

COURSE OUTLINE

(1) GENERAL

SCHOOL	Sciences and Engineering		
ACADEMIC UNIT	Computer Science		
LEVEL OF STUDIES	1 st Cycle		
COURSE CODE	COMP-151	SEMESTER	Fall, Spring
COURSE TITLE	COMPUTER FUNDAMENTALS		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		WEEKLY TEACHING HOURS	CREDITS
		2.5	6
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	General knowledge, skills development		
PREREQUISITE COURSES:	None		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	English		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes		
COURSE WEBSITE (URL)			

(2) LEARNING OUTCOMES

Learning outcomes <i>The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.</i> <i>Consult Appendix A</i> • <i>Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area</i> • <i>Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B</i> • <i>Guidelines for writing Learning Outcomes</i>
Upon completion of the course, students are expected to be able to: ○ Appreciate the role of information systems and technology in our digital world. ○ Comprehend the developments occurring in the information technology era from its initiation to present time and the future trends. ○ Name and describe the components of an information system. More specifically and concerning information system's hardware, the student should be able to describe and analyze the characteristics of the processing unit, input and output devices, and primary and secondary storage. ○ Based on the knowledge gained above the student should be able to suggest a certain computer configuration based on specified organization or personal needs. ○ Understand data representation and work with different number systems. ○ Describe an I.S. professional and his/her role and career opportunities in an organization. ○ Differentiate between application and systems software and subtypes. ○ Understand the requirements for developing an information system: process, computer

programming languages, and data storage.
○ Demonstrate basic knowledge about data communications, the Internet and web resources. ○ Understand how to secure information systems resources, focusing on both human and technological safeguards. ○ Understand how information systems raise ethical concerns in society, and how they influence crime.
General Competences
<i>Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?</i>
<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>
<i>Adapting to new situations</i>
<i>Decision-making</i>
<i>Working independently</i>
<i>Team work</i>
<i>Working in an international environment</i>
<i>Working in an interdisciplinary environment</i>
<i>Production of new research ideas</i>
<i>Project planning and management</i>
<i>Respect for difference and multiculturalism</i>
<i>Respect for the natural environment</i>
<i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i>
<i>Criticism and self-criticism</i>
<i>Production of free, creative and inductive thinking</i>
<i>.....</i>
<i>Others...</i>
<i>.....</i>
Search for, analysis and synthesis of data and information, with the use of the necessary technology
Adapting to new situations
Working independently

(3) SYLLABUS

• Characteristics of the digital world • History of computers • Current I.T. trends • Information systems components • The computer hardware • Computer number systems and data representation • Microcomputers and mobile computing • Information systems in organizations • Globalization; the digital divide • Application and systems software • Developing information systems • Computer programming languages • Files and databases • Data Communications. Local area networks and security. • The Internet and Web Resources • Securing Information Systems • Information Systems Ethics and Crime • Computer abuse and computer crime

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face-to-face						
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	Use of ICT in teaching and practical work						
TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <i>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art</i>	<table> <tr> <th>Activity</th><th>Semester workload</th></tr> <tr> <td>Lecturers and demonstrations</td><td>20</td></tr> <tr> <td>Individual and group work in class</td><td>15</td></tr> </table>	Activity	Semester workload	Lecturers and demonstrations	20	Individual and group work in class	15
Activity	Semester workload						
Lecturers and demonstrations	20						
Individual and group work in class	15						

<i>workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</i> <i>The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i>	Other assignments/activities	55
	Preparation	25
	Exams	5
	Course total	120
STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i> <i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i> <i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	Quizzes and exams, practical assignments and projects, participation in class discussions and group activities	

(5) ATTACHED BIBLIOGRAPHY

<i>- Suggested bibliography:</i>				
Τίτλος	Συγγραφέας	Εκδοτικός Οίκος	Έτος	ISBN
Technology in Action, 18 th ed.	Evans A., Martin K., Poatsy M.A.	Pearson	2024	9780135435199
Computer Concepts Comprehensive, 14 th ed.	Parsons J., Oja D.	Thomson Course Technology	2021	9781423925187