COURSE OUTLINE

1. GENERAL

SCHOOL	SOCIAL, POLITICAL AND ECONOMIC STUDIES		
DEPARTMENT	SOCIAL POLICY		
LEVEL OF STUDIES	LEVEL 6		
COURSE CODE	**13**	**SEMESTER**	**1st**
COURSE TITLE	IntroductiontoInformatics		

TEACHINGACTIVITIES *If theECTSCreditsaredistributedin distinct partsofthecoursee.g. lectures, labsetc. IftheECTSCreditsareawardedto the wholecourse, thenplease indicate the teaching hours per week and the corresponding ECTS Credits.*	**TEACHINGHOURSPERWEEK**	**ECTSCREDITS**
	3	6
Please, addlinesifnecessary.Teaching methods and organization of the course are described in section 4.		

COURSETYPE *Background, GeneralKnowledge, Scientific Area, Skill Development*	Skills Development
PREREQUISITES:	
TEACHING & EXAMINATION LANGUAGE:	Greek
COURSE OFFERED TO ERASMUSSTUDENTS:	Yes
COURSEURL:	https://eclass.duth.gr/courses/438216/

2. LEARNING OUTCOMES

Learning Outcomes

Pleasedescribethelearningoutcomesofthecourse: Knowledge, skills and abilitiesacquiredafterthesuccessfulcompletionofthecourse.

The students who will take this course will gain a first contact with the basic principles of the information technology and the Internet, their applications and services, as well as with the main milestones of the evolution of computer technologyto date. The students will get familiar with the theoretical concepts of information collection, data organization and analysis. Additionally, they will be aware of the most important challenges of modern informatics, such as ethics in artificial intelligent, social computing, protection of personal data, fake news on the Internet and the impact they have on themodern society.The aim of the course is toallow the participants to be active users of the computing technologies and the services they offer, to facilitate the understanding of social phenomena. Additionally, it contributes to the developmentof a critical thinking with regards to the impact of the latest developments in informatics on the social reality.

General Skills

Name the desirable general skills upon successful completion of the module

Search, analysis and synthesis of data and information, ICT Use
Adaptation to new situations
Decision making
Autonomous work
Teamwork
Working in an international environment
Working in an interdisciplinary environment
Production of new research ideas
Project design and management
Equity and Inclusion
Respect for the natural environment
Sustainability
Demonstration of social, professional and moral responsibility and sensitivity to gender issues
Critical thinking
Promoting free, creative and inductive reasoning

- Data collection, analysis and visualizationbasedonsoftware tools.
- Preparation of individual or group project.

3. COURSE CONTENT

This course focuses on familiarizing students with the basic concepts and applications of information technologies. It starts with a brief historical review of some critical moments in the development and evolution of technology. Then, it focuses on the basic principles of computer and communication systems, as well as the basic theoretical concepts of data collection, analysis, and visualization. Finally, it examines the influence of technology and the impact of the latest developments of information and computing technology in all the areas of life at individual, social and global level. The course does not require – although it is facilitated by – computer literacy.

Indicativeconcepts:

1. Introduction to information technology. Historical review of the personal computer - development and evolution. Current status and ethical issues.
2. Computer architecture and basic functions. Parts of a computer system. Microprocessor, memory, memory hierarchy, storage.
3. Operating systems. Introduction to Windows. File management.
4. Basic programming principles. Algorithms.
5. Flowcharts.
6. Computer networks. Introduction to the Internet. Principles and basic use of the internet.
7. Cloud applications. Introduction to Microsoft 365.
8. Basic principles of databases. Data collection, analysis and visualization.
9. Artificial intelligence. Development of AI and current applications. Available AI tools for data collection.
10. Computer and communication systems security principles. Personal data security.
11. Future challenges of information technology and ethical matters.

4. LEARNING & TEACHING METHODS - EVALUATION

TEACHINGMETHOD *Face to face, Distance learning, etc.*	Facetoface
USEOF INFORMATION&COMMUNICATIONSTECHNOLOGY (ICT) *Use of ICT in Teaching, in Laboratory Education, in Communication with students*	• Spreadsheet and database management software tools for demonstration during the courses • Demonstration and use of AI tools • PowerPoint presentation material
TEACHING ORGANIZATION *The ways and methods of teaching are described in detail. Lectures, Seminars, Laboratory Exercise, Field Exercise, Bibliographicresearch& analysis, Tutoring, Internship (Placement), Clinical Exercise, Art Workshop, Interactive learning, Study visits, Study / creation, project, creation, project. Etc.* *The supervised and unsupervised workload per activity is indicated here, so that total workload per semester complies to ECTS standards.*	

Activity	*Workload/semester*
Lectures	39
Interactive teaching	12
Preparation of work	40
Independent study and preparation for the exams	50
Presentation of work	7
FinalWrittenExamination	2

	TOTAL COURSE (25 HOURS OF WORKLOAD PER CREDIT UNIT)	**150**
STUDENT EVALUATION *Description of the evaluation process* *Assessment Language, Assessment Methods, Formative or Concluding, Multiple Choice Test, Short Answer Questions, Essay Development Questions, Problem Solving, Written Assignment, Essay / Report, Oral Exam, Presentation in audience, Laboratory Report,Clinical examination of a patient,Artistic interpretation, Other/Others* *Please indicate all relevant information about the course assessment and how students are informed*	The final evaluation shall take into account: 1) The preparation of a project. 2) The final written examination. Preparation and presentation of projects: Data collection, analysis, and visualization, using state of the art software tools. The originality of the means of presentation, the interactivity,and the completeness of the analysis of the topics are evaluated.The use of ICT isessential in the presentation.	

5. SUGGESTED BIBLIOGRAPHY

Alan Evans, Kendall Martin, Mary Anne Poatsy, (2018). Introduction to Computer Science-Theory andPractice 2rd edition, Athens, Greece: Kritiki

ANNEX OF THE COURSE OUTLINE

Alternative ways of examining a course in emergency situations

Teacher (full name):	Baloukas Christos
Contact details:	cbalouka@sp.duth.gr
Supervisors: (1)	Yes
Evaluation methods: (2)	Project at home (35%). Written exam remotely (65%)
Implementation Instructions: (3)	Home project must be submitted to eclass at a predefined date.

(1) Please write YES or NO

(2) Notedowntheevaluationmethodsusedbytheteacher, e.g.

- *written assignment*or/andexercises
- writtenororalexaminationwithdistancelearningmethods, provided that the integrity and reliability of the examination are ensured.

(3) In the **Implementation Instructions** section, the teacher notes down clear instructions to the students:

a) in case of **written assignment and / or exercises:** the deadline (e.g. the last week of the semester),the means of submission, the grading system, the grade percentage of the assignment in the final grade and any other necessary information.

b) incaseof**oral examination with distance learning methods:** the instructions for conducting the examination (e.g. in groups of X people), the way of administration of the questions to be answered, the distance learning platforms to be used, the technical means for the implementation of the examination (microphone, camera, word processor, internet connection, communication platform), the hyperlinksfor the examination, the duration of the exam, the gradingsystem, the percentage of the oral exam in the final grade, the ways in which the inviolability and reliability of the exam are ensuredand any other necessary information.

c) incaseof**written examination with distance learning methods**:the way of administration of the questions to be answered, the way of submitting the answers, the duration of the exam, the grading system, the percentage of the written exam of the exam in the final grade, the ways in which the integrity and reliability of the exam are ensured and any other necessary information.

There should be anattached list with the Student Registration Numbersonly of students eligible to participate in the examination.