# COURSE OUTLINE

## 1. GENERAL

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|---|---|---|---|
| **SCHOOL** | APPLIED ECONOMIC AND SOCIAL SCIENCES | | |
| **ACADEMIC UNIT** | AGRIBUSINESS AND SUPPLY CHAIN MANAGEMENT | | |
| **LEVEL OF STUDIES** | *Undergraduate* | | |
| **COURSE CODE** | **5105** | **SEMESTER** | 1st |
| **COURSE TITLE** | INTRODUCTION TO INFORMATION AND COMMUNICATION TECHNOLOGIES | | |

| **INDEPENDENT TEACHING ACTIVITIES** | **WEEKLY TEACHING HOURS** | **CREDITS** |
|---|---|---|
| Lectures | 3 | 6 |
| Laboratory exercises | 2 | |

| | |
|---|---|
| **COURSE TYPE** | General Background-Skills Development |
| **PREREQUISITE COURSES** | No |
| **LANGUAGE OF INSTRUCTION and EXAMINATIONS** | Greek |
| **IS THE COURSE OFFERED for ERASMUS STUDENTS?** | YES |
| **COURSE WEBSITE (URL)** | https://oeclass.aua.gr/eclass/courses/330/ |

## 2. LEARNING OUTCOMES

**Learning Outcomes**

The course aims to familiarize students with the introductory concepts of Information and Communication Technologies (ICT), including hardware, software, networks, and the Internet. It analyzes the usefulness of modern ICTs and their applications in various fields of expertise with emphasis on ICT applications in enterprises and production units.

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

- explain the role of hardware, describe hardware units, main memory, input / output units
- explain the basic principles of data communications and the role of computer networks, describe Internet infrastructures and Internet services
- describe the types of Systems Software, the types of Operating Systems and their main operations, and software applications in enterprises
- describe the types of threats of information systems and apply protection measures to

information systems
- process complex documents using text-editing software so they can respond to the creation of high-quality documents
- process spreadsheets using spreadsheet software to solve simple or complex problems involving financial data
- create presentations using presentation software

**General Competences**

- Adapting to new situations
- Decision-making
- Working independently

## 3. SYLLABUS

**The theoretical part of the course covers the following topics:**

1. Introduction to Information and Communication Technologies (ICT) and its applications
2. Main hardware units
3. Peripheral memories, input/output units
4. Data. Data representation. Data structures. Data files. Data Bases.
5. Software. Main concepts. System Software. Operating systems.
6. Introduction to Data Communications
7. Introduction to Computer Networks
8. Internet infrastructures and applications
9. Graphics, media and multimedia
10. Applications of ICTs in enterprises
11. Advanced ICTs and their applications in enterprises
12. Security of Information Systems
13. Ethical and social issues. Epilogue.

**The laboratory part of the course covers the following topics:**

- Familiarization with the computer and peripheral units
- Using an operating system
- Learning how to edit documents
- Learning how to process spreadsheets
- Learning how to create electronic presentations

A combination of teaching and learning methods will be used, aiming at the active participation of the students and the practical application of the thematic units under examination; there will also be lectures using audiovisual media, as well as projections of relevant videos. Furthermore, articles, audiovisual lecture materials, web links/addresses, useful information, case studies and exercises for further practice are posted in digital form on the AUA Open e-Class platform.

## 4. TEACHING and LEARNING METHODS - EVALUATION

<table>
<tr><td>DELIVERY</td><td>Face -to-face</td></tr>
<tr><td>USE OF INFORMATION and COMMUNICATIONS TECHNOLOGY</td><td>
<ul>
<li>Support of the learning process through the University's AUA Open eClass platform (integrated e-Course Management System)</li>
<li>Support of lectures using presentation software</li>
<li>Use of audiovisual material</li>
<li>Use of web applications</li>
</ul>
Communication with students: face-to-face at office hours, email, eclass platform
</td></tr>
<tr><td>TEACHING METHODS</td><td>
<table>
<tr><th>Activity</th><th>Workload</th></tr>
<tr><td>Lectures (direct)</td><td>39</td></tr>
<tr><td>Laboratory Practice</td><td>26</td></tr>
<tr><td>Essay Writing</td><td>0</td></tr>
<tr><td>Autonomous study</td><td>36</td></tr>
<tr><td>Advisory Support</td><td>0,5</td></tr>
<tr><td>Examination</td><td>2</td></tr>
<tr><td>Laboratory Examination</td><td>2</td></tr>
<tr><td>Total<br>(About 25 hours of study per ECTS)</td><td>105,5</td></tr>
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<tr><td>STUDENT PERFORMANCE EVALUATION</td><td>
The evaluation process is in the language that the course is taught (Greek or English) and consists of:<br>
Compulsory written final examination at the end of the semester (weighting factor 70% at least) which may includes:
<ul>
<li>Multiple choice questionnaires</li>
<li>Open-ended questions</li>
<li>Problem solving</li>
<li>Oral examination</li>
</ul>
Evaluation criteria: correctness, completeness, clarity<br><br>
Special learning difficulties:<br>
Students with special learning difficulties in writing and reading (as they are certified and characterized by a competent body) are examined based on the procedure provided by the Department.<br>
Specifically-Defined Criteria:<br>
The evaluation criteria are made known during the first lesson and are clearly stated on the course website and the AUA Open e-class platform. The answers to the exam questions are posted on the AUA Open e-Class platform after the exam. The students are allowed to see their exam paper after its grading (during the announced office hours) and receive explanations about the grade they received.
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## 1. ATTACHED BIBLIOGRAPHY

**Bibliography (in Greek):**


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- Βασικές Αρχές και Τεχνολογίες στην Επιστήμη της Πληροφόρησης https://repository.kallipos.gr/handle/11419/6447
- Εισαγωγή στην επιστήμη των υπολογιστών & επικοινωνιών https://repository.kallipos.gr/handle/11419/4582
- Ιωάννης Βογιατζής, Ήρα Αντωνοπούλου, Υλικό, Λογισμικό και Επικοινωνίες Υπολογιστών - 4η Έκδοση, Έκδοση: 4/2021, Κωδικός Βιβλίου στον Εύδοξο: 102075306
- ΓΚΛΑΒΑ ΜΑΙΡΗ, ΕΙΣΑΓΩΓΗ ΣΤΟΥΣ ΥΠΟΛΟΓΙΣΤΕΣ ΚΑΙ ΤΗΝ ΠΛΗΡΟΦΟΡΙΚΗ (2η έκδοση), Έκδοση: 2/2023, ΕΚΔΟΣΕΙΣ ΔΙΣΙΓΜΑ ΙΚΕ, Κωδικός Βιβλίου στον Εύδοξο: 122093826

- Δρόσος, Δ. Βουγιούκας, Δ., Καλλίγερος, Ε., Κοκολάκης, Σ., & Σκιάνης, Χ. (2015). Εισαγωγή στην Επιστήμη των Υπολογιστών και Επικοινωνιών, [ηλεκτρ. βιβλ.] Αθήνα: Σύνδεσμος Ελληνικών Ακαδημαϊκών Βιβλιοθηκών, Κάλλιπος, Διαθέσιμο στο: http://hdl.handle.net/11419/4582
- Καλαφατούσης Σ., Δροσίτης Ι., Κοίλιας Χ. (2012). Εισαγωγή στις Τεχνολογίες Πληροφορίας και Επικοινωνίας, Εκδόσεις Νέων Τεχνολογιών, Αθήνα.
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- Brookshear, J. C. (2009). Η επιστήμη των υπολογιστών: Μια ολοκληρωμένη παρουσίαση», Επιμέλεια: Κ. Κουρκουμπέτης, Κλειδάριθμος.
- Behrouz A. Forouzan, (2015). Εισαγωγή στην επιστήμη των υπολογιστών, Κλειδάριθμος, 2015.
- Beekman B., Beekman G., (2015). Εισαγωγή στην Πληροφορική, 10η έκδοση, εκδ. Γκιούρδας.
- Cantoni, L., & Danowski, J. A. (Eds.). (2015). Communication and Technology. Berlin: De Gruyter Mouton.
- Kurose, J., & Ross, K. (2013). Δικτύωση Υπολογιστών, Εκδόσεις Γκιούρδας
- Norton, Peter μετάφραση Μιχαήλ Γ. Δημόπουλος (2011). Εισαγωγή στους υπολογιστές, Εκδόσεις Τζιόλα, 6η έκδοση, Θεσσαλονίκη.
- Stallings, W. (2011). Κρυπτογραφία και ασφάλεια δικτύων, Εκδ. Ίων.
- Williams B.K. & Sawyer, S.C. (2016). Εγχειρίδιο της Πληροφορικής και των Επικοινωνιών, 11η έκδοση, Εκδόσεις Μ. Γκιούρδας.


*Related Journals:*

- Journal of Computer Science and Information Technology (JCSIT)
- Journal of Computer Science and Technology (JCST)
- International Journal of Computer Technology and Applications (IJCTA)
- International Journal of Information Technology and Management
- International Journal of Information and Communication Technology
- Journal of Systems and Software
- Journal of Communications and Networks
- International Journal of Security and Networks