other Confessions and Religions; interaction with Orthodoxy History and main contemporary aspects of both the inter-Christian (e.g. with Roman Catholics and Protestants) and inter-faith Dialogues (e.g. with Judaism and Islam).
7. Identify, label and describe the possible existence of cultural and religious differences in attitudes and behaviours of other homologies and religions, and reflect on the extent to which these may influence interaction with Orthodoxy.
8. Recognize models by means of Orthodoxy promotes its message to the World and vise-versa.

In the age of globalization and as a result of the widening of the European Union especially towards the east, i.e. including as its members 'eastern orthodox' states since 1st of May 2004, for those who search to discover the spiritual values that will infuse the European ideal with new meanings the questions are as follows: 1. Will it be possible for Christianity to overcome the Great Schism of the previous millennia so as to spread, consistently and in unison it's authentic and living Testimony on the meaning and purpose of human existence, as it happened 2000 years ago in the reign of Augustus when the world had been united while the human being was experiencing internal schism.

In a period of deep crisis that goes beyond the financial breakdown and is primarily a crisis of human existence, which cultural message, which life values should Orthodoxy transmit? What can Orthodoxy do for the World?

**Subjects covered:**
1. The Orthodox "diaspora" in the West
2. The Orthodox Church and the Ecumenical Movement
3. The unity of the Orthodox Church

**ORTH61 Orthodoxy as a Cultural Achievement and the Problems of the Modern Man**

**Module code:** ORTH61  
**ECTS Credit Points:** 22  
**Module Type:** Compulsory  
**Year:** 2nd  
**Language:** Greek  

**Subjects covered:**
1. Orthodoxy as a cultural achievement
2. Orthodoxy facing current affairs

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.
Description
The aim of the Course is to provide students with knowledge and skills relating to the administration of Business and Organization Systems both in the public and private sector. More specifically, the aim of this Course is to equip graduates with the theoretical background and a practical knowledge required in the administration of the modern businesses and organizations. Due to globalization of economic activity, the European integration and the development of a new economy, more and more modern economic organizations are seeking specialized workforce able to analyze, compose and interact in the complicated circumstances characterizing the modern business and organizations.

Upon completion of this course students should be able to:
1. use statistical and financial methods for the analysis of the external and internal activities of their institutions.
2. understand the influences and interactions between financial occurrence, funding opportunities, governmental policy and business environment in their national and international dimensions.
3. contribute effectively to the most appropriate and financially efficient operation of their institutions.
4. act confidently as consultants in MCM (Mass Communication Media), multinational companies and funding organizations.
5. take initiatives related to technological or organizational changes required in the business world within a rapidly growing international environment.

Requirements
Applicants to the Business Administration course must possess a High School Certificate from a Greek Unified Upper Secondary School (Eniaio Lykeio), a b' level Technical Vocational Educational School (TEE) or an equivalent Greek or Foreign High School Certificate.

Minimum study duration
4 academic years

ECTS credit points
240

Learning Material
Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise. Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

Contact
Registry
Tel.: 2610 367347, 2610 367333 - Fax: 2610 367350 - e-mail: deo@eap.gr

Call Centre for General Inquiries
Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr

Course Structure
1st Year
DEO 10 Law and Administration
DEO 11 Introduction to Business Administration
DEO 13 Quantitative Methods

2nd Year
DEO 23 Marketing I
DEO 24 Public Administration and Policy
DEO 25 Accounting

3rd Year
DEO 31 Financial Management
DEO 33 Marketing II
DEO 34 Economic Analysis and Policy

4th Year
DEO 40 Administration of Businesses and Organizations
DEO 41 Money and Capital Markets
DEO 42 Total Quality and Environmental Management
DEO 43 Industrial Organization, Labour Economics and European Business

The degree is awarded on completion of 12 course modules.

Course Modules

**DEO10 Law and Administration**

**Module code:** DEO10  
**ECTS Credit Points:** 20  
**Module Type:** Compulsory  
**Year:** 1st  
**Language:** Greek

**Module general description:** The Subject Unit "Basic Principles of Law and Administration" intends to familiarize you with the basic principles of Law and to introduce you to some of the key issues related to Administration. Specifically as far as the subject of Law is concerned it seeks:  
- To give you an overview of the scope of the Law, its specific branches and their characteristics.  
- To acquaint you in more detail with two particular branches of Law, namely the Administrative Law and the Commercial Law, which are most directly connected with the business and organizations administration, part of the larger educational programme within which this Subject Unit is included. Similarly as far as the subject of Administration is concerned it seeks:  
- To present you with the dimension of industrial relations, as they are developed within businesses and organizations, both in the private and public sector.  
- To familiarize you with the scope, the dilemmas and principles of administrative action, particularly in the public services sector.  

**Learning Outcomes:** Upon the completion of the course the student is able to,  
1. Understand the architecture of the Greek legal system and the structure of the Greek Public Administration.  
2. Identify the basic principles of the Greek Constitutional and Administrative Law.  
3. Identify the basic principles of the Greek civil, commercial and labor law. Understand the function and impact of the European Union law to the Greek legal system.

**Subjects covered:**  
- Administrative analysis  
- Administrative Law  
- Commercial Law  
- Collective labour Law
- Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**DEO11 Introduction to Business Administration**

**Module code:** DEO11  
**ECTS Credit Points:** 20  
**Module Type:** Compulsory  
**Year:** 1st  
**Language:** Greek  

**Module general description:** The course provides an introduction to management essentials, processes and functions. Overviews the practice of management as applied within organizations. Includes history of the tradition, of main management theories and current effective practices, research findings and case studies. It incorporates operations management, human resource management and study of international economic environment dimensions. The course aims to enhance student understanding of the external and internal factors, which influence and shape organizational performance and draw leadership requirements.

**Learning Outcomes:** On successful completion of the Course Module DEO 11, students acquire a main body of knowledge related to the theory and the practice of Management, which constitute an introduction to the principles, the norms and the methods of Management in the private and public sector.

The Course Module DEO 11 is comprised on the following four parts:
1. Basic Principles of Management for Organisations  
2. Production Management  
3. Human Resources Management  
4. International Economic Environment

On completion of the first part, students will be able to identify the basic introductory concepts and theories that constitute a knowledge background in which Organization and Administration Principles have been based and developed until today. Additionally, they will be in the position to define and analyze the basic functions of Management: Planning - Organizing - Leading - Control, which are implemented in every business and organization in order to achieve effective and efficient performance.

On completion of the second part, students will be able to describe and analyze the production process that is implemented in every business or/and organization in order to generate products and services. Specifically, they will be able to comprehend basic issues related to the design, planning and control of the production systems, that refer to numerous factors, related directly or indirectly to the production process such as labor, technology, facilities, raw material, energy, information, quality, production schedule, inventories, cost, customers, suppliers e.t.c.

On completion of the third part, students will be able to evaluate the prospects of contemporary daily labor life. More specifically, they will be able to identify:
1. the problems that people face as "sellers" of their labor power, not only at the beginning of their labor relation, but also during their business career,  
2. the capabilities that the contemporary human is required to have as an employee, and  
3. the ways and means that will allow him/her to resolve emerging problems as a specialist in Human Resources Management.

Lastly, on completion of the fourth part, students will be in the position to better:
- describe the advantages and disadvantages brought by the internationalization of business activities and their multinational character,  
- identify the major "players" in the international economic environment and describe their role and contribution in its formulation, and to describe the characteristics of the international monetary system as well as the framework of international transactions.

**Subjects covered:**
- Essentials of Management  
- Operations Management
- Human resources management
- International economic environment

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**DEO13 Quantitative Methods**

- **Module code:** DEO13
- **ECTS Credit Points:** 20
- **Module Type:** Compulsory
- **Year:** 1st
- **Language:** Greek

**Module general description:** The aim of this module is to,
- Introduce the students to the main concepts and theory of mathematics and statistics for business and economics as well as operational research, through real business and economic life examples.
- Introduce the students to problem solving techniques with regards to quantitative problems in a modern business environment.
- To familiarize the students with the basic techniques of mathematics and statistics for business and economics and operational research.
- To get the students acquainted with the newly developed computer software packages that are widely used by modern businesses in their everyday activities.

**Learning Outcomes:** Quantitative Methods requires from the student the comprehension of three separate fields of Quantitative Analysis Modules, those of Mathematics for Economists and Business Managers, Statistics for Economists and Business Managers and Operational Research. After successful completion of his/her studies the student:

**With regards to Mathematics:**
1. Will be able to solve functions of one-choice variable, first-order, second-order and higher-order polynomials.
2. Will be able to draw graphs of functions of one-choice variable.
3. Will be able to use functions of one-choice variable in order to apply them in real-life examples and problems of the business and economic environment.
4. Will get acquainted with the concept of derivatives.
5. Will be able to calculate derivatives of elementary functions, complex functions and inverse functions.
6. Will understand the concept of elasticity in microeconomics and will connect it with the use of derivatives.
7. Will be able to calculate the limit of a function.
8. Will be able to solve optimization problems with the use of the first derivative test and the second derivative test.
9. Will comprehend the concept of integral and the use of integration in applications from economics and business.

**With regards to Statistics:**
1. Will get familiar the concept and real nature of statistics as well as with the role of statistics in Business Administration.
2. Will learn the arithmetical methods of describing grouped and ungrouped data such as the measures of location, measures of dispersion, measures of variation, and measures of asymmetry and kurtosis.
3. Will be able to calculate all those measures with given examples of pedagogical nature together with the use of spreadsheets such as excel.
4. Will learn the concept and use of probabilities and probability theory.
5. Will be able to solve probability problems from real-life economics and business examples.
6. Will be able to distinguish among discrete and continuous distributions.
7. Will solve problems of discrete distributions such as Bernoulli, Binomial, Geometric, Hypergeometric and Poisson.
8. Will solve problems of continuous distributions such as Uniform, Normal, Exponential, \( \chi^2 \), t and F distributions.
9. Will learn how to estimate parameters and confidence intervals.
10. Will be able to use hypothesis testing problems for means, proportions and variances for one and for two populations.
11. Will understand the concept of Linear Regression and will be able to solve problems of simple and multiple regression analysis with applications in economics and business.
12. Will be able to calculate the coefficients together with all the necessary statistics of a linear regression problem with the use of spreadsheets (excel).

With regards to Operational Research:
1. Will learn how to solve problems of optimal transportation plan with the use of the Northwest Corner Method and the Vogel Method.
2. Will learn how to tackle assignment problems with the Hungarian Method.
3. Will understand the disequilibrium solutions for both optimal transportation plan and assignment problems.
4. Will use real-life examples from business administration for both optimal transportation plan and assignment problems.
5. Will learn network analysis and network optimization techniques.
6. Will work with dynamic linear programming problems.
7. Will be introduced to game theory and solve problems with the graphical method and the linear programming method.
8. Will get familiar with the queuing models and systems and will solve problems of business administration nature.
9. Will learn how to solve linear programming problems with the use of the simplex algorithm and the graphical method.
Will be acquainted with larger scale operational research problems and learn how to tackle them appropriately with the use of spreadsheets, such as excel.

Subjects covered:
- Mathematics for Business and Economics
- Statistics for Business and Economics
- Operational Research
- Introduction to Computers

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**DEO23 Marketing I**

**Module code:** DEO23  
**ECTS Credit Points:** 20  
**Module Type:** Compulsory  
**Year:** 2nd  
**Language:** Greek

**Module general description:** The module introduction to Marketing aims to:
- Present and discuss the philosophy and functions of marketing in the business context,
- Analyse systematically the key concepts associated with marketing implementation and consumer behaviour,
- Provide theoretical and practical knowledge on the processes of sales and distribution,
- Offer in-depth insights into the area of industrial marketing and consider its implication for the business environment,
- Analyse and highlight the role of International and E-marketing in contemporary marketing practice.

**Learning Outcomes:** After completing this module, students will be able to understand the basic principles of marketing and to become familiar with all processes and functions of marketing gaining a holistic overview of this area. In particular, students will be able to:
- Undertake an analysis of marketing environment
- Understand the concepts of segmentation - targeting - positioning
- Understand basic principles of marketing research
- Analyze the product mix, price, distribution and promotion
- Understand the basic principles of consumer behavior
- Learn about alternative models to explain the behavior in the purchasing process
- Analyze theories shaping attitudes
- Be familiar with models for measuring attitudes and their impact on marketing policies
- Understand models of industrial buyers’ purchasing behavior
- Analyze the characteristics of industrial markets
- Understand the characteristics of industrial marketing management
- Understand the basic principles of sales management
- Carry out comprehensive plans of sales organization
- Understand the peculiarities of the international environment
- Describe applications of political marketing in international export markets
- Be familiar with the basic principles of e-marketing
- Determine the mix of e-marketing

**Subjects covered:**
- Introduction to marketing
- Industrial marketing
- Consumer behaviour
- Distribution channels and Sales Management

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**DEO24 Public Administration and Policy**

**Module code:** DEO24  
**ECTS Credit Points:** 20  
**Module Type:** Compulsory  
**Year:** 2nd  
**Language:** Greek

**Module general description:**
- To introduce the students to the main concepts and theories of Public Administration and Public Policy and to present the reforms that take place in public administration and policy both at the local and the international level.
- To present the structure and the operation of the Greek Public Administration system both at the central and the regional level.
- To familiarize students with the history and basic institutions of the European Union.
- To provide information about the structure of the National Strategic Reference Framework (NSRF) and its main implementation mechanisms
- To explain the role of public enterprises and to describe the concept of their privatization
- To illustrate the principles and processes of public budgeting, the mean through which public policies are established.

**Learning Outcomes:** Upon completion of the course, students should/will be able to:
1. Identify and distinguish the main theoretical approaches to and models of public policy and administration, as well as their interconnectedness and applications to the field of public policy-making in several countries/regions;
2. Grasp, describe and discuss the evolution and the main functions of the Greek system of public administration and governance at large, as well as the main themes surrounding its key reforms;
3. Capture, identify and discuss the evolution and the functioning of the EU multi-level system of governance, as well as the workings of main EU institutions and their role/involvement in the way in which EU policies are designed and implemented;
4. Identify and discuss the main themes/issues surrounding the working of public finances in Greece, such as the functioning of the budget and public utilities companies, as well as the challenges of their reform with emphasis on the processes of (de)regulation and/or privatisation in Greece.

**Subjects covered:**
1. Public Enterprise Economics
2. Principles of public Administration
3. Contemporary function of the State
4. Structure and Operation of public sector organisations
5. Public Policy
6. National Institutions and policies
7. New Public Management

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

DEO25 Accounting
Module code: DEO25
ECTS Credit Points: 20
Module Type: Compulsory
Year: 2nd
Language: Greek

Module general description: The aim of the module is,
To present the key accounting concepts, the procedures and the techniques employed by the economic entities in order to journalize and post transactions, adjust entries, analyze economic transactions and interpret financial information affecting decision making.
To introduce the principles of accounts and financial statements as well as the process of the accounting cycle, of the Greek General Accounting Standards, of costing systems as well as of accounting information systems.
To familiarize with the procedures and the techniques of accounting, through exercises and applications, using an integrated accounting software package.
To provide information on the contemporary issues regarding the quality of accounting information provided by the financial statements, auditing and International Accounting Standards.

Learning Outcomes: In the Accounting Course DEO25 students will study Financial Accounting, the Greek and International Financial Reporting Standards as well as elements of Cost Accounting and Accounting Information Systems. After successful completion of his/her studies the student will be able to:
1. define the meaning and purpose of accounting and its role in management
2. discern between Financial and Managerial Accounting.
3. describe the types of tasks performed by accountants
4. understand the content of financial statements
5. identify the types, the function and the meaning of the accounts as well as understand the operation of the double-entry system and the Debit and Credit principle
6. perform journal entries for routine accounting events
7. understand the role of adjusting entries
8. correct accounting errors
9. determine the profit or loss over a period
10. prepare financial statements
11. understand the characteristics and content of the Greek Accounting Plan and chart of Accounts
12. apply the Greek General Accounting Plan for book keeping and financial statements preparation.
13. understand the differences between IFRS and the Greek General Accounting Plan.
14. understand the concept of cost
15. distinguish between different types of costs.
16. describe the function of costing
17. determine the production cost
18. understand the allocation of overhead charges
19. analyze the thinking of the programmers making accounting applications
20. describe the required structure of a modern accounting application in order to deliver the expected results
21. understand the multitude of information produced by modern accounting software

Subjects covered:
1. Introduction to accounting
2. Financial accounting
3. Greek General Chart of Accounts
4. Computerised accounting
5. Introduction to Cost Accounting

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**DEO31 Financial Management**

**Module code:** DEO31  
**ECTS Credit Points:** 20  
**Module Type:** Compulsory  
**Year:** 3rd  
**Language:** Greek

**Module general description:** The module,
- Defines the meaning of money demand and introduces the students to the functions of the banking system, the supply of money, and the meaning of the monetary policy. The basic features of the currency markets are explained.
- Analyses the basic features of future and present value of money and explains the meaning of cash flows. The students will also focuses on the differences between the methods of the net present value and the internal rate of return and explain the weighted average cost of capital.
- Defines what a derivative instrument is, introduces the concept of risk and how it can be hedged.
- Analyses the importance of the financial markets and describes the risk return relation. The basic concepts of portfolio theory are also presented.

**Learning Outcomes:**

**Money and Banking - Foreign Exchange**
Define the meaning of money demand.
Understand the functions of the banking system and the supply of money.
Interpret the meaning of the monetary policy.
Explain the functions of currency markets.

**Financial analysis and management**
Analyze the basic features of future and present value of money.
Explain the meaning of cash flow.
Define and explain the net present value method.
Define and explain the internal rate of return method.
Explain the differences between the methods of the net present value and the internal rate of return.
Make investment decisions in an inflationary environment.
Adjust for risk in capital budgeting decisions.
Explain and derive the weighted average cost of capital.

**Derivatives - Securities**
Define what a derivative instrument is.
Understand the concept of risk and how it can be hedged.
Describe the mechanics of future markets.
Explain how a future/forward instrument is valued.
Explain the hedging procedure with future/forwards instruments.
Explain how an option contract is valued.
Explain the hedging procedure with options.

**Portfolio management**
Understand the importance of the financial markets.
Describe the risk return relation.
Describe the money and capital markets.
Explain the basic features of a bond.
Explain the basic features of a stock.
Understand the basic concepts of portfolio theory.
Present the capital asset pricing model.
Understand what an investment company is.
Subjects covered:
- Money and Banking - Foreign Exchange
- Financial analysis and management
- Derivatives - Securities
- Portfolio management

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**DEO33 Marketing II**

**Module code:** DEO33  
**ECTS Credit Points:** 20  
**Module Type:** Compulsory  
**Year:** 3rd  
**Language:** Greek  

**Module general description:** The aim of the "Marketing II" module is to give students the opportunity to learn the basic principles of Services Marketing (Volume A) and Communications Techniques (Volume B). Moreover, this module provides the theoretical background and analytical tools for decision making. Finally, the course includes the learning of the key concepts of Marketing Research (Volume C) and the design of Marketing Plans (Volume D).

**Learning Outcomes:** After the completion of the course, students will be able to: understand the specialties of services, describe the additional 3Ps of the services marketing mix, define integrated marketing communications, analyze the promotion mix, design a print advertisement, describe the steps of conducting a marketing research, implement a sampling design, understand the contents of a marketing plan.

**Subjects covered:**
- Marketing Planning
- Distribution channels and Sales Management
- Industrial marketing
- Services Marketing

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**DEO34 Economic Analysis and Policy**

**Module code:** DEO34  
**ECTS Credit Points:** 20  
**Module Type:** Compulsory  
**Year:** 3rd  
**Language:** Greek  

**Module general description:** The student is introduced to the principles of Economic Analysis and Policy with special focus on Microeconomic, Macroeconomic and Public Economics Principles.

**Learning Outcomes:**
On successful completion of the Microeconomics sub module, students will be able to:
- identify the main concepts of microeconomics
- realize how individuals and firms allocate their limited resources to make themselves as well off as possible
- use the model of individual choice to examine how people react to changes in prices and income
- identify the main factors affecting the demand and supply of a good or service
- to understand why the notion of elasticity provides a convenient way of measuring the extent to which market demand responds to price and income changes
- analyze how the free market determines prices
- evaluate broad questions of government policy using the supply and demand model
- understand how economists conceptualize the process of production
- realize why the distinction between the short run and long run for firms is quite useful for studying
market responses to changed conditions
- understand how returns to scale and scale economies affect firm's efficiency
- construct the firm's cost curves
- examine the assumption that firms seek to maximize profits and making their decisions
- understand how the competitive model of supply and demand can be used to investigate a range of economic activities and policies
- understand why monopolistic and oligopolistic conditions determine the market price and lead to deadweight loss effect

On successful completion of the Macroeconomics sub module, students will be able to:
- identify the main concepts of macroeconomics
- elaborate on the methods estimating the main macroeconomic variables and to define the basic relations between them
- illustrate the alternative approaches determining national income
- analyse the main determinants of national income using private sector product demand (private consumption and investment), product demand by the public sector and the net demand from abroad
- differentiate macroeconomic equilibrium between short term, medium term and long term
- identify the main characteristics of the money market and the determination of interest rates
- determine the equilibrium in product and money markets (IS-LM)
- analyse the main determinants of the labour market
- evaluate aggregate demand, aggregate supply and analyse price level determination
- identify and analyse the functioning of monetary and fiscal policies according to various school of economic thoughts
- analyse the concept of equilibrium in foreign transactions and the way of achieving simultaneous equilibrium in the balance of payments, the domestic product and money markets (IS-LM-BP)
- identify the efficiency of economic policy in an open economy under various foreign exchange systems
- define and discuss the concepts of inflation and unemployment

On successful completion of the Principles of Public Economics sub module, students will be able to:
- understand the theoretical context which with contemporary societies approach the fundamental economic problem of "what, how, and for whom will be produced"
- understand the concept of Pareto optimization regarding production and consumption separately, as well as production and consumption simultaneously, and define the relevant optimization conditions
- define the two fundamental theorems of Welfare Economics
- understand the reasons behind the inabilities and imperfections of the free market system, as well as the public sector functions and operations in order to cure these market failures
- define the concept and the categorization of externalities
- understand the effects of externalities on allocative efficiency in production and/or consumption and analyze the policies for correcting externalities
- define the concepts of, pure and non pure, public goods and their distinction from private goods
- understand the inefficiencies emerging from the private and/or public provision of non pure public goods and analyze the policies for correcting those inefficiencies
- determine the reasons for public provision of private goods as well as the problems of public enterprises
- discuss and analyse the main arguments for and against income distribution and redistribution
- define the characteristics, and classifications of various taxes, taxation systems, and the concepts of tax avoidance and tax evasion
- analyze the concepts of tax burden and its distribution, and the various types of economic agents reactions towards taxation
- analyse the economic effects of taxation on the individual and corporate decisions to invest and save, and also its effects on labour market outcomes
- define the concepts of state budget, primary public deficit and primary public surplus and analyse their economic consequences

Subjects covered:
1. Microeconomics
2. Macroeconomics
3. National Accounts and the structure of Greek Economy
4. Principles of Public Economics
5. International Economic Environments

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**DEO40 Administration of Businesses and Organizations**

**Module code:** DEO40
**ECTS Credit Points:** 20
**Module Type:** Compulsory
**Year:** 4th
**Language:** Greek

**Module general description:** Short description of the module: The main purpose of this module is to analyze key issues of management and organization of corporations and organizations, namely:
- The formulation of business strategy
- Organization, planning and controlling of projects
- The study and analysis of organizational theory and of the behavior of individuals within an organization
- The study and analysis of international business and of the role and operation of multinational corporations

**Learning Outcomes:**

On successful completion of the STRATEGIC MANAGEMENT sub module, students will be able to:
- define the concept of strategy and analyse its utility in corporations.
- distinguish the ways through which corporate strategy may be formulated.
- analyse the dimensions of macro and micro external environment as well as of internal environment of corporations.
- analyse the internal and external environment of corporations through rational planning towards the formulation and realisation of a strategy.
- illustrate the way of determination of corporate mission statements.
- formulate appropriate corporate strategies.
- evaluate strategic moves of corporations.
- identify the differences among the levels of strategy.
- distinguish the main options of corporations at corporate level and compare their advantages and disadvantages.

On successful completion of the MANAGEMENT OF MULTINATIONAL CORPORATIONS sub module, students will be able to:
- define the concepts Multinational Corporation and Direct Foreign Investments.
- determine the reasons why corporations go global and the factors affecting their activities.
- distinguish the different types of Direct Foreign Investments and the different ways of penetration in foreign markets.
- analyse the elements of external environment which Multinational Corporations should take into consideration in the formulation of their corporate plans.
- discuss the evolution of the main theories regarding International Trade and Direct Foreign Investments estimate the role of Multinational Corporations in International Trade.
- distinguish the types of subsidiaries, the types of organisational structure of Multinational Corporations and the characteristics of global production strategies.
- discuss how the current investment landscape has been formed, the main regional economic integration organisations and the main international trade agreements.
- evaluate the benefits and negative implications of the activities of Multinational Corporations in host countries and in countries of origin.

On successful completion of the PROJECT MANAGEMENT sub module, students will be able to:
- define the concepts programme, project, sub-project, activity and labour and distinguish the differences among them.
- define project management and discuss the life cycle of a project.
- discuss the breakdown structures of projects and explain their advantages and disadvantages.
- apply the following methods of project planning and control: Gantt charts, progress curves, matrix schedules, horse blankets, lines of balance and Graphical Evaluation & Review Technique (GERD).
- apply the following methods of network analysis: Critical Path Method (CPM), Metra Potential Method (MPM) and Program Evaluation and Review Technique (PERT).
- explain and apply scheduling of resources with time or resource constraints as well as optimisation techniques in scheduling.
- explain and apply schedule and financial control techniques in project management.
- analyse the budget of a project and explain the cost progress.
- identify the operation and the limitations of project management information systems in decision-making.

On successful completion of the ORGANISATIONAL THEORY AND BEHAVIOUR sub module, students will be able to:
- define the concept of Organisational Behaviour and analyse its significance in contemporary organisations.
- discuss the main elements of Organisational Theories and evaluate their potential applications in modern management.
- employ System Theory in studying organisations.
- discuss the main elements of individual behaviour and the role of the causes which determine it.
- define the concept of Communication and determine the capabilities which are required for effective interpersonal communication as well as the barriers which may be encountered.
- determine the reasons for the formulation of groups in organisations as well as the factors which contribute to their effectiveness.
- analyse the process of conflicts and determine ways for their resolution.
- distinguish the concepts Management and Leadership and discuss the methodological approaches regarding the study of Leadership.
- define the concept of Organisational Culture and discuss its creation process.
- define the concepts Ethics and Business Ethics and analyse the importance of ethical behaviour challenges in organisations.

**Subjects covered:**
1. Strategic management
2. Business plan
3. Project management
4. Administration of multinational enterprises

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**DEO41 Money and Capital Markets**

**Module code:** DEO41

**ECTS Credit Points:** 20

**Module Type:** Compulsory

**Year:** 4th

**Language:** Greek

**Module general description:**
- Those mechanisms that crucially determine the returns as well as the associated risks of available investment opportunities within a globalized banking and financial environment.
- The basic principles governing the investment theory and analysis, the types of available investment instruments, such as those related to the portfolio theory and analysis, and, finally, their differences in terms of their effective operation.
- The mechanisms as well as the financing instruments available for business corporations and domestic and international organizations which highly assist CEOs in reaching rational decisions and strategies, and, thus, contributing to higher corporate values and related stock prices.
- The mechanisms that enhance the efficacy of money and capital markets through the alleviation of systematic risk which is mainly attributed to high volatile interest rates, exchange rates, commodity prices, and, finally, stock prices.
Learning Outcomes:
Knowledge and understanding
On successful completion of the module, students will be able to:
- Understand the operations of the major groups of financial institutions within the global financial system and appreciate the broad nature of the financial services and products that they offer
- Explain the role that money and capital markets as well as institutions play in financial intermediation
- Effectively communicate financial information as it relates to the global financial system

Intellectual skills: application
On successful completion of the module, students will be able to:
- Apply models in the money and capital markets to assess the potential of investments in the real world
- Discuss the nature of money and capital markets as well as money and capital market instruments
- Appreciate the regulatory framework within which financial institutions and financial markets function

Intellectual skills: analysis and evaluation
On successful completion of the module, students will be able to:
- Compare the various theories and models in the money and capital markets to assess what approach can bring them closer to the world of finance and investments
- Discuss the causes and consequences of the recent financial crisis and the various official responses around the world
- Contrast the current crisis with previous crises
- Explain certain economic and financial events and case studies from the real world
- Have the ability to identify and evaluate the forces of change facing financial institutions and to appraise the alternative development strategies which may be pursued
- Analyze the impact of regulatory framework upon the operations and strategy of financial institutions

Subjects covered:
- International Money and Capital Markets
- Securities and Stock Market Investments
- Corporate and Organisations Finance
- Credit Institutes and Risk Management

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

DEO42 Total Quality and Environmental Management
Module code: DEO42
ECTS Credit Points: 20
Module Type: Optional
Year: 4th
Language: Greek

Module general description: The main purpose of this module is to present,
1. The practical dimension of Total Quality Management.
2. The main concepts and practices of quality control and quality assurance standards.
3. The basic principles of natural resources management and optimization of conditions for their exploitation
4. The modern operational methods to address environmental problems.

Learning Outcomes:
Volume A
Upon successful completion of the subject of the TOTAL QUALITY MANAGEMENT in the DEO42 module, students are expected to be able to:
1. Recognize the strategic importance of the adoption of Total Quality Management by businesses and organizations.
2. Appreciate the critical success factors for the successful adoption of Total Quality Management in relation to the problems and the needs of organisations and businesses.
3. Use beneficially the quality standards and the quality awards as means for constant quality improvement.
4. Determine quality processes, measurements and inspections for quality improvement.
5. Apply benchmarking for comparative analysis to determine the needs for improvement.
6. Rectify problems and interpret the cause for possible failures.
7. Determine targets, design and implement new improvement procedures in businesses and organisations.
8. Identify quality costs and estimate the cost of simple quality improvement programs.
9. Understand the change in mentality required for the deep and wide adoption of the Total Quality Management paradigm in the businesses/organisations where they are or will be employed.

Volume B
Upon successful completion of the subject QUALITY CONTROL AND QUALITY ASSURANCE STANDARDS of the module DEO42, students will be able to:
1. Define what Quality Control is and which its main principles are.
2. Classify the quality cost in main categories and subcategories and assess the cost of simple quality programs.
3. Report and interpret the sampling errors types and describe the principles of the operating characteristic curve.
4. Understand what the Average Outgoing Quality is and how it is calculated, and the capacity of a production process.
5. Understand what the Statistical Process Control is, when it can be used, and what are the best known graphs.
6. Understand the basic principles of Taguchi theory.
7. Define what quality assurance is and identify the differences with quality control.
8. Define what the standards of quality are and describe the use of the ISO 9000 standards.
9. Describe indicative quality assurance standards and their main principles.
10. Understand the steps in developing and certifying a quality system, detailing its key strengths and weaknesses.

Volume C
Upon successful completion of the subject of the MANAGEMENT OF NATURAL RESOURCES in the DEO42 module, students are expected to be able to:
1. Organize natural resources in certain groups with common characteristics and understand the depletion and degradation problems they face depending on the group to which they belong.
2. Understand the basic principles used in natural resource economics.
3. Assess the economic efficiency of an environmental friendly business.
4. Evaluate policies adopted by businesses which promote environmental friendly decisions.
5. Understand the natural resources integrated management.
6. Estimate the effectiveness of activities and works aiming to protect and enhance the natural resources.
7. Advise businesses, organizations and public authorities in the decision-making process for the management and protection of natural resources.

Volume D
Upon successful completion of the subject of the STRATEGIC MANAGEMENT AND STRUCTURAL CHANGES in the DEO42 module, students are expected to be able to:
1. Understand the concept of strategy.
2. Manage the decision making process.
3. Understand the importance of knowledge, learning and thinking of every person, company or organization anticipating growth and prosperity.
4. Describe the content of strategic decisions, the tasks of strategic management and hierarchical levels of strategy.
5. Understand the meaning of organisational stakeholders and how their expectations shape strategy.
6. Identify the main factors affecting the external and internal environment of an enterprise.
7. Recognize the dynamic allocation of resources and skills that shape organisational capabilities and can be a source of competitive advantage.
8. Perceive the influence of business identity and culture on a company's strategic management.
9. Identify the main cultural factors that influence strategic management as well as the characteristics of the Greek culture that influence both the behavior and the organizational context of Greek enterprises.

Volume E
Upon successful completion of the subject of the ENVIRONMENTAL MANAGEMENT in the DEO42 module, students are expected to be able to:

1. Identify and analyze environmental problems using Operations Research as a tool for decision making and understand the relationship between the supply chain and the environmental chain.
2. Comprehend the importance of eco-design and eco-labeling of products.
3. Understand the concept of life cycle analysis and carry out simple life cycle assessment studies.
4. Know and be able to explain the features of reverse logistics and design simple reverse logistics systems.
5. Appreciate the importance and know the key features of the environmental management systems.
6. Identify and analyze the causes and implications of environmental problems and propose the best solution using simple techniques.
7. Apply environmental management methods and techniques and carry out simple technical environmental/economic studies.
8. Evaluate environmental policies of businesses, organizations and public authorities.
9. Understand the causes and consequences, including economic impacts, of climate change and be able to propose / evaluate mitigation and adoption policies.

Subjects covered:
- Total Quality Management
- Quality Control and Quality Assurance Standards
- Strategic Restructuring of Enterprises and Organisations
- Environmental Management

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

DEO43 Industrial Organization, Labour Economics and European Business
Module code: DEO43
ECTS Credit Points: 20
Module Type: Optional
Year: 4th
Language: Greek

Module general description:
The main purpose of this module is to present the basic principles of the theory of industrial organization, economics of labor and collective bargaining and finances of European companies. In particular, the Industrial Organization presents the topics: theory of production, theory of imperfect markets, market power, market pricing in oligopolistic markets, price discrimination, product differentiation, barriers to entry in a market.

In particular, the Labor Market presents the topics: institutional framework of the labor market, labor supply, labor demand, determination of wage labor, human capital, immigration, labor unions, wage differentials, unemployment, income distribution, economic policy.

In particular, the European Business presents the topics: international economic relations, principles of multinational enterprises, the European business environment and the steps towards European integration, the path towards the European Union (EU), EU competition policy, the EU social policy, the single market and single currency, foreign direct investment in the EU, SMEs in Greece and the EU, entrepreneurship in Greece and the EU

Subjects covered:
- Theory of Industrial Organization,
- Labor economics and collective bargaining
- Economics of European Business

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

SCHOOL OF SOCIAL SCIENCES
POSTGRADUATE COURSES
Description
This Master's Degree Course aims at helping individuals develop the necessary skills and knowledge in order to become effective managers in businesses and organizations. It aims at developing students' ability to evaluate and analyse external and internal data and strategic decision-making in any business environment. Upon completion of this Course, students will:
- have developed a wide range of administrative abilities and operational techniques
- have increased their confidence in evaluating and analysing complex business matters and decision making
- have developed cooperative problem solving skills and will be able to enable students to communicate orally and in writing as managers with potential colleagues
- have the ability to work under pressure to tight deadlines
- have the ability to undertake independent applied research and submit a research thesis
- have developed sensitivity to different cultures, ability to work in international teams

LEARNING OUTCOMES:
- On successful completion of the MBA course, students will be able to,
- Understand the global economy and analyze the ever changing international economic environment that surrounds modern business.
- Employ a modern economic framework for analyzing a variety of problems that managers face in today's business environment.
- Understand the operational environment of the European Union and analyze how various organizations operate within it.
- Understand the theory and techniques of financial accounting and evaluate the present financial position of firms.
- Understand the time value of money concept, capital budgeting and the cost of capital.
- Understand the main issues concerning the management of investments and modern portfolio theory.
- Use quantitative methods in business problems and analyze them with economic and business models.
- Employ analytic methods that managers use in a wide variety of decision situations.
- Understand the nature of complex organizations and the basic functions of management.
- Develop the necessary skills to manage people effectively within an organizational context and develop an understanding of organizational effectiveness.
- Analyze and manage the organizations' markets in order to pursue a competitive advantage.
- Emphasize the strategic and coordinating role of a management executive.
- Make use and combine methodologies and tools for shaping, implementing and evaluating strategic plans.

SUBJECTS COVERED:
Economics for Managers
- International Economic Environment
- Managerial Economics
- European Business
Financial Management & Accounting
- Corporate Finance
- Financial Accounting
- Investment Analysis & Portfolio Management
- Financial Statement Analysis
Advanced Quantitative Methods for Managers
- Advanced Quantitative Analysis
- Economic and Business Modelling
- Decision Making
Management of People & Organisations
- Management
- Human Resource Management
- Marketing Management
- Strategic Management

Requirements
Applicants to the Master in Business Administration course must possess an undergraduate degree from a Greek Public University, a Technological Educational Institute or an equivalent degree. The equivalency to a Greek University Degree is recognized by the Hellenic NARIC (Hellenic National Academic Recognition and Information Center / DOATAP), which verifies the validity and equivalence of the acquired degree with those awarded by Greek institutions of higher education. Applicants must possess documents issued by DOATAP. A list of recognised degrees is available from DOATAP, and a prerequisite course list for applicants to HOU courses may be given by the HOU’s registration department.

All candidates must provide evidence of their English language ability. Those who haven’t received their degree from the UK, the USA, Canada, Australia, New Zealand or Ireland must provide a certified copy of a satisfactory result from one of the following:
- Certificate in Advanced English (University of Cambridge local examinations Syndicate (UCLES), British Council)
- Advanced Level Certificate in English (ALCE), University of Michigan, HAU
- Certificate in Advanced Communication, Edexcel International London Examinations, University of London, Palso
- Test of English for International Communication (TOEIC), Educational Testing Service/Chauncey, USA (score of 785 required)
- Test of English as a Foreign Language (TOEFL), University of Michigan, HAU (score of 200 required)
- International English Language Testing System (IELTS), University of Cambridge Local Examinations Syndicate (UCLES), British Council (score of 6,5 required)
- The British Council - IDP Education Australia IELTS Australia (score of 6.5 required)
- Business English Certificate - Higher, University of Cambridge Local Examinations Syndicate (UCLES), British Council
- ‘Kratiko Pistopiitiko Glossomathias’ State Certificate of Language Proficiency Advanced / C1 level.
- any qualification recognized as equivalent to these.

Minimum study duration
3 years

ECTS credit points
120

Learning Material
Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise.
Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

Contact
Registry
Tel.: 2610 367341 - Fax: 2610 367348 - e-mail: mba@eap.gr
Call Centre for General Inquiries
Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr
Course Structure

1st Year
MBA50 Economics for Managers
MBA51 Financial Management & Accounting

2nd Year
MBA60 Advanced Quantitative Methods for Managers
MBA61 Management of People & Organisations

Dissertation

Course Modules

**MBA50 Economics for Managers**

*Module code:* MBA50  
*ECTS Credit Points:* 24  
*Module Type:* Compulsory  
*Year:* 1st  
*Language:* English

**Module general description:** The module material is organised under three broad thematic sub modules: International Economic Environment, Managerial Economics and European Business.

**International Economic Environment**
The purpose of this thematic sub module is first to provide students with the necessary tools to understand the global economy, and second to equip them with the means of analyzing the ever changing international economic environment that surrounds modern business. A good understanding of international economics will facilitate managers in making the right business decisions to protect their businesses, e.g., from exchange rate fluctuations or from tariff measures, and will also allow them to compete successfully in the international arena by improving their business opportunities.

More specifically, this thematic part will cover the following topics:
- Theory of International Trade (Ricardo model, Income Distribution, Heckshor-Ohlin model, international movements of factors of production),
- International Trade Policy (instruments of trade policy, Strategic Trade Policies in Developed and Developing Countries)
- Exchange Rates and the Open Economy Macroeconomics (Exchange rates and foreign exchange market. Money, Interest Rates and Exchange Rate) and
- International Macroeconomic Policy (the International Monetary System, Optimal Currency Areas, Global Capital Markets).

**Managerial Economics**
This thematic sub module provides a modern economic framework for analyzing a variety of problems that managers face in today's business environment. It has been designed to show how economic theory can be applied in business situations and to familiarize students with the most recent economic literature on decision making under uncertainty. Upon completion of this module students will be able to:
- Understand how economics can be applied to the analysis of enterprise policy.
- Understand and assess the role of economic concepts to improve operational decision making.
- Evaluate rigorously the effects of the macroeconomic environment in business and how businesses respond to macroeconomic trends.
- Understand the link between economic analysis and principles of financial firms.

**European Business**
This thematic sub module examines the operational environment of the European Union and analyzes how various organizations operate within it. It considers the rapid political and socioeconomic changes and the impact of the operational environment on EU policies. The European business environment is
also significantly affected by external influences such as trade relations with the thematic parted States and Japan, and Foreign Direct Investment. The objective of the module is to equip students with knowledge and understanding of the process of EU integration from an economic and social perspective and to provide them with the necessary tools for the analysis of the changing European business environment. Upon completion of the module students will be able to examine rigorously the European Business environment in which companies operate, assess the impact of EU policies on European companies, analyze and evaluate business strategies and performance within a dynamic market. **Learning Outcomes:** On successful completion of the MANAGERIAL ECONOMICS sub module, students will be able to,
- Recall and recognize how the business environment (technology, the status of competition, and regulation in input/output markets) affects a firm's choice of strategy.
- Differentiate analytical frameworks and theories to compare different business environments.
- Apply analytical frameworks and theories to analyze how a firm's pricing decisions can be optimally taken.
- Evaluate how strategy and the business environment together drive the firm's choice of organizational design.
**On successful completion of the INTERNATIONAL ECONOMIC ENVIRONMENT sub module, students will be able to:**
- Understand the basic analytical concepts and tools of international economics
- Recognize what determines the pattern of production and international trade
- Apply analytical frameworks and theories to analyze the gains obtained and losses incurred for countries involved in international factor mobility
- Identify the role of the balance of payments and its components
- Differentiate analytical frameworks and theories related to exchange rate determination

**On successful completion of the EUROPEAN BUSINESS sub module, students will be able to:**
- Describe the driving forces of European Economic Integration
- Identify the main issues of the EU
- Reflect on the main EU policies
- Evaluate the determinants and effects of foreign direct investment (FDI) in the EU

**Subjects covered:**
- International economic environment
- Managerial economics
- European business

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**MBA51 Financial Management & Accounting**

**Module code:** MBA51  
**ECTS Credit Points:** 24  
**Module Type:** Compulsory  
**Year:** 1st  
**Language:** English

**Module general description:** The module material is organised under four broad thematic sub modules: Financial Accounting, Financial Statement Analysis, Corporate Finance and Investment Analysis and Portfolio Management.

**Financial Accounting**

The objective of this sub module is to help students to develop an understanding of the theory and techniques of financial accounting. After completing this thematic sub module, students will be expected to be able to: a) understand the framework of financial accounting in the context of the basic tools used (journal, general ledger and trial balances), b) demonstrate an understanding of the basic double-entry accounting by correctly journalizing transactions, making adjusting entries, and making closing entries and c) prepare and present the financial statements of companies (balance sheet and income statement).

**Financial Statement Analysis**
Financial statement analysis aims to evaluate the present financial position of a firm. In doing so it usually employs two tools: ratios analysis, and sources and uses of funds analysis. The results of the financial analysis should be interpreted in the light of the financial life cycle theory of the firm. Additionally, these results should be related to the economy, and the industry in which the company operates (top-down analysis). After completing this thematic sub module, students will be expected to be able to assess the financial position, performance and cash flow of companies using financial statements and based on the analysis of financial statements to recommend alternative appropriate courses of action to remedy operating and financial problems.

Corporate Finance
Following an introduction to financial management the thematic sub module examines the time value of money concept, capital budgeting and the cost of capital. In introducing financial management the course examines the maximization of shareholders’ wealth as the primary objective of financial management. In turn the functions of financial management, namely the investment decisions and the financing decisions are discussed. Finally, students obtain an idea of (a) some of the forces that affected financial management in the past; (b) the place finance has in a firm's organization; and (c) the relationships financial managers have with their counterparts in the accounting, marketing, and production departments. After completing this thematic part, students will be expected to be able to evaluate the role of the Corporate Finance Manager and its main links to business objectives, understand the concept of the time value of money, demonstrate the ability to evaluate investment decisions using a variety of appraisal techniques, analyse the main sources of debt finance, examine the factors that determine a company's dividend policy and describe and calculate the cost of capital for a business.

Investment Analysis and Portfolio Management
The aim of the present thematic sub module is to present and analyze the main issues concerning the management of investments and modern portfolio theory. In doing so, the main money and capital markets products are analyzed along with the methods developed for estimating their fair fundamental value. Furthermore, the main theoretical models that have been developed in the area of portfolio management that tackle the relationship between risk and expected return are presented. Finally, the process of evaluating and restructuring an investment portfolio is examined. After completing this thematic sub module, students will be expected to be able to: a) state a wide variety of financial securities found in equity, fixed income and derivatives markets, b) explain the theoretical foundations, and make use of the widely used asset pricing theories and portfolio management techniques and c) describe the main methods of valuing a company.

Learning Outcomes:
On successful completion of the FINANCIAL ACCOUNTING sub module, students will be able to:
- Understand the framework of financial accounting
- Demonstrate understanding of basic double-entry accounting by correctly journalizing transactions, making adjusting entries, and making closing entries
- Prepare and present the financial statements of companies

On successful completion of the FINANCIAL STATEMENT ANALYSIS sub module, students will be able to:
- Assess the financial position, performance and cash flow of companies using financial statements
- Recommend alternative appropriate courses of action to remedy operating and financial problems based on the analysis of financial statements

On successful completion of the CORPORATE FINANCE sub module, students will be able to:
- Evaluate the role of the Corporate Finance Manager and its main links to business objectives
- Understand the concept of the time value of money and be able to use basic time value concepts.
- Demonstrate the ability to evaluate investment decisions using a variety of appraisal techniques.
- Analyse the main sources of debt finance
- Examine the factors that determine a company's dividend policy
- Describe and calculate the cost of capital for a business

On successful completion of the INVESTMENT ANALYSIS AND PORTFOLIO MANAGEMENT sub module, students will be able to:
- State a wide variety of financial securities found in equity, fixed income and derivatives markets.
- Explain the theoretical foundations, and make use of the widely-used asset pricing theories and
portfolio management techniques.
- Describe the main methods of valuing a company.

**Subjects covered:**
- Corporate finance
- Financial accounting
- Investment analysis & portfolio management
- Financial statement analysis

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

---

**MBA60 Advanced Quantitative Methods for Managers**

**Module code:** MBA60  
**ECTS Credit Points:** 24  
**Module Type:** Compulsory  
**Year:** 2nd  
**Language:** English

**Module general description:** The module material is organised under three broad thematic sub modules: Advanced Quantitative Analysis, Economic and Business Modelling and Decision Making.

**Advanced Quantitative Analysis**
The objective of the first thematic sub module is to provide the general framework of quantitative methods and their application in business applications. It will help students who do not necessarily have an extensive mathematics background to understand how statistical tools and techniques are applied. It provides students with an overview of descriptive statistics, probability and probability distributions, inferential tools and regression analysis, while special attention is given to the application of statistical methods to business applications.

**Economic and Business Modelling**
The scope of the second thematic sub module is to provide an overview of the relationship between two or more variables when analyzing a business problem. It will help students to understand how a model is built up, how it is specified, how it is estimated and finally how it is tested using diagnostic tools which test how well a specified model fits the data. These models, also called econometric models, are extensively used to describe the relationships among the aggregates of an economy. On the other hand, many business problems involve analyzing the relationships among three or more variables, and these relationships may be nonlinear.

**Decision Making**
The third thematic sub module describes the analytic methods managers use in a wide variety of decision situations. Sometimes they encounter a decision situation in which they can be certain of the outcome of each alternative. This type of decision environment is termed a certainty environment. However, in most business decisions the decision maker does not know what outcome will occur when an alternative is selected. This type of decision environment is termed an uncertainty environment. When managers are faced with choices between two or more options in a business situation, they are required to make a decision. This thematic part explains how the criteria on which the decision is to be made can be established.

**Learning Outcomes:**
On successful completion of the ADVANCED QUANTITATIVE ANALYSIS sub module students will be able to:
- Understand key concepts for quantifying and managing information in business and management problems
- Perform computer-aided data analysis using MS Excel or relevant statistical software
- Analyze data skillfully in the context of assignments and the final project
- Understand the more advanced techniques of the next modules

On successful completion of the ECONOMICS AND BUSINESS MODELLING sub module students will be able to:
- Understand how a model which describes the relationship between variables is specified according to
the underlined economy theory which distinguishes the dependent variable from the independent ones
- Apply appropriate statistical techniques, both simple and more advanced, to estimate the model
- Analyze the computer output and interpret the results
- Incorporate qualitative variables into a regression model by using dummy variables
- Understand how a simultaneous equation model is specified and estimated
- Use the estimated model for forecasting purposes
- Evaluate the forecasting performance of the model

On successful completion of the DECISION MAKING sub module students will be able to:
- Describe the decision-making principles of certainty and uncertainty
- Explain the difference between choices based on utility and choices based on revealed preference
- Apply the decision making techniques with multiple criteria and understand how the individual criteria are weighted
- Construct a payoff table and an opportunity-loss table
- Apply the expected value criterion in business decision situations
- Compute the cost of uncertainty and value of perfect information
- Develop a decision tree and learn how it can aid decision making in an uncertain situation.

Subjects covered:
- Advanced quantitative analysis
- Economic and business modelling
- Decision making

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

MBA61 Management of People & Organisations
Module code: MBA61
ECTS Credit Points: 24
Module Type: Compulsory
Year: 2nd
Language: English

Module general description: The module material is organised under four broad thematic sub modules: Management, Human Resource Management, Marketing Management and Strategic Management.

Management
The objective of this thematic sub module is to help students understand the nature of complex organizations and the basic functions of management. It shows the link between management concepts, organizational behavior and business functions and provides students with the concepts and techniques they need to acquire as managers in today's organizations. The topics covered include an overview of management, the nature and purpose of planning in organizations; organizing human resources; directing, leading and motivating employees; and the role of control in the management process.

Human Resource Management
The objective of this thematic sub module is to provide students with the knowledge, insight and skills necessary to manage people effectively within an organizational context and to develop an understanding of organizational effectiveness. The module identifies the factors and forces that managers confront both internally and externally in the organization regarding its existing and potential human resources and helps students develop an understanding of the nature of decision-making involved in HRM. The topics covered include an overview of HRM in organizations; staffing and organizing human resources; performance management; training and career development; the scope and structure of compensation practices; and the role of labor unions and collective bargaining.

Marketing Management
The objective of this thematic sub module is to equip students with the theoretical understanding and practical skills to analyze and manage the organizations' markets in order to pursue a competitive advantage. It shows how companies create value for their customers and build strong customer relationships in order to capture value from them in return. The topics covered include an overview of
marketing in the new economy, the analysis of a company's macro- and sectoral environment; the
development, positioning and management of market offering; the management of marketing channels;
pricing strategies; advertising; and the management of sales forces.

Strategic Management
The objective of this thematic sub module is to integrate knowledge from the previous thematic sub
modules and to emphasize the strategic and coordinating role of a management executive. Therefore
this is an important area since it concerns the manifestation of policies and strategies for the entire
organization. Students learn to assess strengths, weaknesses, opportunities and threats, as well as the
competitive advantages and disadvantages related to companies and industries. Furthermore, students
comprehend an organization's internal conflicts and external pressures in dynamic organizational
settings. Students are taught how to implement analytical and decision making skills in various
organizational structures. Other topics covered also include strategic choices, change, international
strategy and systems' dynamics.

Learning Outcomes:
On successful completion of the MANAGEMENT sub module, students will be able to:
- Understand the evolution of management thinking
- Analyze the global character of the environment of management
- Recognize the importance of business ethics and social responsibility
- Understand the functions of management (planning, organizing, staffing, leading, controlling) and
  apply relevant tools and techniques
- Analyze the role of quality, value chain and information technology to the performance of organizations
- Implement techniques and tools in different business settings
On successful completion of the HUMAN RESOURCES MANAGEMENT sub module, students will be
able to:
- Analyze and understand the human resource environment
- Apply techniques and tools for acquisition and preparation of human resources
- Understand the role of assessment and development of human resources
- Explain the importance of compensation of human resources and apply the relevant tools and
techniques
- Understand the global dimension of human resource management
- Recognize the strategic aspect of human resource management
On successful completion of the MARKETING MANAGEMENT sub module, students will be able to:
- Define marketing and the marketing process
- Understand the marketplace, the customers and their behavior and needs
- Design a customer-driven marketing strategy and marketing mix
- Explain the role of marketing to creating competitive advantage
- Understand the role of ethics and social responsibility in the global marketplace
- Apply relevant tools and techniques
On successful completion of the STRATEGIC MANAGEMENT sub module, students will be able to:
- Understand what is strategy and why does it matter
- Analyze the managerial process of crafting and executing company strategies
- Apply concepts and analytical tools for evaluating a company's situation
- Understand the ethical and socially responsible dimensions of company strategies
- Apply managerial keys to successfully executing the chosen strategy

Subjects covered:
- Management
- Human resource management
- Marketing management
- Strategic management

Evaluation: Completion of four written assignments during the academic year, the average grade of
which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive
examination. Final exam grades constitute a 70 percent of the students' final course grade.

Health Care Management MSc
Description
This course offers students the managerial knowledge required to effectively and efficiently manage today's dynamic health care units and centres and enhances their skills to meet future employment needs in central and regional services of the National Health System both in the Public and Private Sector.

Requirements
Applicants to the Health Care Management course must possess an undergraduate degree in a related field from a Greek Public University, Technological Educational Institute or an equivalent degree. The equivalency to a Greek University Degree is recognized by the Hellenic NARIC (Hellenic National Academic Recognition and Information Center / DOATAP), which verifies the validity and equivalence of the acquired degree with those awarded by Greek institutions of higher education. Applicants must possess documents issued by DOATAP. A list of recognised degrees is available from DOATAP, and a prerequisite course list for applicants to HOU courses may be given by the HOU's registration department.

Graduates of Technological Educational Institutes must have a two year work experience within Greek Private or Public Health Care System Services, or Pharmaceutical companies to the draw date. Holders of university degrees in different fields must have a four year work experience within Greek Private or Public Health Care System Services, or Pharmaceutical companies to the draw date. All candidates must provide evidence of their ability in a foreign language, preferably English.

Minimum study duration
3 years

ECTS credit points
120

Learning Material
Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise. Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

Contact
Registry
Tel.: 2610 367361 - Fax: 2610 367350 - e-mail: dmy@eap.gr

Call Centre for General Inquiries
Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr

Course Structure

1st Year
DMY50 Basic Principles of Administration and Management of Health Care Services
DMY51 Health Care Services / Hospitals: Peculiarities and Challenges

2nd Year
DMY60 Economic and Financial Management of Health Care Services
DMY61 Sociological and Psychological Approach of Hospitals / Health Care Services

DISSERTATION

Course Modules
DMY50 Principles of Health Services Management

Module code: DMY50
ECTS Credit Points: 24
Module Type: Compulsory
Year: 1st
Language: Greek

Module general description: The objectives of this module are,
- to familiarize students with basic management principles at a theoretical and a practical level,
- to determine the nature and the specificity of the challenges associated with managing health services, and in particular hospitals,
- to provide students with the opportunity to face specific managerial issues and problems (via case studies, exercises, etc.)

Learning Outcomes: On successful completion of the module, students will be able to,
1. Comprehend the definitions, the importance, and the basic functions of management, and to recognize the evolution of management approaches, over time, to their current state.
2. Understand the main types of healthcare organizations and to discuss their basic organizational features.
3. Explain the meaning, the significance and the types of planning as well as of the planning process with examples from the healthcare services domain.
4. Comprehend the meaning, the significance and the types of organizing as well as of the departmentalization process and to analyze an organization chart from a health care facility.
5. Understand the meaning and the importance of human resource management together with its basic operations (personnel planning, job analysis, recruitment, assessment, education and development, wages and compensation) with examples from the healthcare sector.
6. Recognize operational problems in the field of healthcare services, distinguish between and compare planned and unplanned decisions, decision-making levels and decision making.
7. Explain why communication is essential to management of healthcare units and provide examples of the communication process and of the types of formal and informal communication.
8. Give a definition of leadership, describe its basic characteristics and theories as well as to use Blake & Mouton's management grid for healthcare organizations.
9. Describe the relationship between motivation and performance in healthcare organizations and comparatively assess the basic theories of motivation for their applicability in healthcare professionals.
10. Define and explain the need for control, the types of control and its process as well as possible side effects of control in a healthcare environment.
11. Comprehend the different categories of healthcare professionals, their human-geography as well as the main educational institutes which produce healthcare professionals.
12. Understand the specific nature and characteristics of healthcare services and hospital administration.
13. Comprehend and recognize the role and the significance of hospital administration in terms of the healthcare service delivery as well as the educational, research role of the hospital.
14. Understand the socioeconomic aspects of healthcare organizations within a social and economic context but also in terms of the relation between healthcare professionals and the patients.
15. Explain the distinctive nature of "health" as a "public good" and discuss how "healthcare services" operate in mixed economies, in relation to the factors determine demand and supply.
16. Inter-relate healthcare and healthcare systems with the broader social and political issues at an international level.
17. Understand key historical periods and key points of the historical development of healthcare systems and services in Greece, with emphasis on the establishment of the National Health System (NHS) and the subsequent reforms.

Subjects covered:
- Management and Health
- Planning - Programming
- Human resources management
- Decision Making
- Communication. Leadership, Motivation, Controlling and its application in health services

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

---

**DMY51 Health Care Services / Hospitals: Peculiarities and Challenges**

**Module code:** DMY51  
**ECTS Credit Points:** 24  
**Module Type:** Compulsory  
**Year:** 1st  
**Language:** Greek  

**Module general description:** The objectives of this module are,
- presenting the economic, institutional and social environment that composes the overall framework for the operation and the involved actions of healthcare services
- defining those critical issues that reflect upon the economic, administrative and legal levels that govern healthcare services (both current and future ones)
- presenting the basic principles underlying the structure and best-practice of healthcare services, as well as, discussing the evolution of the structure and operation of healthcare services in Greece
- putting suitable emphasis on the general notion of healthcare quality and healthcare service improvement while discussing the involved intra- and extra-service burdens and limitations

**Subjects covered:**
- Health: Definitions, Limitations and perspectives
- Health Policy / Social policy / social security and insurance
- Structure and function of health services
- Structure and function of the Hellenic Health System (administrative and legal aspects)
- Ethical and deontological dimensions of Health

The notion of quality in health services / evaluating quality
- Health Care Services / Hospital Management: Experiences, tendencies and perspectives.
- Health economics and health policy

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

---

**DMY60 Health care financing and financial management**

**Module code:** DMY60  
**ECTS Credit Points:** 24  
**Module Type:** Compulsory  
**Year:** 2nd  
**Language:** Greek  

**Module general description:** This module aims,
- To explain the idiosyncratic nature of health care services
- To analyze and assess alternative methods of financing and provider reimbursement
- To provide an understanding of the notion of efficiency and its measurement in health care organizations
- To analyze hospital financial statements
- To discuss the methods of economic evaluation of health care programs
- To present the methods of priority setting in health care

**Learning Outcomes:** Upon completion of this module, students will be able to,
1. Distinguish the causes and consequences of market failures in the health care sector and evaluate the available government policies to tackle the resulting problems
2. Analyze the motives that patients, third-party payers and suppliers have in different health care settings due to the organization and financing systems in effect
3. Synthesize the acquired knowledge regarding the idiosyncratic characteristics of health care and the methods of financing and apply it to evaluate different health care systems, taking into account both
theoretical argumentation and empirical evidence
4. Comprehend the basic characteristics of the Greek National Health System, identify its weaknesses and suggest effective policies
5. Understand the difficulties associated with the determination of the optimal level of health care expenditure
6. Recognize the hospital as an economic unit that utilizes inputs, which are transformed into outputs through the production process
7. Identify the various types of efficiency, realize the difficulties regarding its measurement and suggest appropriate policies for its improvement
8. Differentiate between the various methods of economic evaluation and recognize the circumstances where each can be legitimately applied
9. Apply pre-established criteria in order to evaluate existing economic evaluation research
10. Describe the aim, methods, results and conclusions of empirical research published in peer-reviewed journals
11. Understand the main features of the basic priority setting approaches and realize their strengths and weaknesses
12. Scrutinize the financial statements of health care units with the use of financial ratios
13. Describe the most common methods used to assess financial investments
14. Realise the need for a transition towards a modern accounting system in Greek public hospitals and understand the differences between single- and double-entry accounting

Subjects covered:
- The idiosyncratic nature of health care services
- Healthcare financing
- Efficiency in healthcare
- Economic evaluation and priority setting in health care
- Health care financial management

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

DMY61 Sociological and Psychological Approaches to the study of Hospitals / Health Care Services
Module code: DMY61
ECTS Credit Points: 24
Module Type: Compulsory
Year: 2nd
Language: Greek

Module general description: This module aims,
- to supplement students' knowledge and understanding of key concepts provided by the other health services management (HSM) modules
- to familiarize students with the basic concepts of sociology and psychology of health (e.g., culture and symptoms, patient-physician communication, health inequalities, chronic illness experience, preventive behaviors)
- to provide students with the necessary knowledge and understanding of research methodology and interdisciplinary collaboration to pursue independent research in the area of HSM
- to provide students with the necessary skills to apply different psychological models of preventive behavior (health belief model, theory of planned behavior, self-efficacy theory, locus of control theory)
- to develop the students' understanding of the complex skills required to take decisions on HSM issues and ensure social reconciliation and social consent
- to equip students with the theoretical and practical knowledge to solve psychosocial problems in the area of HSM and use research findings to support effective policies.

Learning Outcomes: Upon completion of the module, students will be able to,
- Apply the principles of Health Services Management (HSM) to practical problems.
- Identify and define basic terms and concepts which are needed for advanced courses in HSM (e.g., culture and symptoms, patient-physician relationship, health inequalities, social-cognition models of
health behavior, chronic illness experience, health services research methods).
- Compare and contrast the multiple determinants of preventive behavior.
- Critically analyze current research findings in the area of HSM.
- Design individualized interventions for improved quality of health care.
- Distinguish among different models of doctor-patient relationship (e.g., Talcott Parsons' sick role theory, Eliot Freidson’s approach, Szasz and Hollender model)
- Describe how culture impacts the illness experience.
- Explain the role of gender and social class disparities in quality of health care.
- Employ a bibliographical search through the web and use the appropriate research method (e.g., randomized control trial, case-control study design) to study a health care problem.
- Set up and develop a research project and write the research report.
- Evaluate the impact of interventions in the case of professional burnout.
- Outline the differences between epidemic diseases of the past and contemporary chronic diseases.
- Recognize selected doctor-patient communication strategies.
- Discuss various factors affecting patient satisfaction with consultation and hospital care.
- Assess the causes and consequences of professional burnout.
- Apply different psychological models of preventive behavior (e.g., health belief model, theory of planned behavior, self-efficacy theory, locus of control theory, protection motivation theory).
- Use key concepts regarding leadership theories, organizational behavior, group dynamics, process of group development, and conflict resolution.

Subjects covered:
- Social and Cultural aspects of health and illness
- Psychosocial Models of preventive behavior
- The Hospital as a health care institution/Doctor-patient communication
- Socioeconomic Research in health care services and the hospital setting

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

Cultural Organisations Management MSc

Description
The course offers specialized knowledge to current cultural administrators and to those planning to work in the field of cultural management.
Upon completion of the program the students should be able to:
- Master the concepts of culture, cultural industries, cultural policies and administration.
- Investigate the different tools through which cultural administration, cultural policies and cultural communication are implemented.
- Analyze trends for cultural administration, management and communication in the context of cultural institutions.
- Describe the function of the cultural economy along with the methods for cultural promotion in a digital context.
- Examine the structure of cultural institutions and the legal context in which they operate.
- Develop research skills and critical abilities in order to work as cultural managers, design cultural policies and develop financial plans and communication strategies for the promotion of cultural products and institutions.

Requirements
Applicants to the Cultural Organisations Management course must possess an undergraduate degree in a related field from a Greek Public University, a Technological Educational Institute or an equivalent degree.
The equivalency to a Greek University Degree is recognized by the Hellenic NARIC (Hellenic National Academic Recognition and Information Center / DOATAP), which verifies the validity and equivalence of the acquired degree with those awarded by Greek institutions of higher education. Applicants must
possess documents issued by DOATAP. A list of recognised degrees is available from DOATAP, and a prerequisite course list for applicants to HOU courses may be given by the HOU's registration department.

All candidates must provide evidence of their ability in a foreign language, preferably English.

**Minimum study duration**

3 years

**ECTS credit points**

120

**Learning Material**

Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise. Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

**Contact**

**Registry**

Tel.: 2610 367342 - Fax: 2610 367350 - e-mail: dpm@eap.gr

**Call Centre for General Inquiries**

Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr

**Course Structure**

**1st Year**

DPM50 Aspects of Cultural Phenomena

DPM51 Cultural Policy and Management

**2nd Year**

DPM60 Cultural Economics

DPM61 Cultural Communication

**DISSERTATION**

**Course Modules**

**DPM50 Aspects of Cultural Phenomena**

**Module code:** DPM50  
**ECTS Credit Points:** 24  
**Module Type:** Compulsory  
**Year:** 1st  
**Language:** Greek  
**Module general description:**

The aim of DPM50 is to,

- present the basic concepts of culture, cultural industries and cultural activities in Greece and in Europe.
- explore the ways in which cultural reality and cultural contexts are shaped in the Greek, European and global cultural scene.
- give the structure of cultural policy and discuss the development of cultural institutions.
- present the cultural institutional framework and discuss the development of cultural phenomena.
- explore the cultural conditions in which new trends emerge in the field of culture.
- present the cultural trends and the basic concerns regarding the role of culture in the era of digital communication.
- examine and analyse the development of cultural industries and cultural institutions in the 21st century.

**Learning Outcomes:** The learning objectives are,
- Understand the basic concepts of culture, cultural industries and cultural activities in Greece and Europe.
- Explore the ways in which the cultural reality and cultural contexts shape the Greek, European and global cultural scene.
- Consider the cultural agenda and the development of cultural industries, organizations, institutions and agencies.
- Discuss the institutional and cultural frameworks and their role in the advancement of new forms of cultural development
- Analyze new trends in the cultural environment and the role of culture in the era of digital communication.
- Develop their research skills and critical thinking.

**Subjects covered:**
- Introduction to culture
- Cultural policy framework in Europe and Greece
- Cultural education and Museology

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

---

### DPM51 Cultural Policy and Management

**Module code:** DPM51  
**ECTS Credit Points:** 24  
**Module Type:** Compulsory  
**Year:** 1st  
**Language:** Greek

**Module general description:** The aim of DPM 51 is to,
- present the basic concepts of management, strategy and administration of cultural organizations/industries.
- explore the ways in which cultural policies and cultural administration contribute toward the development of cultural organizations/industries.
- examine the formation of cultural and administrative policies.
- investigate the regulatory and legal context in which cultural administration is exercised in the context of cultural organizations.
- explore the contribution of administrators in the development and formation of strategic planning.
- discuss the most significant problems in relation to the institutions, regulation and public interest for the development of cultural policies in the context of a digital environment.
- examine and analyze the development of cultural policies and managerial planning for an effective cultural administration in the 21st century.

**Learning Outcomes:** The learning objectives are,
- Understand the basic concepts of cultural management, cultural policy and cultural administration in the era of info-communication globalization.
- Explore the ways in which the academic research for the cultural policy and administration contributes to the development of cultural institutions in the Greek, European and global cultural environment.
- Discuss the management of cultural organizations, the protection of cultural goods (product and services) and the developments of cultural activities in the information and knowledge society.
- Analyze the new treads in cultural management, administration and policy and the role of public interest in cultural activities.
- Develop their research skills and critical thinking about cultural policy, management and administration.

**Subjects covered:**
Subjects covered:
- General management and administration principles
- Cultural management and Cultural policy

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**DPM60 Cultural Economics**
**Module code:** DPM60
**ECTS Credit Points:** 24
**Module Type:** Compulsory
**Year:** 1st
**Language:** Greek
**Module general description:** The aim of DPM 60 is to,
- present the basic concepts of cultural and financial management in the context of cultural organizations/industries.
- explore the methods and the structure of cultural and financial planning.
- present the strategies/structure of financial and cultural management.
- investigate the institutional context of cultural economics, including financing strategies in the context of cultural organizations.
- explore the contribution of administrators in the development and formation of fundraising strategies.
- discuss the most significant problems in relation to fundraising techniques and cultural marketing in the digital era.
- examine the development of strategies and innovative models for the management of funds, cultural capital and donations in the context of cultural organizations/industries.

**Learning Outcomes:** The learning objectives are,
- Understand the basic concepts of cultural and economic issues in cultural organisations.
- Explore the ways in which the academic research for the cultural economy and the cultural goods (product and services) contributes to the development of cultural markets.
- Discuss the economic management of cultural organizations and the regulation for financing cultural goods (e.g. cultural sponsorship, grants, etc.) in the Greek and European markets.
- Analyze the new treads in cultural economics and cultural investment in the information and knowledge society.
- Develop their research skills and critical thinking about cultural economy and cultural markets.

**Subjects covered:**
- Cultural economics and management
- Resources and Cultural Capital

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**DPM61 Cultural Communication**
**Module code:** DPM61
**ECTS Credit Points:** 24
**Module Type:** Compulsory
**Year:** 1st
**Language:** Greek
**Module general description:** The aim of DPM 61 is to,
- explore the role of communication in cultural processes and practices.
- understand the multidimensional role of communication in cultural activities.
- understand the relationship between culture and communication.
- investigate communication mechanisms and theoretical models, strategies and methods.
- evaluate methods and techniques for market surveys and public opinion polls, in order to develop suitable strategies and cultural policies.
- understand the practice of cultural marketing as well as the development of marketing techniques for the promotion and distribution of cultural products.
Learning Outcomes: The learning objectives are,
- To understand the basic concepts of cultural communication and cultural organisations in the context of information and knowledge society.
- To explore the ways in which the academic research for the promotion and visibility of cultural goods contributes to the development of cultural institutions.
- To discuss the role of cultural communication in the context of Greek and European cultural institutions.
- To analyze the new trends in cultural communication for the promotion of cultural organizations.
- To develop their research skills and critical thinking in regards to cultural communication.

Subjects covered:
- Communication principles and methods
- Communication media

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

Tourism Business Administration MSc

Description
This course aims to offer specialized knowledge required for Bank System Modernization, and the improvement of banking methods and procedures for organizations and businesses.

LEARNING OUTCOMES:
Upon completion of the MSc in Banking program, students will be able to,
1. Review and analyze the main factors determining demand for money and money supply in a modern economy.
2. Analyze the structural characteristics of the financial system, as well as the instruments of monetary policy.
3. Articulate and discuss the way in which the monetary system and financial institutions are controlled and supervised.
4. Present the work of Basel Committee on Banking Supervision.
5. Estimate the expected cash flows of an investment project and calculate the firm's cost of capital.
6. Use, interpret and evaluate the most important methods that are used in capital budgeting analysis.
7. Examine a firm's capital structure, and assess whether it affects investors' preferences and consequently the stock price of the firm.
8. Explain a firm's dividend policy and determine whether it has an impact upon investors' preferences and consequently the stock price of the firm.
9. Apply in practice the two main supportive functions of human resource management, that is, job analysis and job description, and human resource planning.
10. Analyze the banks' financial statements and evaluate their profitability, performance and the quality of their portfolios.
11. Propose the asset - liability management that financial institutions should employ driven by estimated interest rate changes.
12. Understand the accounting plan and the chart of accounts for the banking industry.
13. Analyze the content and use of financial tools.
14. Collect and present statistical data.
15. Apply probability theory and probability distributions.
16. Employ the technology underlying electronic data bases.
17. Evaluate the main information systems that Greek banks employ and suggest either improvements or new advanced operations in order to improve existing or new specialized banking activities.
18. Identify, categorize and evaluate the main risks the banking sector faces.
19. Understand the role and use of modern financial instruments that banks use.
20. Implement risk management techniques.
Requirements

Applicants to the Banking course must possess an undergraduate degree in a related field from a Greek Public University, a Technical Educational Institute or an equivalent degree. The equivalency to a Greek qualification is recognized by the Hellenic NARIC (Hellenic National Academic Recognition and Information Center / DOATAP), which verifies the validity and equivalence of the acquired degree with those awarded by Greek institutions of higher education. Applicants must possess documents issued by DOATAP. A list of recognised degrees is available from DOATAP, and a prerequisite course list for applicants to HOU courses may be given by the HOU's registration department.

University Graduates of different fields must have a two year work experience within Banking and Graduates of Technological Educational Institutes must have a three year work experience within Banking.

All candidates must provide evidence of their ability in a foreign language, preferably English.

Minimum study duration

3 years

ECTS credit points

120

Learning Material

Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise.

Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

Contact

Registry
Tel.: 2610 367342 - Fax: 2610 367350 - e-mail: tra@eap.gr

Call Centre for General Inquiries
Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr

Course Structure

1st Year
DTE50 General Principles of Management, Tourism Law and Organization of Employers' Collective Bodies in Tourism
DTE51 Tourism Sector

2nd Year
DTE60 Tourism and Tourism Business Management
DTE61 Marketing in Tourism Bodies, Organizations and Businesses

DISSERTATION

Course Modules

DTE50 General Principles of Management, Tourism Law and Organization of Employers' Collective Bodies in Tourism
Module code: DTE50
ECTS Credit Points: 24
Module Type: Compulsory  
Year: 1st  
Language: Greek  
Module general description:  
The aims of this course are,  
- To provide basic knowledge regarding the general principles, the theories and the applications of Management.  
- To familiarize students with the institutional and the organizational aspects of Tourism (Private and Public Sector, Collective Bodies, Organisations).  

Learning Outcomes:  
On successful completion of this Module, students will be able to,  
- Define management and summarize the evolution of management thought.  
- Explain the principles, fundamental concepts and applications of management.  
- Identify and analyze contextual factors in the business environment and their impact on the interaction between people and organizations.  
- Understand the types of decisions taken in the modern business environment.  
- Recognize the role of management in modern tourism organizations.  
- Analyze the institutional and organizational dimensions of tourism organizations and operations.  
- To recognize the legal issues in complex problems of the tourism industry and apply their knowledge to these issues.  

Subjects covered:  
- General principles of management  
- Organisation and Operation of Tourism Organisations and Institutions  
- Law and Regulation of tourism  

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

---

**DTE51 Tourism Sector**  
**Module code:** DTE51  
**ECTS Credit Points:** 24  
**Module Type:** Compulsory  
**Year:** 1st  
**Language:** Greek  
**Module general description:**  
The aims of this course are,  
- To provide information regarding the operation and the organization of Tourism and the Tourism Sector.  
- To cross-scientifically analyze the contemporary development of Tourism.  
- To stress the interdisciplinary aspects of the organization and management of companies in the Tourism Sector.  
- To understand the dynamic role of Tourism in the economic, environmental and social development of countries.  

**Learning Outcomes:**  
**Volume A**  
Tourism Economics and Organization of Tourist Travels  
On successful completion of this Module, students will be able to,  
- Describe and interpret the evolution of international tourism.  
- Describe classification systems for travel movements.  
- Demonstrate knowledge of the different structures and types of travel products.  
- Define and explain the structure and function of the tourism market.  
- Analyze and interpret the function of tourism as an economic phenomenon.  
- Define and analyze the generation of tourism multiplier effects.  
- Analyze the dimensions of tourism consumption.  
**Volume B**
Tourism Development and the Environment
On successful completion of this Module, students will be able to,
- Identify and analyze the different parameters forming tourism demand.
- Demonstrate knowledge of the principles, procedures, levels and modes of implementation of tourism development planning.
- Interpret and assess the impacts of tourism on the natural and built environment.
- Define and apply tourism environmental policies.
- Demonstrate knowledge about the institutions and means of implementing policies for tourism and the environment.

Volume C
The Politics and Sociology of Tourism Development
On successful completion of this Module, students will be able to,
- Analyze the reasons justifying the necessity of state intervention in tourism and the development of tourism policy.
- Understand the institutional framework, the organization and the responsibilities of national tourism authorities.
- Identify the particular characteristics of tourism education and training policies.
- Analyze and evaluate the main axes of tourism policy at the European level.
- Understand the social dimension of tourism.
- Identify the main types of tourists and analyze tourist motives.
- Analyze, interpret and evaluate the social and cultural impacts of tourism development.

Volume D
Information Technology (IT) in Tourism
On successful completion of this Module, students will be able to,
- Identify the different applications and uses of IT for tourism development and business organization.
- Analyze and apply Internet and new technology capabilities in tourism development and promotion.
- Understand the functions and uses of information systems in hotels and travel agencies.
- Identify and interpret contemporary trends in tourism IT.

Subjects covered:
- Economics of tourism and Organisation of tourism travel
- Development and environment in tourism
- Policy and sociology of growth in tourism
- Informatics in tourism

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

DTE60 Management of Tourism and Tourism Service Providers
Module code: DTE60
ECTS Credit Points: 24
Module Type: Compulsory
Year: 2nd
Language: Greek

Module general description: The aims of this course are,
- To provide sufficient knowledge on the nature and the primary functions of Tourism Management.
- To familiarize students with the operational, financial and organizational aspects of Tourism Management in Hotels, Restaurants and Entertainment Service Providers, Travel Organizers and Intermediaries, Tourism Organisations and Institutions and Alternative and Special Tourism Service Providers.
- To understand the underlying processes behind major sports events, such as the Olympic Games, with an emphasis on the Athens 2004 Olympic Games.

Learning Outcomes: On successful completion of this Module, students will be able to,
- Identify the factors that affect the management of tourism firms and organisations.
- Evaluate opportunities and threats in the business environment.
- Develop and implement appropriate management strategies for different types of tourism firms and
organisations.
- Identify the role of human resource management in managing key performance indicators of tourism firms and organisations.
- Select and apply appropriate analytical frameworks and theories for successfully managing tourism firms and organisations.
- Identify and forecast changes taking place in the tourism industry.
- Use appropriate models for managing change and developing new competitive tourism services/products.
- Apply analytical frameworks and theories for crisis management in the tourism industry.
- Identify and analyse the conditions for sustainable tourism management and development.
- Understand the dynamically changing role and the services of tourism intermediaries on the function and structure of the tourism industry.
- Analyse the role, organisational structure and services of tourism destination management organisations.
- Understand and apply the process of organizing and bidding for a mega event.

Subjects covered:
1. Principles of Tourism Management
2. Management in the Tourism Industry
3. Management of Tourism Organisations and Institutions
4. Hotel Management
5. Management of Travel Agents and Tour Operators
6. Management of Hospitality and Leisure Service Providers
7. Management of Alternative and Special Tourism Service Providers

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

DTE61 Tourism Marketing for Organizations and Enterprises
Module code: DTE61
ECTS Credit Points: 24
Module Type: Compulsory
Year: 2nd
Language: Greek

Module general description: The aims of this course are,
- To provide sufficient knowledge on the planning, organization, implementation and promotion of Tourism Marketing.
- To understand the organizational and functional aspects of National (Country-level) and Regional marketing plans.
- To familiarize students with the interaction between Advertising, Public Relations and Sales Promotion in Tourism.

Learning Outcomes: On successful completion of this Module, students will be able to,
- Explain the principles and fundamental concepts of tourism marketing.
- Critically analyze the process of developing an integrated tourism marketing plan.
- Develop small-scale market research projects in real-life situations.
- Analyze the factors influencing tourist buying behavior.
- Develop an integrated tourism marketing communication and promotion plan.
- Understand the specificities of applying marketing in different sectors of the tourism industry.

Subjects covered:
1. Principles of Tourism Marketing
2. Principles and Philosophy of National (Country-level) and Regional marketing plans
3. Sales promotion in tourism
4. Advertising and Public relations in tourism
5. Marketing of Hotels and the Hospitality Sector
6. Marketing of Restaurants and of the Entertainment Sector
7. Marketing of the Travel Agencies and Tour Operators: Case Studies from the international and Greek
Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

Banking MSc

Description
This course aims to offer specialized knowledge required for Bank System Modernization, and the improvement of banking methods and procedures for organizations and businesses.

LEARNING OUTCOMES:
Upon completion of the MSc in Banking program, students will be able to,
1. Review and analyze the main factors determining demand for money and money supply in a modern economy.
2. Analyze the structural characteristics of the financial system, as well as the instruments of monetary policy.
3. Articulate and discuss the way in which the monetary system and financial institutions are controlled and supervised.
4. Present the work of Basel Committee on Banking Supervision.
5. Estimate the expected cash flows of an investment project and calculate the firm's cost of capital.
6. Use, interpret and evaluate the most important methods that are used in capital budgeting analysis.
7. Examine a firm's capital structure, and assess whether it affects investors' preferences and consequently the stock price of the firm.
8. Explain a firm's dividend policy and determine whether it has an impact upon investors' preferences and consequently the stock price of the firm.
9. Apply in practice the two main supportive functions of human resource management, that is, job analysis and job description, and human resource planning.
10. Analyze the banks' financial statements and evaluate their profitability, performance and the quality of their portfolios.
11. Propose the asset - liability management that financial institutions should employ driven by estimated interest rate changes.
12. Understand the accounting plan and the chart of accounts for the banking industry.
13. Analyze the content and use of financial tools.
14. Collect and present statistical data.
15. Apply probability theory and probability distributions.
16. Employ the technology underlying electronic data bases.
17. Evaluate the main information systems that Greek banks employ and suggest either improvements or new advanced operations in order to improve existing or new specialized banking activities.
18. Identify, categorize and evaluate the main risks the banking sector faces.
19. Understand the role and use of modern financial instruments that banks use.
20. Implement risk management techniques.

Requirements
Applicants to the Banking course must possess an undergraduate degree in a related field from a Greek Public University, a Technical Educational Institute or an equivalent degree. The equivalency to a Greek qualification is recognized by the Hellenic NARIC (Hellenic National Academic Recognition and Information Center / DOATAP), which verifies the validity and equivalence of the acquired degree with those awarded by Greek institutions of higher education. Applicants must possess documents issued by DOATAP. A list of recognised degrees is available from DOATAP, and a prerequisite course list for applicants to HOU courses may be given by the HOU's registration department.

University Graduates of different fields must have a two year work experience within Banking and
Graduates of Technological Educational Institutes must have a three year work experience within Banking.
All candidates must provide evidence of their ability in a foreign language, preferably English.

**Minimum study duration**
3 years

**ECTS credit points**
120

**Learning Material**
Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise. Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

**Contact**
Registry
Tel.: 2610 367342 - Fax: 2610 367350 - e-mail: tra@eap.gr
Call Centre for General Inquiries
Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr

**Course Structure**

1st Year
TRA50 Banking Environment
TRA51 Banks Management

2nd Year
TRA60 Means of Banking Operation
TRA61 Banking Strategy

**Dissertation**

**Course Modules**

**TRA50 Banking Environment**
- **Module code:** TRA50
- **ECTS Credit Points:** 24
- **Module Type:** Compulsory
- **Year:** 1st
- **Language:** Greek

**Module general description:** General description of the Thematic Subject: The aim of this Thematic Subject is to provide the students a clear understanding of the following concepts and mechanisms. - The economic significance, the definitions and the types of money, the quantity and the value of money as well as the determinants which affect the demand for and the supply of money. - The operation of the financial system both within a closed as well as in open economy. - The international, the European and Greek legal and regulatory framework with respect to the operation and regulation of the banking sector as well as of the monetary system.

**Learning Outcomes:** Upon completion of this module, students will be able to,
1. Explain the definition and role of money in an economy and describe in detail the different types of money.
2. Review and analyze the main factors determining demand for money and money supply in a modern economy.
3. Assess and critically compare local and international money and capital markets as well as intermediation in these markets.
4. Articulate and discuss the way in which the monetary system and financial institutions are controlled and supervised.
5. Analyze the structural characteristics of the financial system, as well as the instruments of monetary policy.
6. Identify the importance of the balance of payments accounts and how they interfere with the domestic monetary processes.
7. Discuss the merits of the alternative exchange rate systems and how they affect the implementation and effectiveness of monetary policy.
8. Present the work of Basel Committee on Banking Supervision.
9. Specify the institutional framework of the European Union's single banking market.
10. Illustrate the fundamental importance of money and financial intermediation in an economy.
11. Debate the structure, function and the increasing importance of financial derivatives and their corresponding markets.
12. Describe the structure, function and historical evolution of the main International Economic Organizations.
13. Define the importance of the yield curve and the theories for the term structure of interest rates.
14. Explain the different types of risk that financial institutions are exposed to and how these risks can be minimized.
15. Articulate and discuss the forms of international expansion for financial institutions and assess their advantages and disadvantages.

Subjects covered:
1. Monetary Theory and Policy
2. The Financial System
3. Banking and Monetary Law

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**TRA51 Banks Management**

Module code: TRA51  
ECTS Credit Points: 24  
Module Type: Compulsory  
Year: 1st  
Language: Greek

Module general description: General description of the Thematic Subject: The aim of this Thematic Subject is to help the student understand the way in which basic concepts and techniques of Financial Management, Human Resource Management and Banking Strategies are implemented on Bank Management.

Learning Outcomes: Upon completion of this module, students will be able to,
1. Evaluate different investment projects under certainty and risk.
2. Estimate the expected cash flows of an investment project and calculate the firm's cost of capital.
3. Use, interpret and evaluate the most important methods that are used in capital budgeting analysis.
4. Examine a firm's capital structure, and assess whether it affects investors' preferences and consequently the stock price of the firm.
5. Explain a firm's dividend policy and determine whether it has an impact upon investors' preferences and consequently the stock price of the firm.
6. Identify the different leasing and factoring alternatives and describe the features, advantages and disadvantages of each.
7. Apply in practice the two main supportive functions of human resource management, that is, job analysis and job description, and human resource planning.
8. Identify recruitment practices for firms and organizations, as well as the theoretical approaches that underlie and shape those practices.
9. Illustrate the way in which employee appraisal and training/development aim to improve management and firm’s performance.
10. Review and describe the main types of payment systems that are in use today in practice.
11. Analyze the banks' financial statements and evaluate their profitability, performance and the quality of their portfolios.
12. Propose the asset - liability management that financial institutions should employ driven by estimated interest rate changes.
13. Suggest the approval or rejection of a loan from a financial institution and the conditions of approval.
14. Judge if it is more profitable to employ local capital market for borrowing and investing, or foreign exchange markets with hedging foreign exchange risk.

Subjects covered:
1. Financial Management
2. Human Resource Management
3. Banking Development Strategies

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

TRA60 Means of Banking Operation
Module code: TRA60
ECTS Credit Points: 24
Module Type: Compulsory
Year: 2nd
Language: Greek

Module general description: General description of the Thematic Subject: The aim of this Thematic Subject is to help the student understand the role of Computer Science in the banking area and also to provide the knowledge that is necessary in the field of Bank Accounting and Quantitative Methods to those that work or are going to work in accounting and financial services in banks in order to be able to reach successfully their goal.

Learning Outcomes: Upon completion of this module, students will be able to,
1. Understand the accounting plan and the chart of accounts for the banking industry.
2. Gather information regarding foreign currency accounting policies
3. Analyse the content and use of financial tools.
4. Have a deep understanding of and suggest improvements to the banking loan system.
5. Analyse in detail issues related to the concept and accounting practices for deposits, repos and bonds
6. Collect and present statistical data.
7. Apply probability theory and probability distributions.
8. Understand in detail the concept of normal distribution, the use of sample distributions and the concept of confidence interval
9. Test hypotheses.
10. Conduct linear and multiple regression analyses.
11. Analyse the principles under which banking electronic systems operate.
12. Employ the technology underlying electronic data bases.
13. Locate appropriate products and services and adapt them to individual banking environments.
14. Adapt information systems related to cash payments and receipts as well as customer oriented information systems
15. Evaluate the main information systems that Greek banks employ and suggest either improvements or new advanced operations in order to improve existing or new specialized banking activities.

Subjects covered:
1. Bank Accounting
2. Informatics in Banking

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**TRA61 Banking Strategy**

**Module Code:** TRA61

**ECTS Credit Points:** 24

**Module Type:** Compulsory

**Year:** 2nd

**Language:** Greek

**Module general description:** General description of the Thematic Subject: The aim of this Thematic Subject is to help the student understand the banking financing, portfolio theory as well as the risk management process of the banking portfolios. Also to provide the knowledge that is necessary in the field of Banking Risk Management and Quantitative Methods to those that work or are going to work as risk officers in banking and financial services in order to be able to reach successfully their goal in measuring and forecasting the volatility of assets and the management of their risks.

**Learning Outcomes:** By the end of this course students will be able to,

- LO1: Identify, categorise and evaluate the main risks the banking sector faces
- LO2: Perform necessary calculations to facilitate managerial decisions
- LO3: Develop extensive knowledge related to financial and investment decisions of banks
- LO4: Critically synthesize the academic literature
- LO5: Understand the role and use of modern financial instruments that banks use
- LO6: Implement risk management techniques
- LO7: Show practical understanding of the necessary quantitative techniques for an advanced career in the banking sector

**Subjects covered:**

1. Risk Management in Banking
2. Portfolio Management
3. Special Types of Credit

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.
Studies in Natural Sciences

Description
The course aims to provide students with an introduction to all fields of Natural Science, including Physics, Chemistry and Biology, understanding of Science principles, notions and theories, and to develop problem solving abilities.

Requirements
Applicants to the Studies in Natural Sciences course must possess a High School Certificate from a Greek Unified Upper Secondary School (Eniaio Lykeio), a b' level Technical Vocational Educational School (TEE) or an equivalent Greek or Foreign High School Certificate.

Minimum study duration
4 academic years

ECTS credit points
240

Learning Material
Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise. Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

Contact
Registry
Tel.: 2610 367335, 2610 367346 - Fax: 2610 367350 - e-mail: fye@eap.gr

Call Centre for General Inquiries
Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr

Course Structure

1st Year
FYE14 Introduction to Natural Sciences
FYE12 General and Inorganic Chemistry
FYE10 Mathematics I

2nd Year
FYE24 Physics I: classical mechanics, electromagnetics, thermodynamics
FYE20 Mathematics II
FYE22 Physical Chemistry
Laboratory Courses
Physics Laboratory Course I
Chemistry Laboratory Course I

3rd Year
FYE34 Physics II: vibrations and waves, relativity, modern physics
FYE30 Organic Chemistry
FYE31 Cell structure and function
Laboratory Courses
Chemistry Laboratory Course II
Biology Laboratory Course II

4th Year
FYE40 Quantum Physics
FYE43 Genetics
FYE41 Evolution of Ideas in Natural Sciences
FYE42 Planet Earth
EKP63 Didactics of Natural Sciences
PLI10 Introduction to Computer Science
Laboratory Courses
Physics Laboratory Course II
Biology Laboratory Course II

Course Modules

**FYE10 Mathematics I**

**Module code:** FYE10  
**ECTS Credit Points:** 20  
**Module Type:** Compulsory  
**Year:** 1st  
**Language:** Greek  

**Module general description:**

**Learning Outcomes:** On successful completion of the Module FYE10 Mathematics I the students will have the opportunity to develop the following skills,
- apply the converge criteria for real number sequences and series
- apply the basic theorems (Darboux, Existence of Minimum & Maximum Value, Mean Value, Rolle) to the solution of various problems, such as the description of the behaviour of real valued functions of a single real variable, approximation of roots of equations, optimization, etc
- use polynomial approximations (Taylor & Maclaurin Series) for algebraic and transcendental functions, determine approximation errors and intervals of validity
- use integration techniques for the determination of antiderivatives, the evaluation of areas of plane regions, areas and volumes of solids of revolution, etc
- determine the Fourier Series expansion of periodic functions
- apply the basic theorems (Continuity, Differentiability, Mean Value, Existence of Local Minima & Maxima, Implicit and Inverse Function) to the solution of various problems, such as the description of the behaviour of real valued functions, optimization, Taylor Series approximation, etc
- use Vector Algebra techniques to the solution of geometrical problems
- apply vector functions techniques to the description curves and surfaces, in three dimensions
- use Vector Calculus techniques and the Theorems of Green, Gauss, Stokes and Helmholtz for the description of Vector Fields

**General outcomes:**
On successful completion of the module MSM60 the student will be able to
- to organize and use the knowledge acquired for solving a specific problem
- to be able to understand and present up to date scientific briefs in related areas of Mathematics

**Subjects covered:**
1. Calculus of one variable  
2. Calculus of many variables  
3. Introductory Mathematics

**Evaluation:** Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.
FYE12 General and Inorganic Chemistry

Module code: FYE12
ECTS Credit Points: 20
Module Type: Compulsory
Year: 1st
Language: Greek

Learning Outcomes: After successful completing the module «General and Inorganic Chemistry» (FYE 12), students will be expected to be able to,

- Describe the properties of electrons, protons, and neutrons (the atomic structure)
- Describe isotopes and their composition
- Calculate atomic weights from isotopic abundance and isotopic masses
- Name and write formulas for common binary and ternary inorganic compounds
- Use chemical formulas to solve various kinds of chemical problems
- Relate names to formulas and charges of simple ions
- Combine simple ions to write formulas and names of some ionic compounds
- Recognize and use formula weights and mole relationships
- Interconvert masses, moles, and formulas
- Determine percent compositions in compounds
- Determine formulas from composition
- Write balanced chemical equations to describe chemical reactions
- Interpret balanced chemical equations to calculate the moles or masses of reactants and products involved in each of the reactions
- Determine the percent yield of a reaction
- Calculate concentrations of solutions when they are diluted
- Carry out calculations related to the use of solutions in chemical reactions
- Describe the wave properties of light and how wavelength, frequency, and speed are related
- Use the particle description of light, and explain how it is related to the wave description
- Relate atomic emission and absorption spectra to important advances in atomic theory
- Describe the main features of the quantum mechanical picture of the atom
- Describe the four quantum numbers, and give possible combinations of their values for specific atomic orbitals
- Describe the shapes of orbitals and recall the usual order of their relative energies
- Write the electron configurations of atoms
- Relate the electron configuration of an atom to its position in the periodic table
- Describe the periodic table and some of the relationships that it summarizes
- Discuss chemical periodicity of the following physical properties: Atomic radii, Ionization energy, Electron affinity, Ionic radii, Electronegativity
- Write Lewis dot representations of atoms
- Predict whether bonding between specified elements will be primarily ionic, covalent, or polar covalent
- Compare and contrast characteristics of ionic and covalent compounds
- Describe how the elements bond by electron transfer (ionic bonding)
- Describe energy relationships in ionic compounds
- Predict the formulas of ionic compounds
- Describe how elements bond by sharing electrons (covalent bonding)
- Write Lewis dot and dash formulas for molecules and polyatomic ions
- Recognize exceptions to the octet rule
- Write formal charges for atoms in covalent structures
- Describe resonance, and know when to write resonance structures and how to do so
- Describe the basic ideas of the valence shell electron pair repulsion (VSEPR) theory
- Use the VSEPR theory to predict the molecular geometry of polyatomic molecules and ions
- Describe the relationships between molecular shapes and molecular polarities
- Predict whether a molecule is polar or nonpolar
- Describe the basic ideas of the valence bond (VB) theory
- Analyze the hybrid orbitals used in bonding in polyatomic molecules and ions
- Use hybrid orbitals to describe the bonding in double and triple bonds
- Describe the basic concepts of molecular orbital theory
- Draw a molecular orbital diagram of a diatomic molecule from the relating atomic orbitals
- Distinguish among bonding, antibonding, and nonbonding orbitals
- Find the bond order in diatomic molecules and ions
- Relate bond order to bond stability
- Use the MO concept of delocalization for molecules in which valence bond theory would postulate resonance
- Recognize and describe nonelectrolytes, strong electrolytes, and weak electrolytes
- Describe the Arrhenius theory of acids and bases
- Describe the Bronsted-Lowry theory of acids and bases
- List properties of aqueous solutions of acids and bases
- Arrange binary acids in order of increasing strength
- Arrange ternary acids in order of increasing strength
- Describe the Lewis theory of acids and bases
- Complete and balance equations for acid base reactions
- Define acidic and basic oxides and salts
- Explain amphoteric
- Balance oxidation-reduction equations
- Explain the common ion effect and give illustrations of its operation
- Recognize buffer solutions and describe their chemistry
- Describe how to prepare a buffer solution of a specified pH
- Explain what acid-base indicators are and how they function
- Describe what species are present at various stages of titration curves for (a) strong acids and strong bases, (b) weak acids and strong bases, and (c) polyprotic acids and strong bases
- Carry out calculations based on titration curves for (a) strong acids and strong bases and (b) polyprotic acids and strong bases
- Write solubility product constant expressions
- Use Ksp in chemical calculations
- Recognize some common, slightly soluble compounds
- Describe fractional precipitation and how it can be used to separate ions
- Describe the occurrence and use of the main-group elements
- Describe compounds of the main-group elements, their reactions, properties, and uses
- Describe major sources of metals
- Describe some pretreatment techniques for ores
- Describe some reduction processes that produce free metals
- Describe some techniques for refining (purifying) metals
- Identify the d-transition metals and describe some of their important properties
- Describe typical oxidation states of the transition metals
- Describe the specific metallurgies of three metals: titanium, iron, and copper
- Recognize coordination compounds
- Use the terminology that describes coordination compounds
- Apply the rules for naming coordination compounds
- Recognize common structures of coordination compounds
- Describe various kinds of structural (constitutional) isomerism and distinguish among structural isomers
- Recognize stereoisomers
- Describe the valence bond theory and the crystal field theory of bonding in coordination compounds
- Explain the origin of color in complex species
- Use the spectrochemical series to explain colors of a series of complexes
- Give some examples of applications of complexes in our daily life

Subjects covered:
1. Atomic structure - The periodic system - Properties of the atoms
2. Chemistry of Coordination and Organometallic Compounds
3. Current Trends and Applications in Inorganic Chemistry

Evaluation: Completion of six written assignments during the academic year, the average grade of
which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**FYE14 Introduction to Natural Sciences**
Module code: FYE14  
ECTS Credit Points: 20  
Module Type: Compulsory  
Year: 1st  
Language: Greek  
Subjects covered:
1. Introduction to mathematics  
2. Introductory physics  
Evaluation: Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**FYE20 Mathematics II**
Module code: FYE20  
ECTS Credit Points: 20  
Module Type: Compulsory  
Year: 2nd  
Language: Greek  
Learning Outcomes: After completing this module, students will be expected to be able to,  
- Understand the basic theory of Linear Algebra and Ordinary Differential Equations.  
- Combine basic mathematical notions with those of Linear Algebra and Differential Equations.  
- Solve problems of Linear Algebra using Matrices, Determinants, Linear Systems, Linear Transformations and Eigenvalues-Eigenvectors.  
- Solve Ordinary Differential Equations of first and higher order, as well as Linear Systems of Ordinary Differential Equations.  
- Apply Linear Algebra and Ordinary Differential Equations to describe and model the behavior of some physical systems or phenomena in mathematical terms.  
Subjects covered:
1. Linear algebra  
2. Differential equations I  
Evaluation: Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**FYE22 Physical Chemistry**
Module code: FYE22  
ECTS Credit Points: 20  
Module Type: Compulsory  
Year: 2nd  
Language: Greek  
Subjects covered:
1. Chemical thermodynamics  
2. Chemical kinetics  
3. Electrochemistry  
4. Statistical thermodynamics  
5. Spectroscopy  
Evaluation: Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**FYE24 Physics I: classical mechanics, electromagnetics, thermodynamics**
Module code: FYE24
ECTS Credit Points: 20
Module Type: Compulsory
Year: 2nd
Language: Greek
Module general description: The module FYE 24 includes three courses: Classical Mechanics, Thermodynamics, and Electromagnetism. Knowledge of derivative and integral calculus is required for all three courses. Knowledge of ordinary differential equations or concurrent registration in FYE 20 is desirable. Especially for Electromagnetism, the knowledge and use of vectors is required. Knowledge of line and surface integrals is desirable.
Learning Outcomes: With the successful completion of the module the students,
1) Will know the beauty of Classical Mechanics, namely that all its results can be derived from Newton’s laws.
2) Will be in a position to study one-dimensional and three-dimensional motions of point masses either through the solution of the differential equation of motion or with the use of the energy method, when it is appropriate.
3) Will be in a position to study the rotation of solid bodies around a fixed axis.
4) Will be in a position to write the equations of motion of point masses in coupled harmonic oscillators independent of their number or their configuration.
5) Will know the fundamental concepts of Thermodynamics (such as heat, work, internal energy, entropy) and will be able to use the laws of Thermodynamics to solve simple problems.
6) Will know the four laws of Electromagnetism.
7) Will be able to compute the electric field that is produced by a distribution of stationary electric charges and the magnetic field that is produced by a constant electric current.
8) Will be able to compute the electric field produced by a variable magnetic flux.
9) Will be able to compute the magnetic field produced by a variable electric flux.
Subjects covered:
1. Classical mechanics
2. Thermodynamics
3. Electromagnetism
Evaluation: Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

FYE30 Organic Chemistry
Module code: FYE30
ECTS Credit Points: 20
Module Type: Compulsory
Year: 3rd
Language: Greek
Learning Outcomes: Upon completion of the course the student will be able to,
- Recognize the structures of molecules and the basic reactions of organic chemistry.
- Knowledge of main spectroscopic techniques.
- Understand the basic principles and rules of stereochemistry.
- Distinguish the major classes of organic compounds & biomolecules, understand their properties and mechanisms of basic reactions.
- Apply and combine the main spectroscopic techniques for the structure elucidation of simple molecules.
- Analyze retro-synthetically the structures of simple organic molecules.
- Suggest reaction sequences for the synthesis of simple organic molecules, designing the most efficient sequence of chemical reactions.
Subjects covered:
1. Homologous series
2. Stereochemistry and organic reactions mechanisms
3. Spectroscopy of organic compounds
4. Bio-Molecules

**Evaluation:** Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**FYE31 Cell structure and function**

- **Module code:** FYE31
- **ECTS Credit Points:** 20
- **Module Type:** Compulsory
- **Year:** 3rd
- **Language:** Greek
- **Subjects covered:**
  1. Cell biology
  2. Biochemistry
  3. Molecular biology

**Evaluation:** Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**FYE34 Physics II: vibrations and waves, relativity, modern physics**

- **Module code:** FYE34
- **ECTS Credit Points:** 20
- **Module Type:** Compulsory
- **Year:** 3rd
- **Language:** Greek
- **Subjects covered:**
  1. Relativity
  2. Vibrations & Waves
  3. Modern Physics

**Evaluation:** Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**FYE40 Quantum Physics**

- **Module code:** FYE40
- **ECTS Credit Points:** 20
- **Module Type:** Compulsory
- **Year:** 4th
- **Language:** Greek

**Learning Outcomes:** Upon completion of the course the student is able to,
1. Understand the fundamental principles of quantum physics.
2. Apply the general theory to a variety of problems involving bound states and simple scattering processes.
3. Characterize and analyze the behavior of nuclei.
4. Compare the theoretical results to the experimental data.
5. Comprehend the basic principles of elementary particles (physical properties, classification and interactions).
6. Understand and evaluate modern results published in some scientific journals.

**Subjects covered:**
1. Quantum mechanics
2. Introduction to nuclear physics
3. Introduction to elementary particle physics

**Evaluation:** Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.
**FYE41 Evolution of Ideas in Natural Sciences**

Module code: FYE41  
ECTS Credit Points: 20  
Module Type: Optional  
Year: 4th  
Language: Greek  
Subjects covered:  
1. History of physics and chemistry  
2. History of biology  
3. Philosophy of science  
Evaluation: Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**FYE42 Planet Earth**

Module code: FYE42  
ECTS Credit Points: 20  
Module Type: Optional  
Year: 4th  
Language: Greek  
Subjects covered:  
1. Lithosphere  
2. Hydrosphere  
3. Biosphere  
4. Atmosphere  
5. Space physics  
Evaluation: Completion of written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**FYE43 Genetics**

Module code: FYE43  
ECTS Credit Points: 20  
Module Type: Compulsory  
Year: 4th  
Language: Greek  
Learning Outcomes: On successful completion of this course, the students will be able to,  
1. Describe the fundamental principles of genetics in prokaryotes and eukaryotes  
2. Understand the relationship between phenotype and genotype  
3. Describe the basics of genetic mapping  
4. Understand how gene expression is regulated  
5. Understand the basics of mutagenesis  
6. Understand the basics of developmental genetics  
7. Understand the basics of genetic engineering  
8. Explain introductory concepts of human physiology  
9. Describe the cellular and tissue organisation of the body by referring to the functions and interactions of the different cell and tissue components.  
10. Describe the fundamental principles and theories of evolution  
11. Explain the processes and mechanisms of evolution  
Subjects covered:  
1. Genetics  
2. Physiology  
3. Evolution  
Evaluation: Completion of six written assignments during the academic year, the average grade of
which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**EKP63 Science Education**
- **Module code:** EKP63
- **ECTS Credit Points:** 20
- **Module Type:** Optional
- **Year:** 4th
- **Language:** Greek

**Subjects covered:**
1. Significance of the systematic exploration of science teaching
2. Conceptual framework of Science Education
3. Contemporary methods of science teaching: general characteristics of science teaching, criteria for the selection of content, learning processes, pacing of teaching and assessment, design and development of teaching material

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**PLI10 Introduction to Informatics**
- **Module code:** PLI10
- **ECTS Credit Points:** 20
- **Module Type:** Compulsory
- **Year:** 1st
- **Language:** Greek

**Learning Outcomes:**

**VOLUME 1: INTRODUCTION TO COMPUTER SCIENCE**

**Knowledge**
On successful completion of the study of the first volume, students will know:
- the historic evolution of computers
- the main disciplines of Computer Science and its applications
- the structure of computer systems and the operations between their subsystems
- ways to store and represent data and information in a computer
- different number systems and its arithmetic operations
- basic logic gates and circuits
- the main ideas behind programming, algorithms, programming languages, system and application software, data bases, and computer networks

**Understanding**
On successful completion of the study of the first volume, students will understand:
- the ways to store, transmit, and process data
- the basic arithmetic operations in different number systems
- the process used to design digital circuits
- the notions of algorithms, system and application software, and data bases
- the ways used to interconnect computers

**Application**
On successful completion of the study of the first volume, students will be able to:
- perform number transformations and arithmetic operations in different number systems
- design logic circuits
- use flowcharts to design algorithms

**Analysis**
On successful completion of the study of the first volume, students will be able to:
- describe the different subsystems of a computer and their functionality
- categorize the main disciplines of Computer Science and its applications

**Synthesis**
On successful completion of the study of the first volume, students will be able to:
- design logic circuits from logic gates
- describe algorithms using flowcharts

**Evaluation**

On successful completion of the study of the first volume, students will be able to:
- discuss the overall influence of Computer Science on technology and society at present and in the future

**VOLUME 2: PROGRAMMING TECHNIQUES**

**Knowledge**

On successful completion of the study of the second volume, students will know:
- the notion of algorithms, the programming practices and concepts, criteria concerning the correctness of programs, principles and structures for procedural programming
- advanced procedural programming techniques such as recursion and backtracking
- special issues about programming (such as software debugging and documentation)
- basics of object-oriented programming and characteristics of the major programming languages

**Understanding**

On successful completion of the study of the second volume, students will understand:
- the steps to solve a problem, how to design programs, and the principles to develop programs
- the notion of variables, data types, data structures, parameters, operators and expressions
- communication between main program and sub-programs
- the operation of sorting and searching algorithms
- range of variable declaration

**Application**

On successful completion of the study of the second volume, students will be able to:
- indicate the attributes of an algorithm
- describe an algorithm with verbal (i.e. pseudo-code) and symbolic (i.e. flowchart) representation
- design algorithms using basic programming practices
- design algorithms using design methodologies
- apply defensive programming techniques
- execute sorting and searching algorithms

**Analysis**

On successful completion of the study of the second volume, students will be able to:
- categorize the main programming languages

**Synthesis**

On successful completion of the study of the second volume, students will be able to:
- design algorithms using arrays and linked lists

**Evaluation**

On successful completion of the study of the second volume, students will be able to:
- choose programmatic structures for implementing algorithms
- assess the appropriateness of programs
- assess the efficiency of an algorithm

**VOLUME 3: DATA STRUCTURES**

**Knowledge**

On successful completion of the study of the third volume, students will know:
- the notion of a data structure (abstract data type) and its difference from an atomic data type
- the functionality of the data structures: array, list, stack, queue, binary search tree, heap tree

**Understanding**

On successful completion of the study of the third volume, students will understand:
- the different means to represent a data structure in the computer main memory
- the different algorithms for sorting elements, and the different means for searching elements (linear search, binary search) in an array

**Application**

On successful completion of the study of the third volume, students will be able to:
- compute the complexity functions of simple algorithms
- compute the order of a complexity function, from its analytic expression
- design variants or/and combinations of the various sorting and searching algorithms
- compute the array mapping function, and the implementation method of an array, when they are given its representation, and conversely calculate the address of a random element of the array, from its mapping function
- design variants, extensions or combinations of the basic algorithms for operations on lists, stacks, queues, binary search trees and heap trees

**Analysis**

On successful completion of the study of the third volume, students will be able to:
- categorize the different kinds of data structures, and distinguish their different applications

**Synthesis**

On successful completion of the study of the third volume, students will be able to:
- design programs that use the basic data structures (array, list, stack, queue, trees)

**Evaluation**

On successful completion of the study of the third volume, students will be able to:
- evaluate the performance of a data structure, by using the notions of time and space complexity

**VOLUME 4: PROGRAMMING LANGUAGES**

**Knowledge**

On successful completion of the study of the fourth volume, students will know:
- the structure of a program in the C programming language as a set of functions
- the concepts of logical and syntax errors as well as the concept of debugging
- the operation of the decision constructs in the C programming language
- the logical operators and bit-wise logical operations of the C programming language
- how to use appropriate basic data types of the C programming language for storing their data
- the concept of the array and the way to define array variables
- the structured types (struct) to be used both as the type of a variable as well as the type of a component (node) of a linked list
- the concept of dynamic memory and how it is implemented in the C programming language using pointer variables
- the differences between variables passed by value and variables passed by reference as well as how the latter can be exploited by functions for returning values

**Understanding**

On successful completion of the study of the fourth volume, students will understand:
- the three ways of performing loops in the C programming language (for, while, do - while) and in which cases each of them is more advantageous than the others
- how to declare and write functions in the C programming language and how the function returns a value in the environment or performs a task without returning a value (a void function)
- how to distinguish among cases where the use of dynamic memory outweighs the use of tables of specified size
- the concept of a recursive function and the advantages/disadvantages over using iteration
- the concept of modular programming and the role of the stepwise refinement technique in the design of their programs

**Application**

On successful completion of the study of the fourth volume, students will be able to:
- describe their solutions to computation problems using programs written in the C programming language
- describe the functionality and the results of a simple program in C
- use a simple IDE (Integrated Development Environment - PL/I10 uses the Dev-C++ IDE)
- debug programs that have syntax or logical errors
- exploit the potential of dynamic memory in their programs dynamically changing data structures
- debug programs that make use of pointers and dynamic memory
- pass parameters to functions using pointer variables

**Analysis**

On successful completion of the study of the fourth volume, students will be able to:
- choose appropriate programming constructs and variables (static or dynamic memory) for the basic functions of their programs

**Synthesis**
On successfully completion of the study of the fourth volume, students will be able to:
- design a program in the C programming language to implement the solution they devise for a computational problem using structured programming techniques (modular programming) and the stepwise refinement methodology

**Evaluation**

On successful completion of the study of the fourth volume, students will be able to:
- provide an estimate of the memory requirements and execution time for the C functions that they implement (either recursive or iterative)
- optimize parts of their programs to increase their efficiency

**Subjects covered:**
1. Introduction to computer science
2. Programming techniques
3. Data structures
4. Programming languages

**Evaluation:** Completion of written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

---

**Computer Science**

**Description**
This course aims at preparing students to become computing scientists. By choosing the necessary course modules, students may develop their knowledge and skills in specialised fields related to applied Computer Science.

**Requirements**
Applicants to the Computer Science course must possess a High School Certificate from a Greek Unified Upper Secondary School (Eniaio Lykeio), a b' level Technical Vocational Educational School (TEE) or an equivalent Greek or Foreign High School Certificate.

**Minimum study duration**
4 academic years

**ECTS credit points**
240

**Learning Material**
Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise. Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

**Contact**

**Registry**
Tel.: 2610 367326, 2610 367334, 2610 367320- Fax: 2610 367350 - e-mail: plh@eap.gr , plh1@eap.gr

**Call Centre for General Inquiries**
Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr

**Course Structure**
1st Year
PLI10 Introduction to Informatics
PLI11 Principles of Software Technology
PLI12 Mathematics for Informatics I

2nd Year
PLI20 Discrete Mathematics and Mathematical Logic
PLI21 Digital Systems
PLI22 Computer Network Fundamentals

3rd Year
PLI24 Software Design
PLI30 Foundations of Computer Science
PLI31 Artificial Intelligence - Applications

4th Year
PLI23 Telematics, Internets and Society
PLI32 Linear Programming and Modeling
PLI35 Computer Systems Security
PLI36 Advanced Networks and Services
PLI37 Informatics and Education
PLI40 Project in Software
PLI42 Special Issues in Software Engineering
PLI44 Signals and Image Processing
PLI47 Distributed Systems

The degree is awarded on completion of 12 course modules.

Course Modules

**PLI10 Introduction to Informatics**

**Module code:** PLI10  
**ECTS Credit Points:** 20  
**Module Type:** Compulsory  
**Year:** 1st  
**Language:** Greek

**Learning Outcomes:**

**VOLUME 1: INTRODUCTION TO COMPUTER SCIENCE**

**Knowledge**

On successful completion of the study of the first volume, students will know:
- the historic evolution of computers
- the main disciplines of Computer Science and its applications
- the structure of computer systems and the operations between their subsystems
- ways to store and represent data and information in a computer
- different number systems and its arithmetic operations
- basic logic gates and circuits
- the main ideas behind programming, algorithms, programming languages, system and application software, data bases, and computer networks

**Understanding**

On successful completion of the study of the first volume, students will understand:
- the ways to store, transmit, and process data
- the basic arithmetic operations in different number systems
- the process used to design digital circuits
- the notions of algorithms, system and application software, and data bases
- the ways used to interconnect computers
Application
On successful completion of the study of the first volume, students will be able to:
- perform number transformations and arithmetic operations in different number systems
- design logic circuits
- use flowcharts to design algorithms

Analysis
On successful completion of the study of the first volume, students will be able to:
- describe the different subsystems of a computer and their functionality
- categorize the main disciplines of Computer Science and its applications

Synthesis
On successful completion of the study of the first volume, students will be able to:
- design logic circuits from logic gates
- describe algorithms using flowcharts

Evaluation
On successful completion of the study of the first volume, students will be able to:
- discuss the overall influence of Computer Science on technology and society at present and in the future

VOLUME 2: PROGRAMMING TECHNIQUES
Knowledge
On successful completion of the study of the second volume, students will know:
- the notion of algorithms, the programming practices and concepts, criteria concerning the correctness of programs, principles and structures for procedural programming
- advanced procedural programming techniques such as recursion and backtracking
- special issues about programming (such as software debugging and documentation)
- basics of object-oriented programming and characteristics of the major programming languages

Understanding
On successful completion of the study of the second volume, students will understand:
- the steps to solve a problem, how to design programs, and the principles to develop programs
- the notion of variables, data types, data structures, parameters, operators and expressions
- communication between main program and sub-programs
- the operation of sorting and searching algorithms
- range of variable declaration

Application
On successful completion of the study of the second volume, students will be able to:
- indicate the attributes of an algorithm
- describe an algorithm with verbal (i.e. pseudo-code) and symbolic (i.e. flowchart) representation
- design algorithms using basic programming practices
- design algorithms using design methodologies
- apply defensive programming techniques
- execute sorting and searching algorithms

Analysis
On successful completion of the study of the second volume, students will be able to:
- categorize the main programming languages

Synthesis
On successful completion of the study of the second volume, students will be able to:
- design algorithms using arrays and linked lists

Evaluation
On successful completion of the study of the second volume, students will be able to:
- choose programmatic structures for implementing algorithms
- assess the appropriateness of programs
- assess the efficiency of an algorithm

VOLUME 3: DATA STRUCTURES
Knowledge
On successful completion of the study of the third volume, students will know:
- the notion of a data structure (abstract data type) and its difference from an atomic data type
- the functionality of the data structures: array, list, stack, queue, binary search tree, heap tree

**Understanding**
On successful completion of the study of the third volume, students will understand:
- the different means to represent a data structure in the computer main memory
- the different algorithms for sorting elements, and the different means for searching elements (linear search, binary search) in an array

**Application**
On successful completion of the study of the third volume, students will be able to:
- compute the complexity functions of simple algorithms
- compute the order of a complexity function, from its analytic expression
- design variants or/and combinations of the various sorting and searching algorithms
- compute the array mapping function, and the implementation method of an array, when they are given its representation, and conversely calculate the address of a random element of the array, from its mapping function
- design variants, extensions or combinations of the basic algorithms for operations on lists, stacks, queues, binary search trees and heap trees

**Analysis**
On successful completion of the study of the third volume, students will be able to:
- categorize the different kinds of data structures, and distinguish their different applications

**Synthesis**
On successful completion of the study of the third volume, students will be able to:
- design programs that use the basic data structures (array, list, stack, queue, trees)

**Evaluation**
On successful completion of the study of the third volume, students will be able to:
- evaluate the performance of a data structure, by using the notions of time and space complexity

---

**VOLUME 4: PROGRAMMING LANGUAGES**

**Knowledge**
On successful completion of the study of the fourth volume, students will know:
- the structure of a program in the C programming language as a set of functions
- the concepts of logical and syntax errors as well as the concept of debugging
- the operation of the decision constructs in the C programming language
- the logical operators and bit-wise logical operations of the C programming language
- how to use appropriate basic data types of the C programming language for storing their data
- the concept of the array and the way to define array variables
- the structured types (struct) to be used both as the type of a variable as well as the type of a component (node) of a linked list
- the concept of dynamic memory and how it is implemented in the C programming language using pointer variables
- the differences between variables passed by value and variables passed by reference as well as how the latter can be exploited by functions for returning values

**Understanding**
On successful completion of the study of the fourth volume, students will understand:
- the three ways of performing loops in the C programming language (for, while, do-while) and in which cases each of them is more advantageous than the others
- how to declare and write functions in the C programming language and how the function returns a value in the environment or performs a task without returning a value (a void function)
- how to distinguish among cases where the use of dynamic memory outweighs the use of tables of specified size
- the concept of a recursive function and the advantages/disadvantages over using iteration
- the concept of modular programming and the role of the stepwise refinement technique in the design of their programs

**Application**
On successful completion of the study of the fourth volume, students will be able to:
- describe their solutions to computation problems using programs written in the C programming language
- describe the functionality and the results of a simple program in C
- use a simple IDE (Integrated Development Environment - PLI10 uses the Dev-C++ IDE)
- debug programs that have syntax or logical errors
- exploit the potential of dynamic memory in their programs dynamically changing data structures
- debug programs that make use of pointers and dynamic memory
- pass parameters to functions using pointer variables

Analysis
On successful completion of the study of the fourth volume, students will be able to:
- choose appropriate programming constructs and variables (static or dynamic memory) for the basic functions of their programs

Synthesis
On successfully completion of the study of the fourth volume, students will be able to:
- design a program in the C programming language to implement the solution they devise for a computational problem using structured programming techniques (modular programming) and the stepwise refinement methodology

Evaluation
On successful completion of the study of the fourth volume, students will be able to:
- provide an estimate of the memory requirements and execution time for the C functions that they implement (either recursive or iterative)
- optimize parts of their programs to increase their efficiency

Subjects covered:
1. Introduction to computer science
2. Programming techniques
3. Data structures
4. Programming languages

Evaluation: Completion of written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

PLI11 Principles of Software Technology
Module code: PLI11
ECTS Credit Points: 20
Module Type: Compulsory
Year: 1st
Language: Greek

Learning Outcomes:
SOFTWARE ENGINEERING I
On successful completion of the module, students will be able to,
- Describe and explain the basic concepts of software engineering (software, tools, procedures, methodologies, life cycle etc.)
- Recognize the fundamental role of the basic principles of software engineering in the development of qualitative software and applications
- Describe the different phases in the development of a software application as well as the basic features of the most significant software life-cycle models.
- Identify the requirements of a software application and use the principles of structured analysis for their detailed specification.
- Use effectively the most known diagrammatic software representation models (data-flow diagrams, state transition diagrams etc.) for the requirements analysis of a software application.
- Design a software application following the principles of structured design (architectural design, interface design, detailed design of modules etc.).
- Explain and apply suitable fault avoidance techniques during the implementation of a software application in order to produce qualitative code without bugs.
- Describe the different stages and explain the different strategies followed during the testing process of a software module or system.

DATA BASES
On successful completion of the module, students will be able to,
- Describe the basic concepts and models of databases as well as the main differences between a database and a database management system.
- Recognize the fundamental need of using database technology in any application that demands efficient organization and management of large-scale data.
- Explain the different methods for data organization and data access (records, indexes, b-trees etc.) in modern database systems.
- Distinguish between the different levels of database analysis and design (conceptual, logical and physical level).
- Use effectively the entity-relationship model for the conceptual design of a database.
- Perform the design of a database in the logical level with use of the relational model.
- Use effectively a theoretical query language (i.e. relational algebra) for data retrieval out of a relational database.
- Implement a database over a modern relational database management system and practically use a standard query language (i.e. SQL) for efficient data organization, management and retrieval.

OPERATING SYSTEMS I
On successful completion of the module, students will be able to,
- Describe the basic functions of an operating system.
- Recognize the fundamental role of operating systems in the efficiency of modern systems and applications due to their advanced multi-tasking and multi-user capabilities.
- Describe the different methods used for process scheduling in modern operating systems and explain their differences, advantages and disadvantages.
- Explain the mutual exclusion problem and use effectively the basic mechanisms offered by a multitasking operating system for process synchronization and communication (semaphores etc.).
- Describe the different main-memory organization methods followed in modern computer systems and identify their advantages and disadvantages.
- Generalize the use of basic memory organization methods (i.e. paging, segmentation) to more complex hybrid memory schemes, which are mainly used in modern computer systems.
- Explain the function of virtual memory organization and distinguish between the different page replacement algorithms used in modern operating systems.
- Solve practical problems and exercises with regard to the above concepts and mechanisms of a modern operating system (process management, CPU scheduling, process synchronization and communication, memory management, virtual memory organization).

Subjects covered:
1. Software engineering I
2. Operating systems I
3. Databases

Evaluation: Completion of written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

PL12 Mathematics for Informatics I
Module code: PL112
ECTS Credit Points: 20
Module Type: Compulsory
Year: 1st
Language: Greek

Learning Outcomes: Upon completing this course,
1. Students will expand their knowledge of the three areas of advanced mathematics which compose the syllabus of this course. They will be able to understand basic facts and principles of Linear Algebra, Single Variable Calculus and Probability Theory.
2. They will have the skills to use the advanced mathematics tools in order to develop critical thinking and analytical problem solving ability.
3. Moreover students will comprehend and appreciate the logical sequence of advanced mathematics, in particular to the role and construction of mathematical proofs and solutions in various problems.
4. Finally students will be able to synthesize and apply the concepts and methods described in the syllabus in order to solve interdisciplinary problems and, also, expand their knowledge to a number of applications of mathematics, especially those concerning Computer Science.

**Subjects covered:**
1. Linear algebra
2. Single variable calculus
3. Elements of probability theory

**Evaluation:** Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

---

**PLI20 Discrete Mathematics and Mathematical Logic**

**Module code:** PLI20  
**ECTS Credit Points:** 20  
**Module Type:** Compulsory  
**Year:** 2nd  
**Language:** Greek  

**Learning Outcomes:** Upon successful completion of this module, students will be able to,
- Understand the basic counting techniques of combinatorics, the basic notions of propositional and first-order logic and the basic notions of graph theory.
- Understand the form of counting problems, the expressing potential and limitations of propositional and first-order types and some interesting graph properties.
- Solve counting problems of different forms, check and prove properties of propositional and first-order types and solve graph theory problems focusing on mathematical induction.
- Model various problems as counting and/or graph problems.
- Use and apply basic algorithms and techniques in logic and graph theory.

**Subjects covered:**
1. Discrete mathematics  
2. Graph theory  
3. Mathematical logic

**Evaluation:** Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

---

**PLI21 Digital Systems**

**Module code:** PLI21  
**ECTS Credit Points:** 20  
**Module Type:** Compulsory  
**Year:** 2nd  
**Language:** Greek  

**Subjects covered:**
1. Digital design I, II  
2. Computer architecture I  
3. Microprocessors

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

---

**PLI22 Computer Network Fundamentals**

**Module code:** PLI22  
**ECTS Credit Points:** 20  
**Module Type:** Compulsory  
**Year:** 2nd  
**Language:** Greek  

**Learning Outcomes:**
A) Information Theory and Coding
- Understand the concept of information, Shannon’s information measure and entropy
- Calculate the entropy and amount of information of random events
- Create instantaneous source codes
- Model various discrete sources of information and apply various source coding algorithms in order to calculate the entropy and the redundancy of a source (with or without memory)
- Measure the capacity of various communication (noiseless or noisy) channels
- Explain the process of error detection and correction using various error correction codes
- Estimate the performance of a code and compare among various error codes

B) Digital Communication
- Understand the concepts of discrete signals, Fourier transforms, analogue and digital modulation, and sampling
- Examine periodicity of a signal and calculate its period and frequency.
- Use Fourier transforms in order to find the frequencies of a signal.
- Apply various modulation schemes in order to shift the signal from its baseband frequencies to a high frequency band.
- Calculate the required bandwidth of signals after modulation.
- Apply filters in order to manipulate a signal.
- Apply Nyquist’s theorem in order to calculate the minimum sampling frequency.
- Explain how to convert analogue signals into digital signals.

B) Computer Networks
- Understand the concepts of layering in IP and OSI and the basic operations of each layer
- Distinguish between connection oriented and connectionless networks and protocols.
- Distinguish between different types of networks e.g Local area networks, Wide area networks and their corresponding technologies used e.g Ethernet, Token Ring, 802.11 etc
- Apply CRC for coding and decoding bits
- Explain the use of framing in physical and link layers and how synchronisation is achieved between sender and receiver.
- Explain how key retransmission protocols like ABP, Go-Back-N, and Selective Repeat work
- Calculate the throughput of these retransmission protocols and compare their performance
- Explain the architecture and protocol operations of 4 major Local area networks (Ethernet 802.3, 802.5, FDDI and 802.11)
- Estimate and compare the performance of these four networks
- Identify three medium access mechanisms.

Subjects covered:
1. Information theory and coding
2. Digital communications
3. Computer networks I

Evaluation: Completion of five written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

PLI23 Telematics, Internets and Society
Module code: PLI23
ECTS Credit Points: 20
Module Type: Optional
Year: 4th
Language: Greek

Learning Outcomes: On successful completion of the module, students will be able to,
1. Explain and present the basic concepts of modern telematics networks and services.
2. Analyze and design wireless and mobile (GSM, UMTS etc) networks.
3. Explain the addressing schemes of the Internet.
4. Distinguish the routing algorithms and protocols of the Internet.
5. Associate telematics services with distributed object-oriented technology and service-oriented architecture.
6. Discuss the architecture of the World Wide Web (WWW).
7. Compose methods of the HTTP protocol.
8. Create simple WWW pages using HTML and CSS.
9. Construct dynamic WWW applications by inserting client-side (JavaScript) and server-side (PHP) scripts in HTML code.
10. Integrate server-side scripting (PHP) with Data Bases (MySQL).
11. Design data descriptions in the WWW with XML.
12. Transform XML descriptions by using XSL.
13. Measure and evaluate the performance of Internet and WWW.
14. Analyze caching and proxy techniques in the WWW.
15. Explain searching and security mechanisms of the WWW.
16. Discuss the increasing and diversifying social impact of Information and Communication Technologies.

Subjects covered:
1. Telematics
2. Internet - Web
3. Computers and information society

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

PLI24 Software Design
Module code: PLI24
ECTS Credit Points: 20
Module Type: Compulsory
Year: 3rd
Language: Greek

Subjects covered:
1. Compilers
2. Software engineering II
3. Programming languages II - Object oriented programming

Evaluation: Completion of five written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

PLI30 Foundations of Computer Science
Module code: PLI30
ECTS Credit Points: 20
Module Type: Compulsory
Year: 3rd
Language: Greek

Learning Outcomes: The Learning Outcomes are categorized in : a) Knowledge and Understanding, b) Intellectual (Thinking) Skills : Application, and c) Intellectual (Thinking) Skills : Analysis and Synthesis
A) Knowledge and Understanding. On successful completion of the module, students will be able to,
1. Describe simple algorithms in pseudocode, explain its functionality, use asymptotic symbols, compute the running time of worst and best cases, write and solve recursive equations, describe the principles of Algorithm Design, Divide and Conquer, Greedy, Dynamic Programming and the techniques of Depth-first search (DFS) and Breadth-first search (BFS).
2. Describe and define a Turing machine and its relative concepts (Computations, Function, Grammar without limitations, M-recursive function), record the sequential steps of computation, define the concept of algorithm, identify the halting problem, describe the universal machine Turing, list some well-known intractable problems, describe the dovetailing procedure, the DTIME and NTIME complexity classes and the classes P, NP, and EXP, describe the class NP via a polynomial verification and short certificate, the meaning of completeness, tractable and hard problems, the role and use of reductions, define the classes of polynomial and exponential space DSPACE and EXPSPACE, describe space and
time constructed functions, define and prove the theorems of space and time hierarchy, the approximation algorithm, the probabilistic Turing machine and the features of Monte Carlo and Las Vegas probabilistic algorithms.

3. Describe what is a language, its fundamental operations and what a regular expression is, list the characteristic of a finite state machine, describe the process of string acceptance, what is a finite automaton and explain what is the transition function, describe the language acceptable by a deterministic finite automaton and a non-deterministic one, name the pumping lemma and its use, define context-free grammar, variables, terminal symbols and derivations, record the basic features of push down automaton and describe the recognition process of a string, explain its transition function, list the two types of strings recognition and the corresponded languages that are acceptable by finite automata, define a deterministic push down automaton, describe the pumping lemma and its use, how a grammar can be transformed into an equivalent one that does not contain unitary rules and explain how the pumping lemma is used for context-free grammars.

B) Intellectual (Thinking) Skills: Application. On successful completion of the module, students will be able to,

1. Use the asymptotic analysis in computations of complexity of iterative and recursive algorithms, compute exact asymptotic estimations for solutions of recursive equations, apply the divide and conquer method for the solution of intermediate difficulty problems, use the method of dynamic programming and the greedy method to solve computational problems, represent a graph with the adjacency list and the adjacency matrix, apply the techniques of Depth-first search (DFS) for exploring a graph and the technique Breadth-first search (BFS).

2. Prove with the diagonal method that the halting problem is unsolved, prove the important properties of Turing acceptable and Turing decidable languages, prove that the satisfiability SAT is NP complete, prove that a problem is Turing decidable or not, categorize a problem in P, NP or NPC classes, prove the existence of PSPACE-complete problems under reductions of polynomial time (Q-SAT problem), classify problems in classes of logarithmic time.

3. Prove the closeness properties of formal languages union, intersection, concatenation and asterisk of Kleene, prove if two regular expressions represent the same language, explain the reason of a finite language being regular, prove if a language is context-free or not, design of push down automata, implement pumping lemma for context free languages.

C) Intellectual (Thinking) Skills: Analysis and Synthesis. On successful completion of the module, students will be able to,

1. Select the most appropriate algorithm for a particular category of problem instances, compare the rate of growth of two functions using asymptotic notation, prove that a greedy algorithm computes the optimal problem solution, use the methods divide and conquer, the greedy method and the method of dynamic programming in computational problem solving, design divide and conquer algorithms, greedy algorithms and dynamic programming algorithms, justify complex algorithms and derive their complexity, synthesize or modify known algorithms to solve new computational problems.

2. Design simple Turing machines that execute asked computations or accept or decide given languages, identify problems as solvable or not, relate time complexity in various types of Turing machines, synthesize effectively the basic Turing machines in order to create more complicated machines, appraise and recognize the usability of the dovetailing procedure, reduce a given problem of known complexity to another and determine the complexity of the second problem, relate the two space complexity classes and the way they are correlated via the Savitch theorem.

3. Identify the regular expression that corresponds to a language, justify why regular languages are closed under intersection, subtraction, union, concatenation, and star Kleene operations, construct a finite automaton for a given regular expression, construct the regular expression corresponding to the language of a given finite automaton, transform a non-deterministic finite automaton to a deterministic one that accepts the same language, design the regular expression of a language accepted by a finite automaton and vice versa, explain why a context-free grammar is ambiguous, develop algorithms solving decision problems for regular and context-free languages.

Subjects covered:
1. Algorithms and complexity
2. Computation Theory
3. Automata and formal languages

**Evaluation:** Completion of five written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**PLI31 Artificial Intelligence - Applications**

- **Module code:** PLI31
- **ECTS Credit Points:** 20
- **Module Type:** Compulsory
- **Year:** 3rd
- **Language:** Greek

**Subjects covered:**
1. Artificial intelligence and expert systems
2. Neural networks and applications
3. Genetic algorithms and applications

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**PLI32 Linear Programming and Modeling**

- **Module code:** PLI32
- **ECTS Credit Points:** 20
- **Module Type:** Optional
- **Year:** 4th
- **Language:** Greek

**Subjects covered:**
1. Modeling and simulation
2. Linear programming foundations
3. Linear programming algorithms and game theory

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**PLI35 Computer Systems Security**

- **Module code:** PLI35
- **ECTS Credit Points:** 20
- **Module Type:** Optional
- **Year:** 4th
- **Language:** Greek

**Subjects covered:**
1. Computer security
2. Network security
3. Cryptography

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**PLI36 Advanced Networks and Services**

- **Module code:** PLI36
- **ECTS Credit Points:** 20
- **Module Type:** Optional
- **Year:** 4th
- **Language:** Greek

**Subjects covered:**
1. Computer Networks II
2. New directions in networks and services
3. Network design issues

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**PLI37 Informatics and Education**
Module code: PLI37
ECTS Credit Points: 20
Module Type: Optional
Year: 4th
Language: Greek
Subjects covered:
1. Didactics of Informatics
2. Informatics in education
3. Design of educational software

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**PLI40 Project in Software**
Module code: PLI40
ECTS Credit Points: 20
Module Type: Optional
Year: 4th
Language: Greek
Subjects covered:
1. Compilers
2. Databases
3. Operating systems

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**PLI42 Special Issues in Software Engineering**
Module code: PLI42
ECTS Credit Points: 20
Module Type: Optional
Year: 4th
Language: Greek
Subjects covered:
1. Formal specifications
2. Verification and Validation
3. Software management and software quality

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**PLI44 Signals and Image Processing**
Module code: PLI44
ECTS Credit Points: 20
Module Type: Optional
Year: 4th
Language: Greek
Subjects covered:
1. Signals and systems
2. Digital signal and image processing
3. Image analysis and pattern recognition

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**PLI47 Distributed Systems**

*Module code:* PLI47  
*ECTS Credit Points:* 20  
*Module Type:* Optional
*Year:* 4th
*Language:* Greek  

**Module general description:**

**Learning Outcomes:**

**Subjects covered:**
1. Distributed systems
2. Operating systems II
3. Distributed databases

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

---

**SCHOOL OF SCIENCE AND TECHNOLOGY**

**POSTGRADUATE COURSES**

**Quality Assurance Msc**

**Description**

The programme aims to provide participants with an integrated specialization in quality management and technology, so as to meet employment needs in industries, and to train engineers and other technicians who perform quality control in industries, health care and other services. Its graduate courses are designed to combine the study of statistical methods and other technical tools for the control and the improvement of quality with the study of quality systems and management principles.

**Requirements**

Applicants to the Quality Assurance course must possess an undergraduate degree in an Engineering, Agriculture or Geotechnical field, Business Administration, Management, Economics, Mathematics, Pharmacy, Physical, Chemical, Biological, Statistical, Computer, Environmental or Materials Science from a Greek Public University, or an undergraduate degree from a Greek Military Academy, or an undergraduate degree in a technological field from a Technical Educational Institute or an equivalent degree. The equivalency to a Greek qualification is recognized by the Hellenic NARIC (Hellenic National Academic Recognition and Information Center / DOATAP), which verifies the validity and equivalence of the acquired degree with those awarded by Greek institutions of higher education. Applicants must possess documents issued by DOATAP. A list of recognized degrees is available from DOATAP, and a prerequisite course list for applicants to HOU courses may be given by the HOU's registration department. All candidates must provide evidence of their ability in a foreign language, preferably English.

**Minimum study duration**

3 academic years

**ECTS credit points**
Learning Material
Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise. Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

Contact
Registry
Τηλ.: 2610 367329 - Fax: 2610 367350 - e-mail: dip@eap.gr
Call Centre for General Inquiries
Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr

Course Structure
1st Year
DIP50 Basic Tools and Methods for Quality Control
DIP51 Quality Planning and Organization
DIP40 Mathematics and Mechanical Drawing for Quality Assurance (Undergraduate level)

2nd Year
DIP60 Advanced Tools and Methods for Quality Control
DIP61 Special Topics on Quality

DISTRIBUTION

The requirements in order to obtain the degree are the following:
1. The students must attend and pass four graduate courses of the programme. Course DIP 40 cannot substitute a graduate course.
2. The students must submit a dissertation. The examining committee of the dissertation consists of at least two members of the tutors of the programme.

Course Modules

DIP40 Mathematics and Mechanical Drawing for Quality Assurance (Undergraduate level)
Module code: DIP40
ECTS Credit Points: 24
Module Type: Compulsory for Technical Educational Institute graduates, Optional for University graduates
Year: 1st
Language: Greek
Module general description: The module under the code DIP40 is an undergraduate level module and it is an elective module for the students having a University degree. They decide to follow this module either for refreshing or strengthening their knowledge in Maths in order to facilitate their studies in the graduate modules of DIP. It is formed by two independent subjects on Maths for Quality Assurance and Mechanical Drawing. The students may follow either both or only one of the subjects, in addition to the graduate modules of the 1st academic year. Since the Mathematical background of the students having a higher education degree from a Technical Educational Institute is not solid, they are obliged to follow the first part of the subject of DIP40 (Mathematics for Quality Assurance) during the 1st year of their graduate studies, while the second part of DIP40 is also elective for them.
For this group of students Mathematics for Quality Assurance is prerequisite for the modules DIP50, DIP60 and DIP61. As a result, students having a Technological higher education degree, during their 1st year of graduate studies may follow the DIP51 module in addition to DIP40.

Mathematics for Quality Assurance


Sets and relations, functions, Real numbers (introduction, topology of the real line).


Mechanical Drawing


Subjects covered:
1. Mathematics for Quality Assurance
2. Mechanical Drawing

Evaluation: Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

DIP50 Basic Tools and Methods for Quality Control

Module code: DIP50
ECTS Credit Points: 24
Module Type: Compulsory
Year: 1st
Language: Greek

Module general description:

Probability

Probability models and probability, the scope of statistics, the role of probability in statistics. Basic probability theory, interpretations and definitions of probability, probability space and events, axiomatic foundation and basic laws, symmetric experiments and combinatorial analysis, conditional probability. Random variables and characteristics of their distributions, random variables and univariate distributions, joint discrete and continuous distributions, indepedence, descriptive measures of distributions, the mean of a random variable and of a function of a random variable, other descriptive measures of univariate and bivariate distributions, useful inequalities. Useful probability models, the binomial, hypergeometric geometric, negative binomial and Poisson distributions, the Poisson process, the normal distribution, the exponential distribution and applications of reliability, the uniform, lognormal, gamma, Weibull, and bivariate normal distributions, use of the Minitab statistical package.

Statistics

Methods of descriptive statistics, data types and data collection, description of the distribution of a dataset, arithmetic measures, histograms, the stem and leaf diagram, the quantile plot, box plots, graphics for attribute data, comparison of distributions of two data sets, graphics for the appropriateness of theoretical distributions. Sampling distributions, statistical functions and their distributions, the sample mean and its distributional properties, sampling from the Bernoulli and the Poisson population, sampling from a normal population, the chi-squared the t and the F distribution. Parameter estimation and testing hypotheses, point estimation, criteria and desirable properties of estimators, basic characteristics of confidence intervals and tests, tests of hypotheses and tests of significance, operating characteristic
curve and power of the test, confidence intervals and tests for the mean of a population and for the
difference of two population means with the use of independent samples, estimation and testing of the
mean-difference with paired samples, confidence intervals and tests for a single proportion and for the
difference of two proportions with independent and large samples, confidence intervals and tests for the
variance and the standard deviation of a normal distribution, estimation and testing for the ratio of
variances of two normal distributions with independent samples. Regression analysis, regression
models and their utility, simple linear regression, correlation analysis, multiple linear regression, fitting,
hypothesis testing, estimation of a mean and prediction of a future observation, stepwise regression.
Introduction to the theory of errors and the statistical analysis of measurement systems, measurement
events and properties of measurement systems, evaluation of repeatability and reproducibility, formulae
of random-error propagation. Use of the Minitab statistical package
Quality Control Techniques, Statistical Quality Control and Sampling
Introduction to metrology and calibration, measurement systems, instruments, standards and errors of
measurement, metrology, the calibration of instruments and quality assurance, measurement
instruments for length, measurement instruments of mass, uncertainty of measurement.
Introduction to statistical quality control, histograms, cause and effect diagrams, Pareto analysis, check
sheets, flow charts, a brief presentation of the main control charts for attributes and variables, other
tools for statistical quality control, use of the Minitab statistical package.
Acceptance sampling for attributes, simple sampling and characteristic curve, rectifying sampling, the
MIL_STD-105E (ANSI-ASQC Z1.4), acceptance sampling for variables, the MIL-STD-414 (ANSI/ASQC
Z1.9), use of the Minitab statistical package.
Learning Outcomes: After completing this module, students are expected to be able to,
1. identify the basic elements of a probability model and use laws of the axiomatic theory of probability
to find unconditional and conditional probabilities.
2. describe univariate and bivariate probability distributions and calculate probabilities, moments and
descriptive measures for specified distributions.
3. select appropriate probability models in order to describe the variability of measurable quality
characteristics and calculate probabilities and percentiles of well-known distributions by means of
formulae, tables or the Minitab statistical package.
4. use descriptive measures and graphical procedures to perform exploratory data analysis.
5. identify proper statistics and their corresponding sampling distributions for estimation and tests
relating to means, proportions and variances of performance characteristics.
6. find confidence intervals and perform tests of hypotheses in one and two-sample problems.
7. apply simple and multiple linear regression analyses, correlation analysis and methods of selecting
an appropriate model.
8. distinguish the categories of measurement errors, apply the laws of propagation of random and
systematic errors and estimate the variability due to repeatability, reproducibility, and the uncertainty of
measurement.
9. understand the function of measurement systems and measuring instruments, select an instrument
based on its metrological characteristics and explain the process of calibration and the associated
documents.
10. apply the 7 main tools of statistical quality control, understand the application of 15 additional tools
and select the appropriate tool for confronting specific problems.
11. select, construct and interpret the proper control chart to monitor a process.
12. design plans of acceptance sampling for attributes, interpret characteristic curves and apply
appropriate standards (MIL-STD-105E, ANSI/ASQC Z1.4, etc).
13. determine sampling plans for variables and apply the system MIL-STD-414 (ANSI/ASQC Z1.9).
Subjects covered:
1. Probability and Statistics
2. Quality Control Techniques
3. Statistical Quality Control
4. Sampling
Evaluation: Completion of five written assignments during the academic year, the average grade of
which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive
examination. Final exam grades constitute a 70 percent of the students' final course grade.
**DIP51 Quality Planning and Organization**

**Module code:** DIP51  
**ECTS Credit Points:** 24  
**Module Type:** Compulsory  
**Year:** 1st  
**Language:** Greek

**Module general description:**

Quality Planning and Quality Management


**Total Quality**

Introduction in Total Quality Management (TQM), The model of TQM, Similarities and differences among Quality Assurance (QA) systems and TQM., Methodology for Quality Improvement, Tools for quality improvement (bench marking, brainstorming, Pareto Figure, Histogram, Quality Control chart, Quality team, Quality Circles. Gurus of Quality, Quality Prizes, European Prize of Quality, Malcom Baldridge, Deming prize.

**Supplier Customer Relationships and Quality Cost**

Quality Cost, Quality Cost Determination, Prevention Cost, Assessment Cost, Cost of internal failures, Cost for external failures, Non-determined cost, Opportunity cost, Product safety and Quality Cost, Parameters affecting the Quality cost, Indirect Costs and Direct Costs. Techniques for improvement the Cost of Quality, Parameters affecting the relationship between client and supplier, Supplies Policy, Supplies and Suppliers, Advanced Logistics, Supplier certification. Suppliers' assessment.


**Learning Outcomes:** After completing this module, students are expected to be able to,

1. understand the term Total Quality Control (TQC), the parameters affecting it, and how it can be applied in practice.
2. plan and develop the product / service quality (including the failure mode and effects analysis (FMEA)), and design the production processes involved.
3. have a good background on total quality management (TQM) and the various currently applied Quality Assurance Systems (similarities, differences) and total quality prizes (EU, USA, Japan).
4. apply the most commonly used tools and techniques (brainstorming, affinity diagram, tree diagram, cause and effect diagram, benchmarking, control diagram, histogram, Pareto diagram, scatter diagram) for quality improvement.
5. have a solid knowledge of two of the most important and successful ISO systems; that is ISO 9001:2008 and ISO 22000:2005 for product quality and food quality and safety, respectively.
6. measure, calculate, analyze and evaluate the quality cost by taking into account the occurrence of various failures of different origin.
7. understand and apply the various techniques for optimizing the quality cost (cost reduction in conjunction with quality improvement).
8. apply a program toward suppliers’ assurance, assessment, and certification.
9. understand the importance of product safety and consumer protection within the legislative frame of EU.
10. comply with the EU legislative frame for Quality development, CE labeling, and safe food trade (HACCP, ISO 22000).

**Subjects covered:**
1. Quality Planning
2. Quality Management
3. Total Quality
4. Supplier - Customer Relationships
5. Quality Cost

**Evaluation:** Completion of five written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**DIP60 Advanced Tools and Methods for Quality Control**

**Module code:** DIP60  
**ECTS Credit Points:** 24  
**Module Type:** Compulsory  
**Year:** 2nd  
**Language:** Greek  

**Module general description:**

**Statistical Process Control**  
Introduction to statistical process control, chance and assignable causes, assignable causes and statistical process control, Process capability indices, accuracy and precision, use of time series diagrams in statistical process control, the use of hypothesis testing in assignable causes search, type I and II error, operating characteristic curve, in-control and out of control process, searching for mean shifts, time-series diagrams and histograms. X-bar charts, R-charts and s-charts. Improving the sensitivity of Shewhart control charts, rational subgroup selection, applying the central limit theorem in control charts. Moving range and moving average, I-MR control charts, moving average control charts, EWMA and CUSUM charts, control charts for medians. Control charts for attributes, p-, c- and u-charts, sample size determination for p-charts, Demerit and Q charts, statistical process control for short production runs. Defects per million objects (DPMO) and first trial yield, 6 sigma program, quality control techniques for high yield processes, rejection control charts, acceptance process level, pre-control charts, ISO-9001 standard and quality control.

Use of the Minitab statistical package for case studies.

**Design and Analysis of Experiments**  
Use of designed experiments for process control improvement, principles of experimental design (response variable, factor, level, treatment, experimental unit, background variable, blocking, noise factor, experimental error), completely randomized experiments with one factor, graphical analysis, one way analysis of variance, multiple comparisons, block designs and Latin squares, random effects, estimation of missing values, factorial designs with more than one factors, main effects and interactions, random effects models and mixed models. 2f factorial designs, 22 and 23 factorials, factorial designs and regression models. Blocking and confounding, fractional designs, resolution of a fractional design. 3f factorial designs, linear and quadratic terms of main effects. Use of the Minitab statistical package for case studies.

**Procedures and Techniques for Continuous Improvement of Quality**

Off-line quality improvement and control techniques, the usefulness of off-line quality control methods, the Taguchi approach for experimental design and off-line quality control, Orthogonal factorial arrays (designs), interaction tables, factorial designs for off-line experiments. Performance measures, the Taguchi approach for selecting performance measures, variability-control factors, target-control factors, data transformation in the performance measures approach, Box-Cox transformation. Taguchi’s orthogonal arrays, the multi-level formation, dummy-level, and virtual level techniques, the technique of composition and confounding, selecting optimal factor levels. Tolerance design, Taguchi’s approach to tolerance design and analysis. Response surface methods and designs, special response surface designs, optimal experimental designs, the evolutionary operation method. Continuous improvement techniques, risk analysis, the Deming circle. Use of the Minitab statistical package for case studies.

**Learning Outcomes:** After completing this module, students are expected to be able to,

1. discriminate between random (common) causes and assignable (special) causes which are present in manufacturing process.
2. understand how Statistical Process Control (SPC) can be used to monitor a manufacturing process
and improve its performance.

3. apply quality control tools (control charts for variables and attributes, estimation of process capability indices) in a manufacturing process so as to achieve an optimum process level in terms of target value and variability.

4. understand and exploit a six-sigma improvement model.

5. indentify single-factor and multi-factor experiments as well as complete block experiments.

6. use experimental design theory (one or two way ANOVA, Latin squares etc) to investigate the effects of one or more factors over a response variable (characteristic of interest).

7. discriminate between random and fixed effects models. Explain when each of them is applicable in a real data problem.

8. manipulate full and fractional factorial designs to perform statistical analyses of experiments involving factors with two or three levels.

9. employ Taguchi’s loss function approach to establish a value base for the development of quality products.

10. use Taguchi’s philosophy for off-line quality control by setting up appropriate inner and outer array designs and by analysing relevant performance measures, in order to determine the appropriate production process conditions so that the process and/or the final product is made robust against the effects of uncontrollable (noise) factors.

11. exploit Taguchi’s lists of orthogonal arrays for setting up economical designs for experiments requiring the study of many multi-level factors.

12. understand and apply response surface methodology for modelling the shape of a process’ or a product’s response.

13. apply the methods of Evolutionary Operation (EVOP).

Subjects covered:
1. Statistical Process Control
2. Design and Analysis of Experiments
3. Procedures and Techniques for Continuous Improvement of Quality

Evaluation: Completion of five written assignments during the academic year, the average grade of which constitute a 30 percent of each student’s grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students’ final course grade.

DIP61 Special Topics on Quality
Module code: DIP61
ECTS Credit Points: 24
Module Type: Compulsory
Year: 2nd
Language: Greek
Module general description:
Quality and the Environment
Description of the main environmental issues facing organizations around the world -historical background and new developments.
International legal framework for environmental issues. Analysis of the EU environmental policies, the Maastricht and Amsterdam treaties. The Greek legal framework for environment protection and proposed measures.
Recent developments on the Quality Environmental Standards (EMAS, ISO 14000, Responsible Care, etc). Introduction to the new ISO 14000, main issues, its structure and prerequisites for application.
Analysis of EMAS, main issues, its structure and prerequisites for application.
Auditing an Environmental Standard (audit mechanisms and audit bodies, audit methodology, actual audit procedures)
Quality Systems Audit
Introduction to Quality Assurance, and to quality assurance standards (terms and definitions). Analysis of the ISO 9000 standard and its documentation (quality policy, quality manual, documents and files, quality planning). Auditing Quality Assurance Systems (terms and definitions, types of audits, the term conformance to requirements). Preparation and management of a Quality Audit (purpose of audit, information gathering, meetings arrangement, audit checklists, etc). Preparation of an external quality
subjects covered:
1. Quality and the Environment
2. Quality System Audits
3. Organization of Calibration and Testing Laboratories
4. Reliability and Maintenance

Evaluation: Completion of five written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

Enviromental Design of Cities and Buildings MSc

Description
This Course offers specialization on the Protection of the Environment Operations for those working in the field of Building and Landscape Control and Management.

Requirements
Applicants to the Environmental Design of Cities and Buildings course must possess an undergraduate degree in a related field from a Greek Public University, a Technical Educational Institute or an equivalent degree.

The equivalency to a Greek qualification is recognized by the Hellenic NARIC (Hellenic National Academic Recognition and Information Center / DOATAP), which verifies the validity and equivalence of the acquired degree with those awarded by Greek institutions of higher education. Applicants must possess documents issued by DOATAP. A list of recognised degrees is available from DOATAP, and a prerequisite course list for applicants to HOU courses may be given by the HOU's registration department.

University graduates must have been members of the Technical Chamber of Greece for at least four or eight years according to the field of their undergraduate study.

Graduates of universities must have received their degree four years prior to draw date and Technical Educational Institute graduates must have received their degree six years prior to draw date.

All candidates must provide evidence of their ability in a foreign language, preferably English. Experience in Building, Space and / or Urban design and applications is considered necessary for the successful completion of the course.
Minimum study duration
3 academic years

ECTS credit points
120

Learning Material
Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise. Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

Contact
Registry
Tel.: 2610 367343 - Fax: 2610 367350 - e-mail: psp@eap.gr
Call Centre for General Inquiries
Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr

Course Structure
1st Year
PSP50 Introduction to Natural and Human Environment
PSP51 Design, Environmental Consequences and Methods for their Evaluation

2nd Year
PSP60 Environmental Design of Cities and Open Spaces
PSP61 Sustainable Design of Buildings and Surroundings

DISSERTATION

The master's degree is awarded upon completion of 4 course modules and a dissertation.

Course Modules

PSP50 Introduction to Natural and Human Environment
Module code: PSP50
ECTS Credit Points: 24
Module Type: Compulsory
Year: 1st
Language: Greek
Learning Outcomes: After completing this module (PSP50 / Introduction to the Natural and Human Environment), students will be expected to be able to,
[KNOWLEDGE]
- describe the structure of the ecological systems and the components of natural environment (soil, water, atmosphere) of an area as well as the categories of ecosystems and flora of Mediterranean
- report the diachronic effects of settlements in the environmental landscape of Greece and Mediterranean
- describe the ways of constitution and trends of organization of land uses in the urban space and the components of transport, water supply - sewerage and energy networks
- describe the energy problem, the conventional, the renewable and alternative forms of energy and the methods of saving energy
- describe the basic human activities that pollute the environment, their interactions as well as their
impacts in the natural recipients
- describe the main pollutants of atmosphere, water and soil as well as the types and character-istics of solid waste and noise
- report the general principles of International Environmental Legislation and the main legis-la-tive regulations and means of protection of environment in Greece

[UNDERSTANDING - IMPLEMENTATION]
- explain the role of plants in the functioning of the natural environment
- distinguish the interactions of the components of the environment
- relates the evolution of the population to the changes of economic activities and the trans formations of urban areas
- describe the advantages and disadvantages of various applications of transportation, water supply, solid waste and energy networks
- explain environmental problems arising from the use of conventional energy sources
- explain the advantages and disadvantages as well as the environmental impacts of the use of renewable and alternative energy sources
- analyse the basic mechanisms of environmental pollution and production of waste and their negative impacts on the environment and human health
- distinguish the key problems of implementation of the International Environmental Legislation and comment on the objectives, principles and actions of Community Environmental Policy

[RESOLVE PROBLEMS THROUGH THE TRANSFER OF EXISTING KNOWLEDGE AND SKILLS OBTAINED TO NEW SITUATIONS]
- assess the environmental quality of a specific area, taking into account the situation of the respective components of the natural and human environment
- propose methods of saving energy in a specific area and the use of most appropriate renew able and alternative energy sources, taking into consideration the respective advantages, dis-advantages and environmental impacts and the results of the implementation of the most widely used methods at international level
- assess the environmental quality of a specific area on the basis of the thresholds of different pollutants

Subjects covered:
1. The natural environment
2. The manmade environment
3. Energy Issues
4. Environmental issues
5. Legal framework and protection institutions

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**PSP51 Design, Environmental Consequences and Assessment Methods**
Module code: PSP51
ECTS Credit Points: 24
Module Type: Compulsory
Year: 1st
Language: Greek

Subjects covered:
1. Urban and Regional Planning
2. Policies for the Urban Environment
3. Evaluation and Assessment of Environmental Consequences

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**PSP60 Environmental Design of Cities and Open Spaces**
Module code: PSP60
ECTS Credit Points: 24
Module Type: Compulsory
Year: 2nd
Language: Greek

Learning Outcomes: After the completion of PSP60/ Environmental Design of Cities and Buildings, students are expected to have acquired the following learning skills,
- Understanding of the building methods of humans, depending on the climate, i.e. the conditions of light, temperature, rainfall and wind
- Knowledge of construction ways, using locally available materials and tools
- Understanding of the transitions that occur in cases of climate shifts or changes in the available materials
- Understanding of the way that religion, social habits or economy have influenced architectural solutions and residential complexes
- Understanding of the way of exploiting the knowledge of the natural environment towards a better living and the design and development of settlements and buildings
- Ability to determine the relationship of settlements with the wider geographic area
- Ability to evaluate buildings in relation to local materials, environment and climate
- Understanding of the absolute adaptation of traditional buildings and settlements in the terrain
- Understanding of the articulation between buildings and the urban fabric
- Ability to evaluate problems and opportunities arising during the transition of traditional settlements in the modern phase of development
- Understanding of the factors shaping the microclimate in relation to the morphological characteristics of the city
- Ability to formulate proposals for reducing energy consumption and improvement of the thermal and visual comfort in cities
- Capacity analysis of local micro-climatic differences and suggesting proposals and environmental interventions in urban centers
- Identification of environmental impacts caused by construction activity
- Definition of basic synthetic requirements for the design of environmentally friendly buildings
- Evaluation of building materials on their environmental impact
- Understanding of the concepts of reuse and recycling of construction materials
- Ability of suggesting solutions to water saving practices and addressing flooding problems
- Establishing criteria for the assessment of buildings
- Ability to document the value cost of environmental deterioration and to propose incentives for improving the environmental performance of buildings
- Understanding of the importance of the urban fabric's adaptation in the natural environment and the effects of ignorance or disregard of the natural phenomena
- Ability of selecting specialist partners so as to use expert knowledge on urban design
- Understanding the need for adaptation of the development of human environment in the coherent natural environment
- Understanding of the concept of landscape for the design of outdoor spaces
- Understanding of the design parameters of large-scale landscape
- Identification of general and specific categories of outdoor public spaces
- Identification of the need to form modules and networks of open spaces
- Formulating of proposals and guidelines to protect and restore natural units
- Identification of problems of outdoor spaces with natural and artificial elements and the assessment of objectives, guidelines and design standards
- Evaluation of the ecosystemic function of the city based on the mechanisms of natural ecosystems
- Recognition of the impact of individual components that implement the ecosystemic function
- Ability to orientate everyday practices towards the broader direction of sustainable development

Subjects covered:
1. Environmental technology
2. Sustainable Urban Design Principles

Evaluation: Completion of six written assignments during the academic year, the average grade of
which constitute a 30 percent of each student’s grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students’ final course grade.

_PSP61 Sustainable Design of Buildings and Sites_

**Module code:** PSP61  
**ECTS Credit Points:** 24  
**Module Type:** Compulsory  
**Year:** 2nd  
**Language:** Greek

**Learning Outcomes:** After the completion of PSP61: bioclimatic design of buildings and open air spaces around building, students are expected to have acquired the following learning skills,
- Understanding of climate and its influence on the design and construction of buildings.
- Identification of microclimate elements and microclimate transformation mechanisms as well as ways of improving the microclimate of a certain plot.
- Understanding of the factors and mechanisms involved in configuring thermal comfort sensation.
- Ability of selecting and using thermal comfort diagrams as well as applying the results on improving the design of buildings.
- Ability of using solar diagrams and understanding the ways of utilizing solar gains according to orientation.
- Understanding of the mechanisms of thermal transfer as well as the thermal performance of opaque and transparent building elements.
- Comprehension of thermal inertia of buildings and its influence on thermal performance of buildings.
- Comprehension of methods for intercepting solar radiation.
- Utilizing solar radiation for heating of buildings through passive solar energy heating systems.
- Utilizing solar radiation for cooling of buildings through passive solar energy cooling systems.
- Understanding of the thermal balance of buildings and its relation to thermal comfort conditions.
- Understanding of natural lighting physics, perception procedure and vision mechanism.
- Ability in designing openings in buildings considering suitable size, position and distribution on the facades.
- Comprehension of systems and techniques for improving visual comfort in interior spaces as well as capacity in selecting suitable materials and in architectural design in order to achieve maximum use of daylight.
- Comprehension of the basic types of tools for environmental design as well as their application potential.
- Comprehension of the structure of several software applications on environmental analysis of buildings, as well as ability of selecting per case.
- Ability in architectural and constructural analysis of buildings, as well as in defining their central idea (concept- parti).
- Comprehension of methods applied on rehabilitation of spaces and dealing with the impact of prior uses.
- Comprehension of environmental problems in urban spaces and especially in residential areas.
- Ability in evaluating rehabilitation techniques and proposing new uses compatible with the environmental conditions.
- Comprehension of rehabilitation techniques in urban building blocks and streets.
- Comprehension of water recycling technologies in order to preserve natural resources, as well as comprehension of methodologies for private and public open air spaces upgrade within the urban fabric.
- Identification of the parameters involved in landscape design and infrastructure projects design, in order to achieve environmental efficiency.
- Understanding and evaluation of the effects of planting and ability in selecting and designing proper planting in relation to its environmental impact.
- Comprehension of design and construction of artificial elements and urban equipment in open air spaces.

**Subjects covered:**
1. Sustainable Building Design  
2. Small Scale Urban Restoration Issues
Advanced studies in Physics MSc

Description
The Course aims to offer Natural Science Graduates advanced knowledge on the physical-chemical properties of solid material and surfaces, and allied scientific fields.

Requirements
Applicants to the Advanced Studies in Physics course must possess an undergraduate degree in Physics from a Greek Public University, a Studies in Natural Sciences degree from the Hellenic Open University course or an equivalent degree.
The equivalency to a Greek qualification is recognized by the Hellenic NARIC (Hellenic National Academic Recognition and Information Center / DOATAP), which verifies the validity and equivalence of the acquired degree with those awarded by Greek institutions of higher education. Applicants must possess documents issued by DOATAP. A list of recognised degrees is available from DOATAP, and a prerequisite course list for applicants to HOU courses may be given by the HOU’s registration department.
Good knowledge of English is necessary for the successful participation in the course.

Minimum study duration
3 academic years

ECTS credit points
120

Learning Material
Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise.
Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

Contact
Registry
Tel.: 2610 367329 - Fax: 2610 367350 - e-mail: psf@eap.gr

Call Centre for General Inquiries
Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr

Course Structure
1st Year
PSF50 Advanced Studies in Physics
PSF51 Mathematical Methods of Physics

2nd Year
PSF60 Advanced Studies in Quantum Physics
The master's degree is awarded upon completion of 4 course modules and a dissertation.

<table>
<thead>
<tr>
<th>Course Modules</th>
<th>Code</th>
<th>ECTS</th>
<th>Year</th>
<th>Language</th>
<th>Subjects Covered</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PSF50 Advanced Studies in Classical Physics</strong></td>
<td>PSF50</td>
<td>24</td>
<td>1st</td>
<td>Greek</td>
<td>1. Advanced Studies in Classical Mechanics  2. Advanced Studies in Classical Electrodynamics</td>
<td>Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.</td>
</tr>
<tr>
<td><strong>PSF51 Mathematical Methods in Physics</strong></td>
<td>PSF51</td>
<td>24</td>
<td>1st</td>
<td>Greek</td>
<td>1. Mathematical Methods in Physics  2. Mathematical Methods of Experimental Data Analysis</td>
<td>Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.</td>
</tr>
<tr>
<td><strong>PSF60 Advanced Studies in Quantum Physics</strong></td>
<td>PSF60</td>
<td>24</td>
<td>2nd</td>
<td>Greek</td>
<td>1. Comprehend and apply the laws of quantum physics to the real world.  2. Acquire technical skills for solving complex problems.  3. Analyze a variety of exactly solvable systems involving bound states and scattering processes.  4. Develop and apply approximation methods to the study of systems arising in atomic, molecular, nuclear and solid state physics.  5. Compare the theoretical predictions to the experimental results.  6. Evaluate modern results (those that are described in published scientific journals) based on extensive knowledge of the fundamental laws of quantum physics.</td>
<td>Completion of six written assignments during the academic year, the average grade of</td>
</tr>
</tbody>
</table>
which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**PSF61 Structure of Matter and the Universe**

**Module code:** PSF61  
**ECTS Credit Points:** 24  
**Module Type:** Optional  
**Year:** 2nd  
**Language:** Greek

**Subjects covered:**
1. Elementary Particles  
2. Nuclei  
3. Solid State  
4. Astrophysics

**Evaluation:** Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**PSF62 Science of Materials and Devices**

**Module code:** PSF62  
**ECTS Credit Points:** 24  
**Module Type:** Optional  
**Year:** 2nd  
**Language:** Greek

**Subjects covered:**
1. Metals-Semiconductors  
2. Microelectronics  
3. Sensors and Bio-Sensors  
4. Lasers and Optical Electronics  
5. Material Science  
6. Polymer Science

**Evaluation:** Completion of written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**Waste Management MSc**

**Description**
The aims of the course are to provide specialized knowledge on waste management techniques and purification processes and to develop understanding of the complex environmental systems, which are affected by waste disposal.

**Requirements**
Applicants to the Waste Management course must possess an undergraduate degree in a related field from a Greek Public University, a Technical Educational Institute or an equivalent degree. The equivalency to a Greek qualification is recognized by the Hellenic NARIC (Hellenic National Academic Recognition and Information Center / DOATAP), which verifies the validity and equivalence of the acquired degree with those awarded by Greek institutions of higher education. Applicants must possess documents issued by DOATAP. A list of recognised degrees is available from DOATAP, and a prerequisite course list for applicants to HOU courses may be given by the HOU's registration department. All candidates must provide evidence of their ability in a foreign language, preferably English.

**Minimum study duration**
3 academic years

ECTS credit points

120

Learning Material
Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise. Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

Contact

Registry
Tel.: 2610 367332 - Fax: 2610 367350 - e-mail: dia@eap.gr

Call Centre for General Inquiries
Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr

Course Structure

1st Year
DIA50 Natural Environment and Pollution
DIA51 Solid Waste Management

2nd Year
DIA60 Liquid Waste Management
DIA61 Air Pollution Management

DISSERTATION

The requirements in order to obtain the degree are the following:
1. The students must attend and pass four courses of the programme.
2. The students must submit a dissertation. The examining committee of the dissertation consists of three members of the Academic Research Staff or tutors of the programme.

Course Modules

DIA50 Natural Environment and Pollution
Module code: DIA50
ECTS Credit Points: 24
Module Type: Compulsory
Year: 1st
Language: Greek

Module general description:
The soil environment as waste receiver

The atmosphere as waste receiver

Waste disposal and environmental impact

Subjects covered:
1. The terrestrial environment as waste recipient
2. The marine environment as waste recipient
3. The atmosphere as waste recipient
4. Waste disposal and its impacts on the environment

Evaluation: Completion of five written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

DIA51 Solid Waste Management
Module code: DIA51
ECTS Credit Points: 24
Module Type: Compulsory
Year: 1st
Language: Greek

Module general description:
Residential and other nonhazardous wastes

Hazardous wastes

Solid agricultural wastes

Learning Outcomes: With this Thematic units the students acquire an integrated knowledge of solid waste management issues.
In particular, they become capable to:
- Determine the quantitative and qualitative characteristics of solid wastes generated by municipalities and productive activities such as agriculture and mining
- Follow the relevant legislation, but also the processes that generate it and the current legal trends
- Design the basic characteristics of a solid waste collection system
- Design the basic characteristics of a recycling system
- Design the basic characteristics of a sanitary landfill
- Assess the economic and environmental issues of alternative waste treatment systems (mechanical separation, thermal methods with an emphasis on incineration, biological methods such as composting and anaerobic digestion) and to compare alternative management scenario that are based on these technologies
- Evaluate construction and demolition waste, as well as mining waste management issues
- Evaluate special waste management issues (car tyres, lamps, oils, batteries, etc.)
- Evaluate the characteristics that render a certain waste hazardous (e.g. reactivity, corrosivity, explosivity, toxicity, radiation etc)
- Propose methods for hazardous waste management (e.g. stabilization/solidification)
- Propose methods of contaminated soils remediation
- Propose methods of agricultural and animal breeding waste management
- There is a special emphasis on the prospect of valorization of solid wastes for the production of energy and useful materials

**Subjects covered:**
1. Household and other nonhazardous wastes
2. Hazardous wastes
3. Solid agricultural wastes

**Evaluation:** Completion of five written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**DIA60 Liquid Waste Management**

- **Module code:** DIA60
- **ECTS Credit Points:** 24
- **Module Type:** Compulsory
- **Year:** 2nd
- **Language:** Greek

**Module general description:**

- **Municipal wastewaters**

- **Industrial wastewaters**

- **Agricultural wastewaters**

**Subjects covered:**
1. Municipal liquid wastes
2. Industrial liquid wastes
3. Agricultural liquid wastes

**Evaluation:** Completion of five written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**DIA61 Air Pollution Management**
Module code: DIA61
ECTS Credit Points: 24
Module Type: Compulsory
Year: 2nd
Language: Greek
Module general description:
Atmospheric pollutants and emission control technology I

Atmospheric pollutants and emission control technology II
Analytical methods for the identification and measurement of atmospheric pollutants. Air quality and atmospheric pollution indicators. Telescopic detection of atmospheric pollutants,

Subjects covered: Atmospheric pollutants and technology of emission control

Evaluation: Completion of five written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

Construction Management MSc

Description
The course aims to train professional engineers to move into higher management positions within the construction services industry.

Requirements
Applicants to the Engineering Project Management course must possess an undergraduate degree in a related field from a Greek Public University, a Technical Educational Institute or an equivalent degree. The equivalency to a Greek qualification is recognized by the Hellenic NARIC (Hellenic National Academic Recognition and Information Center / DOATAP), which verifies the validity and equivalence of the acquired degree with those awarded by Greek institutions of higher education. Applicants must possess documents issued by DOATAP. A list of recognised degrees is available from DOATAP, and a prerequisite course list for applicants to HOU courses may be given by the HOU's registration department.
All candidates must provide evidence of their ability in a foreign language, preferably English.

Minimum study duration
3 academic years

ECTS credit points
120

Learning Material
Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise. Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

Contact
Registry
Tel.: 2610 367329 - Fax: 2610 367350 - e-mail: dxt@eap.gr
Course Structure

1st Year
DCHT50 Principles of Construction Project Organization and Management
DCHT51 Construction Project Analysis and Design

2nd Year
DCHT60 Construction Law and Construction Safety
DCHT61 Construction Economics and Management

DISSERTATION
The master's degree is awarded upon completion of 4 course modules and a dissertation.

Course Modules

**DCHT50 Principles of Construction Project Organization and Management**
Module code: DCHT50
ECTS Credit Points: 24
Module Type: Compulsory
Year: 1st
Language: Greek
Subjects covered:
1. Principles of business administration
2. Construction site organization and management
3. Information systems in construction management
Evaluation: Completion of five written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade. More information is available

**DCHT51 Construction Project Analysis and Design**
Module code: DCHT51
ECTS Credit Points: 24
Module Type: Compulsory
Year: 1st
Language: Greek
Subjects covered:
1. Analysis and design of structures
2. Principles of construction technologies
3. Building materials and construction equipment
Learning Material: The HOU publications can be viewed
Evaluation: Completion of five written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade. More information is available

**DCHT60 Construction Law and Construction Safety**
Module code: DCHT60
ECTS Credit Points: 24
Module Type: Compulsory
Year: 2nd
Language: Greek

Subjects covered:
1. Construction Law
2. Construction safety
3. Environmental impacts of construction projects and construction sites

Evaluation: Completion of five written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**DCHT61 Construction Economics and Management**

Module code: DCHT61
ECTS Credit Points: 24
Module Type: Compulsory
Year: 2nd
Language: Greek

Subjects covered:
1. Engineering economics
2. Construction planning and estimation
3. Construction project scheduling and control

Evaluation: Completion of five written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**Earthquake Engineering and Seismic Resistant Structures MSc**

Description
The scope of the programme is to provide specialized studies and knowledge to Civil Engineers in the area of Earthquake Engineering and Seismic-Resistant Structures, which will contribute to the elevation of the technical potential of the country educationally and professionally. The course provides the necessary theoretical background in seismology and soil and structural dynamics and emphasizes seismic design and repair and strengthening of building structures made of reinforced concrete, steel or other materials.

Requirements
Applicants to the Earthquake Engineering and Seismic-Resistant Structures course must possess an undergraduate degree in a related field from a Greek Public University, a Technical Educational Institute or an equivalent degree.

The equivalency to a Greek qualification is recognized by the Hellenic NARIC (Hellenic National Academic Recognition and Information Center / DOATAP), which verifies the validity and equivalence of the acquired degree with those awarded by Greek institutions of higher education. Applicants must possess documents issued by DOATAP. A list of recognised degrees is available from DOATAP, and a prerequisite course list for applicants to HOU courses may be given by the HOU's registration department.

The knowledge of a foreign language, preferably English, certified by the submission of relevant documents, will considerably help the students to follow the programme.

Minimum study duration
3 academic years

ECTS credit points
120
Learning Material

Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise. Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

Contact

Registry
Tel.: 2610 367332 - Fax: 2610 367350 - e-mail: sma@eap.gr

Call Centre for General Inquiries
Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr

Course Structure

1st Year
SMA50 Dynamic Analysis of Structures
SMA51 Technical Seismology and Soil Dynamics

2nd Year
SMA60 Design of Seismic - Resistant Structures
SMA61 Seismic Damage, Repair and Strengthening of Structures

DISSERTATION

Students are awarded a Masters degree upon successful completion of four modules and a dissertation.

Course Modules

**SMA50 Dynamic Analysis of Structures**
Module code: SMA50
ECTS Credit Points: 24
Module Type: Compulsory
Year: 1st
Language: Greek

Module general description:
I. Basic characteristics of a structural dynamics problem: dynamic loads, structural modelling, dynamic response. Analysis of free vibrations of a single degree of freedom system and determination of its response to harmonic or transient forces in the time or frequency domain taking also into account the effect of viscous damping. Derivation of the equations of motion of a multi degree of freedom system (structure) with the aid of the mass, stiffness and damping matrices of that system. Determination of natural frequencies and modal shapes of the structure.
Determination of the dynamic response of multi degree of freedom systems (structures) by the modal superposition method or by the stepwise time integration of the equations of motion. The dynamic forces may be harmonic or general transient ones including seismic forces in conjunction with rigid soil. Concept of the response spectra and the design spectra. Determination of the maximum structural seismic response by using modal superposition in conjunction with response or design spectra.
II. Determination of the dynamic response of inelastic multi degree of freedom systems (structures) either by stepwise time integration of the equations of motion or by other special methods. Definition and computation of ductility factor, damage index and behaviour factor of a structure.
Description and application of the Greek Seismic Code and Eurocode 8 for the seismic design of a simple building structure. Influence of the soil-structure interaction phenomenon on the structural dynamic response. Use of seismic base isolation in structures to reduce the seismic stresses.
III. Definition of random variables and random processes in structural dynamics. Mean value and
standard deviation. Determination of the stochastic dynamic response of linear single and multi degree of freedom systems (structures) subjected to random loading. Determination of the stochastic dynamic response of simple non-linear structures or simple continuous systems under random loading. Modelling of random fields and analysis of the structural seismic vulnerability with the aid of stochastic structural dynamics.

**Learning Outcomes:** After the successful completion of the above course, the student will be able to,

1) Describe problems of free and forced vibrations of single and multi degrees of freedom structures, under elastic or inelastic material behavior and determine their response to dynamic and especially seismic loads under deterministic or stochastic conditions of analysis.

2) Distinguish and compute the mass, stiffness and damping matrices of a structure, use the above for the computation of the dynamic response of this structure with the aid of the method of superposition of modes-response spectra or the method of the time integration of the equations of motion and finally apply all the above in the framework of seismic codes for the design of a structure.

3) Analyse a problem of structural dynamics into subproblems (e.g., determination of modal frequencies and shapes, or modeling reduction of a complex system into a simpler one or use of the substructuring method in soil-structure interaction), synthesize appropriately subproblems (e.g., use of the method of modal superposition), evaluate models of systems and methods of determination of dynamic response of structures and assess analysis and synthesis results as they are related to practice.

**Subjects covered:**
1. Structural Dynamics
2. Special Topics in Structural Dynamics and Earthquake Engineering
3. Stochastic Structural Dynamics

**Evaluation:** Completion of five written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

---

**SMA51 Technical Seismology and Soil Dynamics**

**Module code:** SMA51  
**ECTS Credit Points:** 24  
**Module Type:** Compulsory  
**Year:** 1st  
**Language:** Greek

**Module general description:**

**Technical Seismology**

**Generation and Propagation of Seismic Waves**
Dynamic theory of elasticity. Stress and strain. Hooke’s law between stresses and strains. Equations of motion in terms of displacements. Fracture mechanics of brittle materials and seismic faults. Propagation, reflection and diffraction of seismic waves. Primary (P), Shear (S), Rayleigh (R) and Love (L) waves in the full space or the half-space soil medium under homogeneous or non-homogeneous conditions. Material and geometrical damping in soils.

**Dynamics of Soils and Foundations**
Basic concepts from soil mechanics and wave propagation. Laboratory and field tests for the determination of soil properties. Soil behaviour under monotonic and cyclic shear deformation. Methods for determining the dynamic response of soils and foundations. Seismic motions of soil and site effects. Consolidation and liquefaction of soils. Seismic design of slopes, dams and retaining walls. Seismic design of foundations and piles.

**Learning Outcomes:** On successful completion of the module, students will have understood the nature of the earthquakes and the response of soil formations during the seismic motion. In this way, they will be able to assess the seismic risk of civil engineering works, an important issue for the seismic design of structures. More specifically, the following subjects will be studied: the fracture on the causative fault and the generation of the earthquakes; the recording of the seismic motion and the
measure of its intensity; the generation and the propagation of the seismic waves; the basic principles of seismic hazard analyses; the seismic response of soil formations; the effect of the ground response on the seismic motion that is applied at the base of the structures; and the seismic design of natural slopes, dams, embankments, retaining walls and shallow and deep foundations.

**Subjects covered:**
1. Technical Seismology
2. Generation and Propagation of Seismic Waves
3. Dynamics of Soils and Foundations

**Evaluation:** Completion of five written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

---

**SMA60 Design of Seismic-Resistant Structures**

**Module code:** SMA60  
**ECTS Credit Points:** 24  
**Module Type:** Compulsory  
**Year:** 2nd  
**Language:** Greek

**Module general description:**

**Seismic Design of Reinforced Concrete Structures**

**Seismic Design of Steel Structures**

**Composite Structures**

**Learning Outcomes:** On successful completion of the module, students will be able to,

1. Understand the basic principles for the seismic design of reinforced concrete structures.
2. Understand the basic characteristics of the behaviour of reinforced concrete members under cyclic forces and displacements.
3. Know basic principles for the proper planning of earthquake-resistant reinforced concrete structures.
4. Determine proper detailing for reinforced concrete members under cyclic loading.
5. Understand the basic principles for the seismic design of steel structures.
6. Know the mechanical characteristics of steel, steel beams, columns and connections under cyclic loading.
7. Apply proper detailing rules for different types of steel structures under cyclic loading.
8. Explain 2nd order effects in the seismic response of steel structures.
9. Understand the role of diaphragms, semi-rigid connections, axial forces and foundations in the seismic response of steel structures.
10. Understand the basic principles for the seismic design of steel-concrete composite structures.
11. Explain the role of shear connection in composite structures.
12. Design composite beams, slabs and columns.

**Subjects covered:**
1. Seismic Design of Reinforced Concrete Structures
2. Seismic Design of Steel Structures
3. Seismic Design of Composite Structures

**Evaluation:** Completion of five written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

---

**SMA61 Seismic Damage, Repair and Strengthening of Structures**

**Module code:** SMA61  
**ECTS Credit Points:** 24  
**Module Type:** Compulsory  
**Year:** 2nd  
**Language:** Greek  

**Module general description:**

Assessment of Seismic Damages, Repairs and Strengthening of Reinforced Concrete Buildings


Assessment of Seismic Damages, Repairs and Strengthening of Traditional and Monumental Buildings

Basic principles for the repair, strengthening and restoration of traditional and monumental buildings made of (mainly) masonry or wood. Methods of analysis and design as influenced by the law governing traditional and monumental buildings. Mechanical characteristics of building materials (stone, brick, mortar, wood). Traditional ways of analysing, designing and building these buildings. Typical damages in masonry walls under in-plane or lateral seismic loads. Assessment of damages and methods for repair, strengthening and restoration. Description of a typical repair, strengthening and restoration methodology for a monumental masonry structure.

**Subjects covered:**

1. Seismic Damage Evaluation, Repair and Strengthening of Reinforced Concrete Buildings  
2. Seismic Damage Evaluation, Repair and Strengthening of Traditional and Monumental Buildings

**Evaluation:** Completion of five written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

---

**Advanced studies in Physics MSc**

**Description**

The Course aims to offer Natural Science Graduates advanced knowledge on the physical-chemical properties of solid material and surfaces, and allied scientific fields.

**Requirements**

Applicants to the Advanced Studies in Physics course must possess an undergraduate degree in Physics from a Greek Public University, a Studies in Natural Sciences degree from the Hellenic Open University course or an equivalent degree. The equivalency to a Greek qualification is recognized by the Hellenic NARIC (Hellenic National Academic Recognition and Information Center / DOATAP), which verifies the validity and equivalence of the acquired degree with those awarded by Greek institutions of higher education. Applicants must possess documents issued by DOATAP. A list of recognised degrees is available from DOATAP, and a
prerequisite course list for applicants to HOU courses may be given by the HOU's registration
department.
Good knowledge of English is necessary for the successful participation in the course.

**Minimum study duration**
3 academic years

**ECTS credit points**
120

**Learning Material**
learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise. Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

**Contact**
Registry
Tel.: 2610 367329 - Fax: 2610 367350 - e-mail: psf@eap.gr
Call Centre for General Inquiries
Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr

**Course Structure**

1st Year
PSF50 Advanced Studies in Physics
PSF51 Mathematical Methods of Physics

2nd Year
PSF60 Advanced Studies in Quantum Physics
PSF61 Structure of Matter and Universe
PSF62 Science of Materials and Devices

**DISSEMINATION**

The master's degree is awarded upon completion of 4 course modules and a dissertation.

**Course Modules**

*PSF50 Advanced Studies in Classical Physics*
**Module code:** PSF50  
**ECTS Credit Points:** 24  
**Module Type:** Compulsory  
**Year:** 1st  
**Language:** Greek  
**Subjects covered:**
1. Advanced Studies in Classical Mechanics
2. Advanced Studies in Classical Electrodynamics

**Evaluation:** Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.
**PSF51 Mathematical Methods in Physics**

Module code: PSF51  
ECTS Credit Points: 24  
Module Type: Compulsory  
Year: 1st  
Language: Greek  

**Subjects covered:**
1. Mathematical Methods in Physics  
2. Mathematical Methods of Experimental Data Analysis  

**Evaluation:** Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**PSF60 Advanced Studies in Quantum Physics**

Module code: PSF60  
ECTS Credit Points: 24  
Module Type: Compulsory  
Year: 2nd  
Language: Greek  

**Learning Outcomes:** Upon completion of the course the student is able to,  
1. Comprehend and apply the laws of quantum physics to the real world.  
2. Acquire technical skills for solving complex problems.  
3. Analyze a variety of exactly solvable systems involving bound states and scattering processes.  
4. Develop and apply approximation methods to the study of systems arising in atomic, molecular, nuclear and solid state physics.  
5. Compare the theoretical predictions to the experimental results.  
6. Evaluate modern results (those that are described in published scientific journals) based on extensive knowledge of the fundamental laws of quantum physics.  

**Subjects covered:**  
1. Non-Relativistic Quantum Mechanics  
2. Quantum Chemistry  

**Evaluation:** Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**PSF61 Structure of Matter and the Universe**

Module code: PSF61  
ECTS Credit Points: 24  
Module Type: Optional  
Year: 2nd  
Language: Greek  

**Subjects covered:**  
1. Elementary Particles  
2. Nuclei  
3. Solid State  
4. Astrophysics  

**Evaluation:** Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**PSF62 Science of Materials and Devices**

Module code: PSF62  
ECTS Credit Points: 24  
Module Type: Optional
**Year:** 2nd  
**Language:** Greek  
**Subjects covered:**  
1. Metals-Semiconductors  
2. Microelectronics  
3. Sensors and Bio-Sensors  
4. Lasers and Optical Electronics  
5. Material Science  
6. Polymer Science  
**Evaluation:** Completion of written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

---

**Catalysis and Environmental Protection MSc**

**Description**  
The programme is mainly addressed to Chemists, Chemical Engineers, Physicists, Environmental Scientists and Engineers as well as to Geologists and Materials Scientists and Engineers. The main goal of the program is the detailed study of the catalytic science and technology and their applications in producing clean energy and in the environmental protection. The graduates is expected to be able to contribute to the development of novel catalysts and catalytic processes (or to the improvement of existing ones) related to the catalytic destruction of pollutants and to the production of environmentally friendly fuels.

**Requirements**  
Applicants to the Catalysis and Environmental Protection course must possess an undergraduate degree in a related field from a Greek Public University, a Technical Educational Institute or an equivalent degree.  
The equivalency to a Greek qualification is recognized by the Hellenic NARIC (Hellenic National Academic Recognition and Information Center / DOATAP), which verifies the validity and equivalence of the acquired degree with those awarded by Greek institutions of higher education. Applicants must possess documents issued by DOATAP. A list of recognised degrees is available from DOATAP, and a prerequisite course list for applicants to HOU courses may be given by the HOU's registration department.  
All candidates must provide evidence of their ability in a foreign language, preferably English.

**Minimum study duration**  
3 academic years

**ECTS credit points**  
120

**Learning Material**  
Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise.  
Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

**Contact**
Course Structure

1st Year
KPP50 Catalysis
KPP51 Catalytic Surfaces

2nd Year
KPP60 Pollution - Energy and 'De pollution' technologies
KPP61 Environmental Catalysis

DISSERTATION

Regulations
Students have the right to register for at most two courses per year. Concerning the first year they may register either for both the courses KPP50 and KPP51 or for the course KPP50 and then (next year) for the course KPP51. In order to register for a second year course they must have passed both the aforementioned courses. Concerning the second year courses the students may register either for both the courses KPP60 and KPP61 or for the course KPP60 and then (next year) for the course KPP61.

Requirements for the acquisition of the master's degree
1. The students must attend and pass the aforementioned four courses of the programme.
2. The students must submit a dissertation. The examining committee of the dissertation consists of three members of the Academic Research Staff or tutors of the programme.

Course Modules

KPP50 Catalysis
Module code: KPP50
ECTS Credit Points: 24
Module Type: Compulsory
Year: 1st
Language: Greek
Learning Outcomes: After completing this module, students will be expected to be able to,
- Present in details the fundamental concepts and methods of homogeneous, enzymatic and heterogeneous catalysis (e.g. activity, selectivity, stability of catalysts, parameters for estimating activity and selectivity, active sites, catalytic cycle, deactivation and regeneration, general mechanism of catalytic action).
- Classify catalysts and catalytic reactions in important groups and present in details the various aspects of catalytic action for each group (e.g. catalysis by protons in solutions and surfaces, homogeneous catalysis by organometallic complexes, catalysis by enzymes, catalytic action of transition metals, oxides and sulphides).
- Present the fundamental concepts and methods of Surface Science and their applications in heterogeneous catalysis (e.g.).
- Explain the contribution of catalysis in chemical industry, destruction of pollutants and improvement of fossil fuels as well as in the development of environmentally friendly fuels and chemical processes.
- Choice the best catalyst for a given catalytic reaction.
- Combine various catalytic materials for performing a complex chemical process

Subjects covered:
1. Homogeneous Catalysis
2. Enzyme Catalysis
3. Heterogeneous Catalysis

4. Surface Science

Homogeneous and Enzyme Catalysis

Introduction and Terminology (a short description of catalysis, homogenous and heterogeneous catalysis, catalysis and chemical equilibria, catalytic cycle, catalytic activity, selectivity and stability, the general mechanism of catalytic action)

Catalysis in acidic and alkaline solutions (organic reactions catalyzed by acids, proton donors, carbenium ions, proton catalysis of molecules with heteroatoms containing a lone pair of electrons, catalysis through protonation of the carbon, carbon double bond, proton catalysis of paraffinic hydrocarbons, catalysis in alkaline solutions, acid-base simultaneous catalysis, acid catalysis in solutions of macromolecules)

Catalysis by transition metal complexes (the catalytic action of the transition metal ions in solutions, organic reactions catalyzed by transition metal complexes, a short introduction in the structure and properties of the transition metal complexes, mechanisms of selected organic reactions catalyzed by transition metal complexes in solutions, the catalytic action of transition metal complexes supported on various supports, catalysis at the interface of two liquids, catalysis by clusters)

Enzyme catalysis (the general characteristics of the enzymes and the enzyme action, preparation, structure and active sites of the enzymes, acid base enzyme catalysis, metal -enzyme catalysis, formal kinetics and mechanisms of the enzyme reactions, the influence of pH on the activity of the reactions catalyzed by enzymes).

Heterogeneous Catalysis

Heterogeneous acid-base catalysis: zeolites (development of acid-base surface sites on solid oxides e.g. MgO, γ-Al₂O₃, SiO₂, γ-Al₂O₃-SiO₂ used as catalysts, the structure and surface properties of zeolites, the catalytic action of zeolites, fluid catalytic cracking, shape selective catalysis)

Catalysis on the metallic surfaces: hydrogenation, dehydrogenation and hydrogenolysis of the hydrocarbons (the surface characteristics of the transition metals, the mechanism of hydrogenation of alkenes: an interpretation based on the hydrogen chemisorption, the relationship between the energy of the Fermi level and the strength of the metal hydrogen chemisorptive bond, the mechanism of hydrogenation of alkenes: an interpretation based on the ethylene chemisorption, hydrogenation of the carbon, carbon triple bond, hydrogenation of the aromatic hydrocarbons, dehydrogenation and hydrogenolysis of alkanes, structure sensitive reactions, hydrogenation and hydrogenolysis of organic compounds with heteroatoms)

Catalysis on the metallic surfaces: hydrogenation of CO and catalytic synthesis of NH₃ (introduction to the hydrogenation of CO, chemisorption of CO on metallic surfaces: the main experimental observations, chemisorption of CO on metallic surfaces: orbitals interactions, interactions of the C atomic orbitals with the orbitals of the transition metals, interpretation of the experimental observation based on the orbital interactions, methanation, F-T synthesis of hydrocarbons, production of oxygen compounds over rhodium supported catalysts, methanol production, the catalytic synthesis of NH₃: the development of the industrial catalyst, the catalytic synthesis of NH₃: the reaction mechanism)

Catalysis on the metallic surfaces: catalytic oxidations (catalytic oxidations on the transition metal surfaces, selective oxidation of ethylene to ethylene oxide: the catalyst, the old reaction mechanism and the modern reaction mechanism, oxidation of CO over the Pd(1 1 1) crystal face: CO and O₂ chemisorption and the reaction mechanism)

Catalytic oxidation over the surface of the transition metal oxides (electrical and surface properties of the transition metal oxides, the Mars and Van- Krevelen general oxidation mechanism, catalytic production of maleic anhydride, phthalic anhydride, formaldehyde from methanol and sulphuric acid, partial oxidation and amoxidation of propene, selective catalytic reduction of NO, catalytic combustion of volatile organic compounds)

Hydrorefining reactions over the surface of transition metal sulphides (the hydrorefining of the petroleum fractions, selection, preparation and activation of the hydrorefining catalyst, the nature of the active sites, mechanisms of reactions taking place upon the hydrorefining of the oil fractions)

Surface Science

Introduction to the Surface science (surfaces and solid-solid interfaces, bulk structure and surface structure of a solid, surfaces interfaces and modern technologies, clean surfaces at atomic level and very high vacuum)
Fundamentals concepts and technologies of the high vacuum (concepts of the kinetic theory of the gases, basic concepts and mechanisms of the gas flow in vacuum, calculations relevant to the molecular flow, pumping and production of high vacuum)

Surface analysis (low energy electrons and surface sensitivity, the physicochemical ground of the photoemission, the physicochemical ground of production of the Auger electrons, X-ray photoelectron and X-ray Auger electron spectroscopies-XPS and XAES, general characteristics of the XP and XAE spectra, the XPS surface analysis, technological applications of the surface analysis using XPS/XAES)

The surface structure (surface lattices and notation of the super structures, determination of the surface structure by low energy electron diffraction or high electron reflection, tunnelling and atomic force microscopy for studying surfaces)

Electronic properties of surfaces (surface electronic density, determination of the work function, metal semiconductor interfaces).

Atomic motion at surfaces (surface vibrations, surface diffusions and surface melting)

Thin films at surfaces (mode of development of thin films, production of films at solid surfaces by epitaxial molecular beam)

**Evaluation:** Completion of five written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**KPP51 Catalytic Surfaces**

**Module code:** KPP51  
**ECTS Credit Points:** 24  
**Module Type:** Compulsory  
**Year:** 1st  
**Language:** Greek

**Learning Outcomes:** Upon completion of the module, the student will be able to,

- describe the structural parts of a solid catalyst
- describe the necessary physicochemical characteristics of the structural parts of a solid catalyst, in order this to be suitable for specific catalytic processes
- explain how the physicochemical characteristics of a solid catalyst can be changed upon a catalytic process
- report and describe the main preparation techniques of supports, unsupported and supported catalysts
- describe the interface oxide / aqueous solution
- select the appropriate physicochemical techniques for the determination of specific: (a) physical, (b) total chemical and (c) surface chemical characteristics of the solid catalysts
- describe the basic principles, the corresponding experimental setups and the corresponding experimental procedures of the main techniques used for the determination of the physical, total chemical and surface chemical characteristics of the solid catalysts
- describe qualitatively and quantitatively the reaction kinetics on the catalytic surfaces, as well as the influence of mass and heat transfer phenomena on the kinetics
- describe the most important types of catalytic reactors
- select the most appropriate lab catalytic reactor for a specific study

**Subjects covered:**

1. Structure of solid catalysts
2. Synthesis of solid catalysts
3. Characterization of catalytic surfaces
4. Catalytic reaction engineering

**Catalysts Preparation**

Structure and Morphology of Solid Catalysts (Active Phases, Catalytic Carriers, Stabilizers, Modifiers, Chemical or Electronic Promoters, Shaped Solid Catalysts, Monolithic Catalysts, Structural Changes of Solid Catalysts upon Catalytic Processes, Nomenclature for Solid Catalysts)

Polymerization, Coprecipitation and Cogelation, Precipitate Aging: Hydrothermal Transformations, Drying: Aerogels, Calcination: Precipitates and Gels, Shaping)
Preparation of Supported Catalysts (Dry and Wet Impregnation, Deposition-Precipitation, Study of Oxidic Carriers Surface, Oxide-Water Interface, Interactions between the Oxidic Carrier Surface and Active Phase Precursor Ions upon Impregnation, Equilibrium Deposition Filtration Technique, Comparison of Aqueous Solutions Impregnation Techniques, Heterogenization of Homogeneous Catalysts-Grafting, Preparation of Supported Catalysts with Different Supported Phase Macro-distributions in Pre-shaped Carrier Bodies)
Catalysts Characterization
Catalyst Evaluation
Kinetics of Reactions on the Catalytic Surfaces (The Mechanism of the Heterogeneous Catalytic Action, Adsorption, Surface Kinetics)
The Influence of Mass and Heat Transfer Limitations on the Kinetics of Heterogeneous Catalytic Processes (External Mass Transfer Phenomena, Internal Mass Transfer Phenomena) Laboratory Catalytic Reactors (Classification of the Laboratory Catalytic Reactors, Transient Reactors, Steady State Reactors.

Evaluation: Completion of five written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

KPP60 Pollution ‘Energy and Counter’ Pollution Technologies
Module code: KPP60
ECTS Credit Points: 24
Module Type: Compulsory
Year: 2nd
Language: Greek
Subjects covered:
1. Ecosystems
2. Energy
3. Processes for pollution control
Ecosystems-pollution and environmental impacts
Introduction and structure of ecosystems (a short description of ecosystems structure, abiotic and biotic compartments, food chain, energy flow, productivity of ecosystems, biochemical cycles and photosynthesis). Wastes and pollution (atmospheric pollutants, water pollution and contamination, soil pollution, solid wastes, noises). Environmental pollution and impacts to human (introduction to the pollution parameters, toxic wastes and compounds, regulations and directives for environmental protection, environmental quality parameters, risk assessments).
Energy sources and uses
Energy needs and its conventional forms (introduction in energy sources, international energy status and problems, energy categories and sources, production and final forms, environmental impacts, uses and typical consumptions, possibilities and limits of alternative energy sources). Environmental impacts (introduction, air pollutants, wastewaters, solid wastes, secondary pollutants and impacts, clean technologies, greenhouse problem). Orthogonal use of energy (management of energy sources, energy control and stocks, data analysis, alternative solutions, techno-economic studies for alternative solutions). Energy design (methods for energetic design, thermal recovery, co-production of electricity and thermal energy, replacement of electric and other conventional forms of energy by gas, economic
evaluation of energy infrastructure works). Alternative and renewal energy sources (advantages and
disadvantages of renewal energy sources, technologies for use of renewal energy sources, sunlight
systems, wind energy, photovoltaic systems, biomass, geothermic sources and other renewal sources).
Wastewater treatment plants and sludge disposal

Introduction to the wastewater treatment plants (influence of disposal terms on wastewater treatment
plants, water out flow quality, alternative techniques in waste treatment and disposal, quantities and
characteristics of wastewaters). Pre-treatment systems (bar racks and grit chambers,). First step-
mechanical treatment systems (sedimentation, flotation and first step sludge). Biological treatment
systems (activated sludge systems, biological filters, biological disks, biological towers, stabilization
treatment (chemical treatment and advanced oxidative methods). Sterilization of wastes by using ozon
and UV light.

Wastewater reuse, (irrigation of agricultural areas, ground water enrichments, industrial recycling, rural
reuses). Management of industrial wastewaters and co-treatment with municipal sewage. Sludge
treatment and disposal (characteristics of sludge, quantities and volumes of production, safety and
storage). Stabilization of sludge (anaerobic digestion, chemical stabilization, water removal, fertilisation,
thermal treatment). Final disposal of sludge (agricultural use, soil properties improvement, forestry uses,
disposal in landfills). Comparative evaluation of different methods for sludge management and disposal
in soil.

**Evaluation:** Completion of five written assignments during the academic year, the average grade of
which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive
examination. Final exam grades constitute a 70 percent of the students' final course grade.

---

**KPP61 Environmental Catalysis**

**Module code:** KPP61

**ECTS Credit Points:** 24

**Module Type:** Compulsory

**Year:** 2nd

**Language:** Greek

**Learning Outcomes:** After completing this module, students will be expected to be able to,

- Describe the formation of the main pollutants emitted from mobile and stationary sources (CO2, NOx,
SO2, VOCs, N2O) and explain the necessity of controlling their emissions by presenting the negative
impact these pollutants have on the Environment.
- State the main catalytic and non-catalytic methods (both, primary and secondary measures) for
controlling these emissions and describe their operation.
- Propose state of the Art or potentially promising catalysts for the catalytic emission control processes
and to justify their choice based on the requirements that a catalyst should fulfill for specific control
process, pollutant and source.
- Describe the established as well as the potentially promising applications of the catalytic combustion
for either the primary or secondary emission control of atmospheric pollutants such as the NOx or the
volatile organic compounds (VOCs).
- Describe the impact of emitted chlorofluorocarbons (CFCs) on stratospheric ozone and the climate
change and give examples of catalytic and non-catalytic processes which are used to destroy or to
exploit existing CFCs stocks.
- Define basic concepts in the field of photocatalysis and describe photocatalytic processes for the
processing of wastewater and potable water treatment.
- Describe the basics of the operation of a petroleum refinery and state the main products.
- Describe the chemistry, operational conditions and requirements from the catalysts for the main
catalytic processes in a petroleum refinery (reforming, isomerization, catalytic pyrolysis and
hydroisomerization).
- Discuss the potential impact of biofuels on the environment and describe the production of the main
biofuels.
- Explain the necessity of introducing hydrogen to the energy balance of our planet and state the
relevant problems which are currently opposing the hydrogen economy.
- Describe the chemistry, operational conditions and requirements from the catalysts for the catalytic
processes for the production of hydrogen from hydrocarbons (steam or CO2 reforming, catalytic partial oxidation and autothermal reforming).

- Describe processes for the production of hydrogen which are based on the electrolytic, thermochemical or photocatalytic decomposition of water.
- Present arguments and specific examples regarding the role of catalysis (mainly, heterogeneous and photocatalysis) on the protection of the environment.

Subjects covered:
1. Catalytic Processes for Pollution Control
2. Catalytic Production of Environmentally Friendly Fuels

Catalytic Air Pollution Control

Introduction (a brief outline of the course and of the impact of the major pollutants in the quality of our environment, a description of the major expected achievements from the course). Control of emissions from mobile sources (origin of emitted pollutants, catalytic treatment of exhaust gases, catalytic converters, basic characteristics of three way catalytic converters, remaining problems and future trends, catalytic converters for diesel engines). Control of the NOx emission from stationary sources (origin and formation of nitrogen oxides, methods for the control of NOx emission, selective catalytic reduction of NOx by NH3 (NH3-SCR), catalysts for the NH3-SCR process, kinetics and mechanism of the NH3-SCR process, industrial application of the NH3-SCR process, selective catalytic reduction of NOx by hydrocarbons (CxHy-SCR), catalysts for the CxHy-SCR process, reducing agents for the CxHy-SCR process). Control of the VOCs emission from stationary sources (origin of VOCs and technologies for their emission control, catalytic combustion, catalysts for the catalytic combustion of VOCs, kinetics and mechanism of the VOCs catalytic combustion, the destruction of chlorinated hydrocarbons). Catalytic combustion (application fields of catalytic combustion, NOx emission control from gas turbines, the application of catalytic combustion in gas turbines, catalysts for the catalytic combustion process, industrial applications of catalytic combustion). Control of the use and emission of chlorofluorocarbons (CFCs) (origin and environmental impact of CFCs, catalytic transformations of CFCs, the addition of HF, the replacement of halogen, isomerisation, differential and uniform distribution, hydrodehalogenation, destruction of CFCs, synthesis and use of alternative compounds, exploitation and treatment of the HCl by product). Ozone control in airliners (processes for controlling ozone levels inside the aircraft, catalysts for the catalytic conversion of ozone and their deactivation). CO2 and N2O emission control (origin and formation of CO2 and N2O, methods for the CO2 emission control, CO2 valorisation, dry methane reforming, the SPARG process, the HYDROCARB and CARNOL processes, photocatalytic decomposition of CO2, methods for the N2O emission control, technologies for the N2O removal from flue gases, kinetics and mechanism of the N2O catalytic decomposition, industrial applications of the N2O catalytic decomposition: production of adipic acid, production of nitric acid, combustion units, mobile sources). Control of SO2 emission from stationary sources (origin and formation of SO2, non-catalytic processes for the SO2 emission control: dry, semi-dry and wet processes for the SO2 removal from flue gases, catalytic processes for the SO2 emission control: catalytic oxidation of SO2, catalytic reduction of SO2 with CO, methane or H2).

Catalytic Treatment of Liquid Wastes and Water


Catalytic Production of Environmentally Friendly Fuels

A brief description of a refinery and its products (flow chart of a refinery, refinery products). Catalytic reforming (flow chart and description of the process, the chemistry of catalytic reforming, factors influencing the yields and quality of the products, future trends in catalytic reforming). Isomerisation
(flow chart and description of the process, the chemistry of isomerisation, factors influencing the yields and quality of the products, isomerisation of light petroleum fractions, future trends). Fuel production by the catalytic pyrolysis of heavy oil fractions (flow chart and description of the process, the chemistry of catalytic pyrolysis of heavy oils, description of the feed, the hydrocarbons and the heteroatoms in the feed, characterisation of the FCC feed, the influence of the feed properties on the yields and quality of the FCC products, the catalysts of the catalytic pyrolysis, influence of operation conditions on the FCC products, the future of the FCC process). Hydrotreatment of petroleum fractions (flow chart and description of the process, the chemistry of hydrotreatment, hydrotreatment catalysts, operation conditions). Production of environmentally friendly fuels in the refinery (pollutants emitted from vehicles, modification of the gasoline composition, future trends, bio-fuels). Production, uses and necessity of hydrogen (availability and hydrogen production processes, the use of hydrogen as an alternative fuel, the necessity of adding hydrogen to the energy balance of our planet, physicochemical properties of hydrogen). Steam reforming of hydrocarbons for the production of hydrogen (technologies for hydrogen production, catalytic processes for the reforming of hydrocarbons, steam reforming of hydrocarbons, description of the process, thermodynamics of the reforming reaction, catalysts for the steam reforming and their deactivation, kinetics of the reforming reaction, detailed description of the methane steam reforming, process yield). Autothermal reforming for hydrogen production (description of the process, catalysts for the autothermal reforming of fuels, thermodynamics of the autothermal reforming, hydrogen yield, comparison of the operational parameters and the yields of the natural gas steam reforming and autothermal reforming processes). Water decomposition for hydrogen production (electrolytic decomposition of water, basic principles, description of the technology, thermochemical decomposition of water, basic principles, the role of catalysis in the thermochemical decomposition of water, flow charts and description of the thermochemical cycles S-I and UT-3, photocatalytic decomposition of water, description of processes for the photocatalytic decomposition of water, specifications of the photocatalysts, performance of photocatalytic systems based on semiconductors).

**Evaluation:** Completion of five written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

---

**Master's in Mathematics MSc**

**Description**

Description: The programme is addressed to mathematicians, mainly those teaching in Secondary Schools or intending to teach in Secondary Schools. This programme intends to offer:

a) a more profound understanding of fundamental mathematical concepts

b) an introduction to the mathematical methods used in Applied Mathematics

c) a description and analysis of mathematical models in Health sciences, Technology, Physics, Sociology, Economics, etc.

d) acquaintance with the use of computer systems, and

e) an introduction to the History of Mathematics, Epistemology, and Educational Methods in Mathematics

**Requirements**

Applicants to the Master in Mathematics course must possess an undergraduate degree in mathematics or applied mathematics from a Greek Public University, a Technical Educational Institute or an equivalent degree.

The equivalency to a Greek qualification is recognized by the Hellenic NARIC (Hellenic National Academic Recognition and Information Center / DOATAP), which verifies the validity and equivalence of the acquired degree with those awarded by Greek institutions of higher education. Applicants must possess documents issued by DOATAP. A list of recognised degrees is available from DOATAP, and a prerequisite course list for applicants to HOU courses may be given by the HOU's registration department.

All candidates must provide evidence of their ability in a foreign language, preferably English.
Minimum study duration
3 academic years

ECTS credit points
120

Learning Material
Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise.
Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

Contact
Registry
Tel.: 2610 367332 - Fax: 2610 367350 - e-mail: msm@eap.gr
Call Centre for General Inquiries
Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr

Course Structure

1st Year
MSM50 Fundamental Theories and Methods in Mathematics
MSM61 Computational Methods and Software in Mathematics

2nd Year
MSM60 Mathematical Models in Sciences
MSM51 Historical Development of Mathematics and Mathematics Education
MSM62 Special Topics in Mathematics

DISSERTATION
The requirements in order to obtain the degree are the following:
1. The students must attend and pass four courses of the programme.
2. The students must submit a dissertation. The examining committee of the dissertation consists of three members of the Academic Research Staff or tutors of the programme.

Course Modules

**MSM50 Fundamental Theories and Methods in Mathematics**
Module code: MSM50
ECTS Credit Points: 24
Module Type: Compulsory
Year: 1st
Language: Greek
Module general description:
Analysis
Sequences and series of real numbers. Functions of a real variable. Continuous functions. The
**MSM51 Historical Development of Mathematics and Mathematics Education**

**Module code:** MSM51  
**ECTS Credit Points:** 24  
**Module Type:** Optional  
**Year:** 2nd  
**Language:** Greek

**Module general description:**

**Historical Development of Fundamental Mathematical Concepts**

**Mathematics Education**

**Foundations of Mathematics and Contemporary Mathematical Theories**

**Learning Outcomes:**

A. **History/Philosophy of Mathematics** - By the end of the module students will be able to demonstrate,
- A detailed critical understanding of some important debates within contemporary philosophy of mathematics;
- A deep knowledge and appreciation of the nature and structure of mathematical knowledge.
- An appreciation of the culturally dependent nature of mathematics, its historical development and continuing evolution.

More specifically, students will be able to,

i. Discuss the differences between the Logicism, Formalism, and Intuitionism, and the impact of formal results in logic (in particular, Goedel’s Incompleteness Theorems) on these Foundationalist Programmes.

ii. Explain what is meant by ‘ontological commitment’ to mathematical objects, and why some philosophers think that there might be a problem with being committed to the existence of such objects.

iii. Engage with various philosophical accounts of the truth of mathematical statements, and with arguments for and against the existence of mathematical objects.

iv. Relate philosophical questions about the nature of mathematics to some aspects of actual mathematical practice.

v. Explain what an axiom system is, what it means for an axiom system to be consistent, what Goedel’s work tells us about our ability to prove consistency, and how mathematicians’ views of axiom systems have evolved since the time of Euclid.

vi. State Euclid’s fifth postulate, explain why mathematicians spent centuries trying to prove it, state its negation, and explain how the negation leads to non-Euclidean geometries.

B. **Didactics of Mathematics/ Cognitive Evolution of Math Concepts**
This part of the course covers recent theoretical work and research in the psychology of learning and teaching mathematics. Psychology is potentially the greatest knowledge resource available to teachers and other education professional in understanding the central issues concerning the learning of mathematics by students. The aim of the course is to introduce students to, and to enable them to actively engage with, the insights that psychology provides as it directly pertains to the learning of mathematics. More specifically,

Students will be able to,

- Understand Evolutionary, Didactical and Philosophical Interpretations of Cognition. More precisely,
  1. Understand the various psychological aspects involved in teaching mathematics.
  2. Understand theories of the development of cognition, mathematics cognition, and the implications for teaching and learning;
- Understand the relationship between brain function and important aspects of cognition.
- Are familiar with the methods of cognitive neuroscience
- Can debate the strengths and weaknesses of cognitive neuroscience and cognitive psychology as approaches for cognitive modeling
- Become familiar with some key concepts from the research into learning, intelligence and brain activity.
- To consider critically the implications of research in cognitive neuroscience for classroom practice.

**Subjects covered:**
1. Development of fundamental mathematical concepts
2. Mathematics education
3. Foundations of mathematics and contemporary mathematical theories

**Evaluation:** Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**MSM60 Mathematical Models in Sciences**
**Module code:** MSM60
**ECTS Credit Points:** 24
**Module Type:** Compulsory
**Year:** 2nd
**Language:** Greek

**Module general description:**
**Partial Differential Equations**

**Topics on Functional Analysis and Linear Algebra**

**Linear Integral Equations**

**Learning Outcomes:** On successful completion of the Module MSM60 'Mathematical Models in Science and Modern Technology' the students will have the opportunity to develop the following skills,
- identify and classify a Partial Differential Equation (PDE) and an Integral Equation (IE)
- apply standard analytical techniques in order to solve a PDE or an IE, such as the Separation of Variables, the use of integral transforms, and the use of the Fundamental solution of the corresponding Differential Operator
- determine the subspace into which an inhomogeneous equation of a general Linear Operator enjoys an exact solution.
- determine if a Mathematical problem, consisted of a PDE and auxiliary conditions, is well posed
- construct a self consistent mathematical model that describes a physical process, such as the potential distribution, the flow of a substance or the wave propagation in a medium, and to formulate the corresponding mathematical Boundary and Initial Value Problem.
- determine the Green's function for a Boundary Value Problem, using analytical techniques,
- apply the method of Separation of variables, the use of integral transforms, the Green's method and the corresponding integral representation for solving a Boundary Value Problem

**General outcomes**
On successful completion of the module MSM60 the student will be able to
- express a physical problem in mathematical terms
- to organize and use the knowledge acquired for solving a specific problem
- to be able to understand and present up to date scientific reports in the field of PDEs, IEs and their applications in the Physical Sciences.

**Subjects covered:**
1. Analysis of mathematical model in Sciences and Modern technology
2. Differential equations
3. Integral equations

**Evaluation:** Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**MSM61 Computational Methods and Software in Mathematics**

**Module code:** MSM61  
**ECTS Credit Points:** 24  
**Module Type:** Compulsory  
**Year:** 1st  
**Language:** Greek  

**Module general description:**  

**Learning Outcomes:** On successful completion of the Module MSM61 Computational Methods and software for Mathematics the students will have the opportunity to develop the following skills,  
- To be familiar with the software package Mathematica and learn how to solve mathematical problems with it.  
- To use the software for teaching mathematics at various educational levels.  
- To study linear and nonlinear problems and to solve them computationally.  
- To use methods of Fourier series and then numerical methods for solving ordinary differential equations.  
- To use methods of dimensional analysis and perturbation theory using computer packages.  
- To be able to use methods from calculus of variations by solving problems for extremums of functionals.  
- To utilize the basic theory and methods of partial differential equations in order to solve problems computationally.  
- To solve numerically problems of partial differential equations with the method of finite differences.  

**General learning outcomes**  
Successful completion of the module MSM61 gives the student the opportunity:  
- To be able to study and solve problems of science with various methods of applied mathematics.  
- To utilize the computer packages in teaching and research.  
- To organize and use the knowledge gained in solving specific problems.  
The knowledge of the computer package can contribute to preparing dissertations and scientific
publications in the area of mathematics and science.  

**Subjects covered:**
1. Computational mathematics (Numerical and symbolic computational techniques and methods with the aid of computational systems - Packages)
2. Applications in mathematical modeling
3. Educational software

**Evaluation:** Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

---

**MSM62 Special Topics in Mathematics**

**Module code:** MSM62  
**ECTS Credit Points:** 24  
**Module Type:** Optional  
**Year:** 2nd  
**Language:** Greek

**Learning Outcomes:** On successful completion of the Module MSM62 «Special topics in Mathematics», the students will be able to
- Comprehend and describe processes arising in physics, biomedical sciences and continuum mechanics and formulate the physical problems
- Identify and express the driving mechanisms of physical and biological phenomena including fluid flow, blood flow, the heartbeat cycle, electrochemical pulses in the nerve, tumor growth,
- Analyze, reproduce and develop mathematical models concerning wave propagation and scattering, heat and mass transfer,
- Use tensor notation for the mathematical formulation of the physical problems,
- Apply analytical methods for solving the governing differential equations along with the supplementary conditions, (separation of variables, methods for solving integral equations, perturbation methods, calculus of variations, etc.)
- Make parametric study and obtain estimates on the accuracy and stability of a model
- Use mathematical packages (i.e. Mathematica, Matlab, etc.) in order to confirm the obtained results, make predictions and further exploit a model or investigate a process.

**General outcomes**

On successful completion of the Module MSM62 "Special topics in Mathematics", the students will
- Get motivation for doing further research on subjects of mathematical physics, mathematical biology and continuum mechanics.
- Be experienced and able to apply mathematical methods for modeling processes in a variety of scientific areas
- Reveal the mathematical model underlying the physical process.
- Present a scientific report, paper on the relevant fields in scientific audience and in the public
- Communicate with scientists and engineers from different areas

**Subjects covered:**
1. Applied algebra, analysis and geometry
2. Mathematical physics, Biomedical sciences and Continuum mechanics
3. Mathematics education
4. History of mathematics

**Evaluation:** Completion of five written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

---

**Master's in Information System MSc**

**Description**
The aim of this programme is to offer its students the opportunity to acquire specialized knowledge in Information and Communication Technologies, and to prepare for professional work in the design, development and management of integrated information systems. The program is targeted at science and technology graduates and covers the design and development of programs and systems, the management and the quality of system development, and advanced issues in telecommunications and networking.

Requirements
Applicants to the Master’s degree must possess a University degree in any field of science and engineering, except computing and/or electrical engineering. The equivalency to a Greek qualification is recognized by the Hellenic NARIC (Hellenic National Academic Recognition and Information Center / DOATAP), which verifies the validity and equivalence of the acquired degree with those awarded by Greek institutions of higher education. Applicants must possess documents issued by DOATAP. A list of recognised degrees is available from DOATAP, and a prerequisite course list for applicants to HOU courses may be given by the HOU's registration department.

A good working knowledge of English is essential but not formally required.

Contact
Registry
Tel.: 2610 367332 - Fax: 2610 367350 - e-mail: pls@eap.gr

Call Centre for General Inquiries
Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr

Minimum study duration
3 academic years

ECTS credit points
120

Learning Material
Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise. Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

Course Structure
1st Year
PLS50 Fundamental Specialization in Theory and Software
PLS51 Fundamental Specialization in Computer Architecture and Computer Networks

2nd Year
PLS60 Specialization in Software Engineering
PLS61 Software Design and Management
PLS62 Specialization in Networks and Communications

DISSERTATION
The Master's Degree will be awarded upon successful completion of at least four (4) modules of the Program and submission of a dissertation (and subsequent successful examination) in accordance with the terms of the General Regulations for the Submission of Dissertations.
Course Modules

**PLS50 Fundamental Specialization in Theory and Software**
Module code: PLS50  
ECTS Credit Points: 24  
Module Type: Compulsory  
Year: 1st  
Language: Greek  
Subjects covered:  
1. Algorithms and complexity  
2. Programming languages  
3. Software engineering  
Evaluation: Completion of eight written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**PLS51 Fundamental Specialization in Computer Architecture and Computer Networks**
Module code: PLS51  
ECTS Credit Points: 24  
Module Type: Compulsory  
Year: 1st  
Language: Greek  
Subjects covered:  
1. Digital systems  
2. Computer architecture  
3. Computer networks  
Evaluation: Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**PLS60 Specialization in Software Engineering**
Module code: PLS60  
ECTS Credit Points: 24  
Module Type: Optional  
Year: 2nd  
Language: Greek  
Subjects covered:  
1. Data management  
2. Operating systems  
3. Modern programming paradigms  
Evaluation: Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**PLS61 Software Design and Management**
Module code: PLS61  
ECTS Credit Points: 24  
Module Type: Optional  
Year: 2nd  
Language: Greek  
Subjects covered:  
1. Software design  
2. Software quality and management  
3. Human - Computer interaction  
Evaluation: Completion of six written assignments during the academic year, the average grade of
which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**PLS62 Specialization in Networks and Communications**

**Module code:** PLS62  
**ECTS Credit Points:** 24  
**Module Type:** Optional  
**Year:** 2nd  
**Language:** Greek  
**Subjects covered:**  
1. Advanced topics in computer networks  
2. Digital communications  
3. Cryptography and network security  
**Evaluation:** Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

---

**Master's in Teaching Natural Sciences MSc**

**Description**  
Description: This Course is designed to offer scientific knowledge as well as technology and methodological skills to Secondary Science teachers. Upon the completion of this course graduates will:  
a) have a more scientific approach to teaching Physics, Chemistry and Biology  
b) be able to understand and convey to students, through educational processes, classical and modern theories of Natural Sciences and their role within the unified scientific world  
c) have acquired requisite skills and scientific competence for using experiments to investigate and prove scientific theories and hypotheses  
d) have acquired special methodological training to design and carry out educational projects at school or within the wider educational community, or local community  
e) will have required level of competence to use information technology to design and produce electronic learning material

**Requirements**  
Applicants to the Master in Teaching Natural Sciences course must possess an undergraduate degree in a related field from a Greek Public University, a Technical Educational Institute or an equivalent degree.  
The equivalency to a Greek qualification is recognized by the Hellenic NARIC (Hellenic National Academic Recognition and Information Center / DOATAP), which verifies the validity and equivalence of the acquired degree with those awarded by Greek institutions of higher education. Applicants must possess documents issued by DOATAP. A list of recognised degrees is available from DOATAP, and a prerequisite course list for applicants to HOU courses may be given by the HOU's registration department.  
Good knowledge of English is necessary for the successful participation in the course.  
Basic computer and Internet skills are necessary for the successful participation in the course.

**Minimum study duration**  
3 academic years

**ECTS credit points**  
120

**Learning Material**
Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise. Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

Contact

Registry
Tel.: 2610 367343 - Fax: 2610 367350 - e-mail: kfe@eap.gr

Call Centre for General Inquiries
Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr

Course Structure

1st Year
KFE51 Motion, Constitution and Basic Interactions of Matter
KFE52 Organization and Interaction at Molecular Level
KFE53 Organization of Matter in Life Systems

2nd Year
KFE51 Motion, Constitution and Basic Interactions of Matter
KFE52 Organization and Interaction at Molecular Level
KFE53 Organization of Matter in Life Systems
KFE60 Natural Sciences: History, Science and Educational Methodology
KFE61 Issues in Contemporary Physics

DISSERTATION

The master's degree is awarded upon completion of 4 course modules and a dissertation.

Course Modules

KFE 51 Motion, Constitution and Fundamental Interactions of Matter
Module code: KFE51
ECTS Credit Points: 24
Module Type: Optional
Year: 1st / 2nd
Language: Greek
Subjects covered:
2. Quantum description of the world: A review of the basic quantum physics, Applications of quantum physics in solids, Atoms and Nuclei Elementary particles and cosmology
Evaluation: Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

KFE52 Organization and Interaction at Molecular Level
Module code: KFE52
ECTS Credit Points: 24
Module Type: Optional
Year: 1st / 2nd
Language: Greek

Subjects covered:
1. A review of the general and inorganic chemistry through the scope of the modern view about the composition of matter
2. Physicochemical examination of matter. Development of a modern methodology for the characterization of matter
3. Structure, properties, and characterization of carbon compounds

Evaluation: Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**KFE53 Organization of Matter in Life Systems**
Module code: KFE53
ECTS Credit Points: 24
Module Type: Optional
Year: 1st / 2nd
Language: Greek

Learning Outcomes: After completing this module, students will be expected to be able to,
1. Obtain a broad knowledge regarding basic and applied areas of Biosciences, such as Basic and Clinical Biochemistry, Molecular and Cell Biology, as well as Physiology.
2. Understand, investigate and highlight, through the educational process, the scientific importance of both traditional and modern achievements of Biosciences and of their role in prevention and treatment of biologically-based problems in the modern world.
3. Obtain the scientific expertise and the abilities that are required in order to seek for reliable bibliography and to use both conventional and novel experimental procedures for the establishment of biological knowledge.
4. Acquire the scientific proficiency to plan and execute advanced educational procedures regarding biologically-interesting and significant health issues within the secondary education school environment, the broader educational community and the local society.

Subjects covered:
1. Basic concepts of Biochemistry, Cell Biology and Molecular Biology
2. Genetic information flow, Molecular Mechanisms of Gene Expression Regulation
4. Cell communication: Intercellular and intracellular communication physiology
5. Cell Cycle: Regulatory mechanisms of cell growth and cell division

Evaluation: Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**KFE60 Natural Sciences: History, Science and Educational Methodology**
Module code: KFE60
ECTS Credit Points: 24
Module Type: Compulsory
Year: 2nd
Language: Greek

Subjects covered:
1. History of Natural Sciences
2. Philosophy of Natural Sciences
Methodology of Scientific Research Programs.
3. Selection from the Didactics of Natural Sciences

Evaluation: Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

KFE61 Issues in Contemporary Physics
Module code: KFE61
ECTS Credit Points: 24
Module Type: Optional
Year: 2nd
Language: Greek

Subjects covered:
1. Modern aspects of particle physics and cosmo-theory
2. Modern aspects of material science
3. Experimental methods and technology

Evaluation: Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

Engineering of pervasive computing systems MSc

Description
The Program aims to establish systematic training of students on the design and development of Pervasive and Mobile Computing systems. The program builds upon students' knowledge in Computer Science and Telecommunications and advances it on issues such Software System Design, Computer Networks, Digital Systems, Human-Computer Interaction, Operating Systems and Distributed Systems. The program is not limited to providing knowledge but also focuses on skill acquisition in designing mobile and pervasive computing systems, requirement analysis, evaluation and selection of technology solutions, analysis of service quality and performance systems, application and service design, through real-life case studies and applications.

Learning Outcomes
- Understand the fundamental concepts of Pervasive Computing
- Analyze problems and case studies of pervasive computing systems and choose the appropriate technological solutions
- Understand basic principles of wireless networking, cellular networks and ad hoc sensor networks
- Understand design principles, implementation methods and evaluation criteria for Pervasive Computing Systems
- Understand principles of interaction design and human-centered design

Requirements
Applicants to the Master in Engineering of Pervasive Computing Systems course must possess an undergraduate degree in a related field from a Greek Public University, a Technical Educational Institute or an equivalent degree.

The equivalency to a Greek qualification is recognized by the Hellenic NARIC (Hellenic National Academic Recognition and Information Center / DOATAP), which verifies the validity and equivalence of the acquired degree with those awarded by Greek institutions of higher education. Applicants must possess documents issued by DOATAP. A list of recognised degrees is available from DOATAP, and a prerequisite course list for applicants to HOU courses may be given by the HOU's registration
Good knowledge of English is necessary for the successful participation in the course. Basic computer and Internet skills are necessary for the successful participation in the course.

**Minimum study duration**

3 academic years

**ECTS credit points**

120

**Learning Material**

Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise. Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

**Contact**

**Registry**
Tel.: 2610 367329, 2610 367343 - Fax: 2610 367350 - e-mail: sdy@eap.gr

**Call Centre for General Inquiries**
Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr

**Course Structure**

**1st Year**
SDY50 Software and Networking Technologies
SDY51 Ubiquitous and Global Computing Systems

**2nd Year**
SDY60 Analysis and Design of Hardware / Software Systems
SDY61 Mobile Computing Systems
SDY62 Embedded Systems

**DISSERTATION**

The master's degree is awarded upon completion of 4 course modules and a dissertation.

**Course Modules**

**SDY50 Software and Networking Technologies**

*Module code:* SDY50
*ECTS Credit Points:* 24
*Module Type:* Compulsory
*Year:* 1st
*Language:* Greek

*Learning Outcomes:*
- Point and define the basic concepts of Pervasive Computing (PerCom)
- Appraise the gravity of addressing privacy issues in PerCom
- Tabulate positioning technologies
- Explain the techniques for multi-sensor data fusion
- Appraise the role of distributed systems and middleware in PerCom systems
- Review specialized topics on distributed systems (system models, inter-process communication, operating systems, distributed file systems, peer-to-peer networks, web services)
- Analyze distributed systems' problems and case studies and select the most appropriate technologies and tools to implement distributed systems
- Appraise the role of wireless networks in PerCom systems
- Point and define the basic concepts of wireless networking technologies
- Express the operation principles of mobile cellular networks
- Discuss the basic principles of ad hoc wireless sensor networks

**Subjects covered:**
1. Wireless Networks: Protocols, Services and Applications
2. Distributed Systems: Advanced Design Issues
3. Middleware Design

**Evaluation:** Completion of five written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**SDY51 Ubiquitous and global computing systems**

**Module code:** SDY51  
**ECTS Credit Points:** 24  
**Module Type:** Compulsory  
**Year:** 1st  
**Language:** Greek

**Learning Outcomes:**
- Understanding of basic principles of mobile & ubiquitous computing
- Knowledge on various architectures and operational models of pervasive computer systems
- Understanding of design principles for pervasive computing systems
- Knowledge on development methodologies for pervasive computing systems
- Understanding of basic principles of human-computer interaction in pervasive computing systems
- Understanding the distinction between explicit and implicit interaction in pervasive computing systems
- Analysis, application and assessment of tagging and scanning technologies
- Understanding the principles of the "Internet of Things (IoT)"
- Understanding of the notion of "context" in pervasive computing systems
- Analysis of context models in pervasive computing systems
- Application of design and development principles for context-aware pervasive computing systems
- Understanding of architectures and characteristics of intelligent pervasive computing systems
- Understanding of concepts related with Ambient Intelligence (AmI)
- Understanding and application of methodologies and criteria for evaluating pervasive computing systems
- Application of pervasive computing systems via case studies
- Synthesis of design principles, methodologies and technologies for the development of low and mid-fidelity prototypes (mock-ups, Android apps) of pervasive computing systems
- Knowledge of the international literature in the area of pervasive computing systems

**Subjects covered:**
1. Ubiquitous and Global Computing Systems: Architectures  
2. Ubiquitous and Global Computing Systems: Design and Programming issues  
3. Ubiquitous and Global Computing Systems: Special Development Issues

**Evaluation:** Completion of five written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**SDY60 Analysis and Design of Hardware / Software Systems**

**Module code:** SDY60  
**ECTS Credit Points:** 24  
**Module Type:** Compulsory
Year: 2nd  
Language: Greek  
Subjects covered:  
1. Interaction and Appliance Design  
2. Performance Analysis of Large scale Systems  
3. Case Studies and Applications  
Evaluation: Completion of six written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

SDY61 Mobile computing systems  
Module code: SDY61  
ECTS Credit Points: 24  
Module Type: Optional  
Year: 2nd  
Language: Greek  
Learning Outcomes: After the completion of SDY61 module, the students will be capable to,  
- Discuss and describe design issues for wireless mobile networks as well as to point the use of them  
- Analyze, study and evaluate specialized topics of wireless mobile networks such as quality of service and security  
- Assess and evaluate the user friendliness and non-functional requirements of mobile computing systems  
- Prepare, organize, experiment and design mobile computing services  
- Understand and point the need of adaptation of mobile computing applications to the user demands  
- Analyze, assess and discuss problems and case studies of mobile computing applications as well as to select, modify and develop the appropriate implementation technologies  
Subjects covered:  
1. Mobile Wireless Networks: Advanced Design Issues  
2. Mobile Computing applications Design  
3. Case Studies and Applications  
Evaluation: Completion of seven written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

SDY62 Embedded systems  
Module code: SDY62  
ECTS Credit Points: 24  
Module Type: Optional  
Year: 2nd  
Language: Greek  
Learning Outcomes:  
- Understand the fundamental concepts of embedded systems  
- Analyze problems and case studies of embedded systems  
- Understand implementation methods and evaluation criteria for embedded systems  
Subjects covered:  
1. Digital Systems Design  
2. Embedded Systems Design  
3. Case Studies and Applications  
Evaluation: Completion of written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.
Description
This Course is offered to holders of undergraduate Degrees in related fields such as graphic design, media studies, computer studies and other related disciplines. A Master's Degree is awarded upon successful completion of all 4 modules of the Course and after successful evaluation of a submitted dissertation, in compliance with the General Regulations for Submission of Dissertations.

Aim of this Course is to offer specialized knowledge in the field of Graphic Arts - Multimedia. More specifically, the Course gives you the opportunity to acquire the requisite skills and to learn how to use your creativity in order to create products for visual communication. The educational process is supported, when possible, by appropriate audio-visual material in printed or digital format.

This Course has been mainly designed for students who aim to develop particular skills in graphic arts through the use of computers and multimedia. However, it may also appeal to graduates from other fields, who wish to make productive use of new technologies in order to design user friendly, functional and aesthetically appealing visual products for communication. The language of the course is Greek.

Students will be awarded a Master's Degree after successful evaluation of their submitted dissertation. After completion of this Course, students will not only have developed the necessary skills relating to the creative and aesthetic aspects of visual culture, but will also have acquired the requisite specialized knowledge that will render them competitive in their profession. On the other hand, this Course will supply students with the suitable methodology for appropriate sources for further training and specialization, according to their personal and professional needs.

Requirements
Applicants to the Graphic Arts - Multimedia course must possess an undergraduate degree in a related field from a Greek Public University, a Technical Educational Institute or an equivalent degree. The equivalency to a Greek qualification is recognized by the Hellenic NARIC (Hellenic National Academic Recognition and Information Center / DOATAP), which verifies the validity and equivalence of the acquired degree with those awarded by Greek institutions of higher education. Applicants must possess documents issued by DOATAP. A list of recognised degrees is available from DOATAP, and a prerequisite course list for applicants to HOU courses may be given by the HOU's registration department.

Skills and knowledge in visual arts, an artistic background, computer usage (especially in software relevant to the course) as well as internet and e-mail skills are considered necessary for the completion of the course.

All candidates must provide evidence of their ability in a foreign language, preferably English.

Minimum study duration
3 academic years

ECTS credit points
120

Learning Material
Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise.

Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.
Contact

Registry
Tel.: 2610 367328 - Fax: 2610 367350 - e-mail: gtp@eap.gr

Call Centre for General Inquiries
Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr

Course Structure

1st Year
GTP50 Art and Communication in Graphic Arts
GTP51 Graphic Design

2nd Year
GTP60 Graphic Arts Technology
GTP61 Informatics - Multimedia

Master's dissertation

The master's degree is awarded upon completion of 4 course modules and a dissertation.

Course Modules

GTP50 Art and Communication in Graphic Arts
Module code: GTP50
ECTS Credit Points: 24
Module Type: Compulsory
Year: 1st
Language: Greek

Module general description: Introduces key theories in visual communication, visual design, history of art and aesthetics, comprising an array of reading material and exercises. The material is carefully selected and aims at enhancing the analytical and synthetic skills needed to understand cultural texts and the role of graphic arts in their making. Students will acquire the necessary skills in understanding graphic arts in the wider context of cultural production as well as the theoretical background for creating visual compositions within a rapidly changing new media environment.

Learning Outcomes:
Knowledge & understanding
On successful completion of the module, students will be able to,
- Understand the visual encoding and language as a powerful tool of communication
- Get a global perception of the history of art and comprehend the reflection of the history of art in the contemporary creative process and the role of the reference, appropriation and citation.
- Get acquainted with history, theory and practice of visual design and also communication studies and semiotics, media and cultural studies; and therefore be able to appreciate the medium's role in the creative process and reception of its result.

Intellectual (thinking) and creative skills: interpretation, evaluation and synthesis
On successful completion of the module, students will be able to,
- Analyze, interpret and recognize specific characteristics associated to historical, social and media-related aspects of the examined artwork.
- Comprehend through the application of theory, the way that media reflect and at the same time configure the societies that produce them.
- Develop visual thinking, recognize styles and encodings, keys and methods of artists and graphic designers.
- Interpret, evaluate and criticize visual projects and obtain intellectual tools for the synthesis of their own visual projects.
Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**GTP51 Graphic design**
**Module code:** GTP51  
**ECTS Credit Points:** 24  
**Module Type:** Compulsory  
**Year:** 1st  
**Language:** Greek  
**Module general description:** This module is specifically designed so that it can be independently attended without necessarily attending all other modules, should students choose to do so. Aim of the module is to familiarise students with those elements used in the creation of printed material, using both typography and image, as well as to introduce them to a more systematic study of the various application areas of graphic design communication. Through this module and in addition to learning graphic design history, students will be given the opportunity for a thorough study of handling fonts typography, photography and graphic design for print media (such as books, press, posters, packaging, etc.).

**Learning Outcomes:**
- You will become familiar with the design elements used to create two dimensional communication designs, in printed or digital form. You will also become acquainted with the typical application areas of graphic design in its various instantiations.
- You will be able to refer to the evolution of typography and of graphic design
- You will be able to semantically analyze visual design and photographic images.
- You will be able to conduct visual experimentations, of communicative and aesthetic nature; experimentation involves the selection and manipulation of elements, typographic or graphical, and creating a designed composition. You will also be able to do design experiments with structuring a visual image and selecting appropriate graphical elements.
- You will familiarize with visual composition targeted to specific communication objectives. You will be able to communicate certain concepts or messages, by the use of visual language.
- You will be able to apply the use of typographic elements, graphic and photographic elements, in your designs.
- You will be able to compose images using basic elements and principles of visual composition. You will cultivate your creativity and gain skills in visual communication using various media (printed or electronic).
- You will be able to judge and evaluate visual designs in respect to their overall aesthetic and communicative value.

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**GTP60 Graphic Arts Technology**
**Module code:** GTP60  
**ECTS Credit Points:** 24  
**Module Type:** Compulsory  
**Year:** 2nd  
**Language:** Greek  
**Module general description:** This module focuses exclusively on the technological dimension of graphic arts. The rapid development of this field, in the context of an equally rapidly emerging Information Society, has resulted in the total automation of the production process. All modern methods leading to the finalising and finishing of printed material are thoroughly examined in this module. Considering the fact that the potential offered by various printing methods does indeed limit the boundaries of how graphic design ideas can be implemented in print, the particular module is very important even for those students who will not work in the technological aspect of the printing process, after successfully completing this Course.
Learning Outcomes: At the end of this course the student should be able to,
1. Define the full preprint procedure
2. Know the whole process of montage
3. Describe the process of galley proof development
4. Sort the printing methods based on the printing machines and the requirements of print making
5. Describe the whole procedure of flexography, heliography and silk print
6. Describe the post printing procedure

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

GTP61 Informatics - Multimedia
Module code: GTP61
ECTS Credit Points: 24
Module Type: Compulsory
Year: 2nd
Language: Greek

Module general description: The module on "Informatics - Multimedia" firstly studies the aspects of computer science that relate to the design, manipulation and display of multimedia content. It thoroughly examines the main features of multimedia and their application through a stage-by-stage analysis of the design and development of a multimedia application. This module aims at providing students with the theoretical and technical knowledge as well as the requisite skills for creating well-designed, user friendly and functional audiovisual interactive products for communication.

Evaluation: Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

Lighting Design and Multimedia, MA

Description
The course aims to provide expertise in designing lighting sets with the application of modern digital technology. More specifically, the course aims to provide an opportunity for students to cultivate their creativity and develop skills in planning and designing lighting on a theme set with the use of computers and multimedia.

Requirements
Applicants to the Lighting Design and Multimedia course must possess an undergraduate degree in a related field from a Greek Public University, a Technical Educational Institute or an equivalent degree. The equivalency to a Greek qualification is recognized by the Hellenic NARIC (Hellenic National Academic Recognition and Information Center / DOATAP), which verifies the validity and equivalence of the acquired degree with those awarded by Greek institutions of higher education. Applicants must possess documents issued by DOATAP. A list of recognised degrees is available from DOATAP, and a prerequisite course list for applicants to HOU courses may be given by the HOU's registration department.

Skills and knowledge in visual arts, an artistic background, computer usage (especially in software relevant to the course) as well as internet and e-mail skills are considered necessary for the completion of the course.

All candidates must provide evidence of their ability in a foreign language, preferably English.

Minimum study duration
3 academic years

ECTS credit points
120

Learning Material
Learning material used is mainly printed textbooks but also audiovisual and electronic learning material. The printed material is especially adapted to meet the needs and standards of distance education. Chapters clearly state aims and objectives. Key concepts and expected learning outcomes. Self-assessment questions and exercise. Alternative teaching material. To assist the students to a better understanding of the main teaching material. It utilizes, clarifies and enriches, if necessary, the already existing material.

Contact
Registry
Tel.: 2610 367344 - Fax: 2610 367650 - e-mail: sfp@eap.gr
Call Centre for General Inquiries
Tel.: 2610 367300, Fax: 2610 367350, e-mail: info@eap.gr

Course Structure

1st Year
SFP50 Art history and history of the science of light
SFP51 General principles of lighting

2nd Year
SFP60 Lighting technology and connection with production
SFP61 Lighting and Multimedia applications

DISSERTATION
The master's degree is awarded upon completion of 4 course modules and a dissertation.

Course Modules

SFP50 Art history and history of the science of light
Module code: SFP50
ECTS Credit Points: 24
Module Type: Compulsory
Year: 1st
Language: Greek
Learning Outcomes: Upon completion of the graduate program the student will,
1 Have knowledge of basic concepts related to the properties of natural and artificial light.
2 Identify the various methods of light handling and the available tools.
3 Plan a variety of schemes and lighting options in fields like architecture, interior design, stage setting, photography, the fine arts, etc.
4 Have acquired adequate knowledge of the psychological aspects of light, that is, of the ways in which light influences man under certain conditions.
5 Have sufficient knowledge of design methods aiming at the achievement of artistic expressive objectives in any of the above mentioned fields.
6 Be cognizant of the basic concepts of photometry as well as of the methods of measurement and the manner in which the qualitative and quantitative aspects of light are related.
7 Be able to operate computer programs for the simulation and representation of lighting conditions in any design problem.
8 Be in a position to deal with various lighting applications in real conditions with competence in quantitative calculations and cost estimation of each project.

**Subjects covered:**
- Art history
- Historical view of light
- Optical Communication
- Basic principles of visual literacy

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**SFP51 General principles of lighting**
- **Module code:** SFP51
- **ECTS Credit Points:** 24
- **Module Type:** Compulsory
- **Year:** 1st
- **Language:** Greek

**Learning Outcomes:** At the end of this course the student should be able to,
1. Know about the nature of light, the basic principles of radiometry and photometry, the notion of the black body and its applications, the radiometric and photometric quantities and units, about the reflectance, the ways of flow transport from a source to a surface and the most important measuring set-ups in radiometry and photometry.
2. Familiarise himself/herself with the ecological approach of the optical perception (irritation and optical perception, direct perception, movement in space, static/moving images and optical cognition).
3. Describe the notions of colours, the role of luminous sources in the colour generation process, the classification of colours as well as the methods of mixing them.
4. Apprehend ancient and modern shadows, give description of the applications of shadows in astronomy, architecture and arts and speak about the relation between perspective and shadow projection.
5. Talk about topics related to light and space (medium, substances, surfaces, ambient optical deployment, events and information, perceptions about light in religion, philosophy and arts, the knowledge of Byzantines about light).

**Subjects covered:**
- Perception of light
- Principles of photometry
- Definitions and units of measurements
- Light and colour
- Light and shadow
- Light

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

**SFP60 Lighting technology and connection with production**
- **Module code:** SFP60
- **ECTS Credit Points:** 24
- **Module Type:** Compulsory
- **Year:** 2nd
- **Language:** Greek

**Learning Outcomes:** After the successful completion of the course 'Lighting technology and connection with the production' the candidate of the postgraduate programme 'Lighting design-Multimedia' of the Hellenic Open University will be able to,
- analyze the requirements of a lighting project
- formulate the suitable technical solutions for the lighting project
- determine the required conditions for visual comfort qualitatively and quantitatively
- organize and design the lighting system
- synthesize technically integrated solutions and combine them with the rational use of energy
- specify the appropriate equipment and arrange its position in the space
- calculate the initial cost as well as the operation and maintenance cost
- choose the optimal solutions, technically and economically

**Subjects covered:**
- Lighting techniques and applications
- Rules for rational lighting
- Optimisation of lighting projects
- Cost

**Benefits**

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.

---

**SFP61 Lighting and Multimedia applications**

**Module code:** SFP61  
**ECTS Credit Points:** 24  
**Module Type:** Compulsory  
**Year:** 2nd  
**Language:** Greek

**Subjects covered:**
- Contemporary advancements in lighting and optical technology issues
- Simulation of Lighting conditions
- Skills development with computers and Multimedia applications

**Evaluation:** Completion of four written assignments during the academic year, the average grade of which constitute a 30 percent of each student's grade, if a pass is obtained in the final or repetitive examination. Final exam grades constitute a 70 percent of the students' final course grade.