COURSE OUTLINE

1. GENERAL INFORMATION

SCHOOL	MARITIME AND INDUSTRIAL STUDIES
DEPARTMENT	INDUSTRIAL MANAGEMENT AND TECHNOLOGY
LEVEL OF STUDY	UNDERGRADUATE
COURSE UNIT CODE	ΤΕΜΑΘ36-2 **SEMESTER OF STUDY** 5th
COURSE TITLE	INFORMATION SYSTEMS

INDEPENDENT TEACHING ACTIVITIES *in case in which credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the whole of the course, give the weekly teaching hours and the total credits*	**WEEKLY TEACHING HOURS**	**CREDITS**
Lecture, Laboratory Exercises and Project		5.5
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail at section 4.		

COURSE TYPE *general background, special background, specialized general knowledge, skills development*	Special background
PREREQUISITE COURSES:	None
LANGUAGE OF INSTRUCTION and EXAMINATION/ASSESSMENT:	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	https://eclass.unipi.gr/courses/BDT625/

2. LEARNING OUTCOMES

LEARNING OUTCOMES
The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult: *APPENDIX A*   • *Description of the level of learning outcomes for each qualifications' cycle, according to the European Higher Education Area's Qualification Framework.*   • *Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and APPENDIX B*   • *Guidelines for writing Learning Outcomes*

The aim of the course is to understand the information systems and their role in the modern organizations and also to understand the technologies for information management and the process of creating information systems to support entrepreneurship and business operations.

Upon successful completion of the course, the students will be able to:
- Understand the role of information systems
- Understand the relationship between IT systems and business strategies
- Identify different types of information systems and online environments
- Understand the ethical and social issues related to information systems
- Describe the technologies that are the basic information infrastructure
- Design a website strategy to promote websites
- Use information systems to extract information, decision support and e-learning
- Design and build relational databases

- Search for, analysis and synthesis of data and information, by the use of technologies that are necessary according the case
- Adapting to new situations
- Decision-making
- Independent work
- Team work
- Project planning and management
- Respect for difference and multiculturalism
- Social, professional and ethical responsibility and sensitivity to gender issues
- Critical consciousness, criticism and self-criticism
- Development of free, creative and inductive thinking

2. COURSE CONTENT

The course includes the following topics:

1. Introduction to information systems: The role of information systems in enterprises, Data – Information – Knowledge, components of an information system, challenges of information systems
2. Information systems and strategy: The five powers of competition (Porter Model), External factors affecting the five powers, value chain, relation between information systems and business strategy
3. Information and telecommunication technologies: Analysis of the material components of a PC, Basic types of software, transmission means and networks, business architecture
4. Data bases: nature of information, file management systems, design, accessibility, management of relational databases, multiple data bases, data storage
5. Business information systems: Financial information systems, human capital management, supply chain management, customer relationship management, operational resources management
6. eCommerce and Internet: internet strategy, (Web Sites), Web 2.0, eCommerce, Website promotion
7. Decision Support Systems: Business intelligence, decision making levels, data mining, decision support systems, website performance measurement indicators
8. Collaboration technologies: Characteristics of collaboration technologies, web collaboration technologies, web environments
9. ELearning: categories of intellectual capital, knowledge types, knowledge management strategy, elearning
10. Information security and privacy: Personal data, privacy, information security

Students also attend a laboratory training program in the Laboratory of Production Management Information Systems in order to develop an intuitive and hands-on understanding of the concepts presented in the lectures. Open access and specialized software is used. Students are trained in workshops with a rotation system. The workshop program is posted on the course website and eclass at the beginning of the semester. Laboratory training includes the following topics:

- Laboratory 1: Entity-Expression-Correlation Concepts, Correlation Entity Model, Attribute Types, Correlation Inference, Relation Multiplicity Ratio
- Laboratory 2: Relational Model, Relational Database Figure, MOS Conversion, 5 Conversion Steps
- Laboratory 3: Structured Questions Language, Data Entry, Data Deletion, Data Modification, Data Search
- Laboratory 4: Popular Database Management System, New Database Creation, Tables Creation, Validation Rules
- Laboratory 5: Statement of Foreign Keys & Reports, Relationship Definition, Data Entry
- Laboratory 6: Data Search, Search Queries, Query, Query, Advanced Criteria, Selection Queries over a Table, Aggregate Functions, Grouping Results
- Laboratory 7: Dashboard Query, Update Questions, Deletion Questions, Attachment Questions
- Laboratory 8: Forms, Form Creation, Inner Form Structure, Form Modules, Form Changes
- Laboratory 9: Exhibitions, Good Practices, Exhibition Creation, Introduction of a Concentration Function, Report Containing Data from Two Tables

In addition, articles, audiovisual lecture material, web addresses, useful information, exercises or/and software are posted at eclass.

3. TEACHING METHODS - ASSESSMENT

TEACHING MODE *Face-to-face, in-class lecturing, on distance teaching and distance learning etc.*	In-class lecturing / Laboratory teaching
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in Teaching, Laboratory Education, Communication with students*	**Teaching:** Lectures with audiovisual media, support of the learning process through the eclass platform **Laboratory Education:** Use of open access and specialized software for laboratory exercises **Communication with students:** face-to-face at office hours, email, eclass

COURSE DESIGN	Activity / Method	Semester Workload
Description of teaching techniques, practices and methods: *Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, clinical practice, Art Workshop, Interactive teaching, Educational visits, project, Essay writing, Artistic creativity, etc.*	Lectures	39
	Laboratory exercises	13.75
	Project	12.75
	Self-study of lab exercises	28
	Self-study of lecture material	40.5
	Oral presentation of the project	1
The study hours for each learning activity as well as the hours of non- directed study are given according to the principles of the ECTS	Counselling	0.5
	Exams (written)	2
	Course Total	*137.5*

STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS	
Detailed description of the evaluation procedures: *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice questionnaires, short- answer questions, open-ended questions, problem solving, written work, Essay/report, oral exam, public presentation, laboratory work, art interpretation, other......etc*	**Language of exams:** Greek **Assessment Methods:** After the last lecture, the exam material is posted at eclass. The final course grade is formed as follows: The final course grade is formed as follows: Lab grade comprises the 20% of the final grade. In particular, maximum two (2) grade units can be given, one (1) of which is given to students that do not have more than two (2) absences during the lab classes and maximum one (1) grade unit may be assigned to oral presentation of the project.

Evaluation criteria are specifically defined and given as well as if and where they are reported and accessible to students.	• The written exams comprise the 80% of the total grade. The written exams are taken in the examination period of the winter semester and, in case of failure, in the September resits. The written examination includes problem solving / exercises, short-answer and open-ended questions. It is conducted with closed books. The evaluation of students with special learning difficulties in writing and reading (as certified and qualified by a competent institution) is performed according to the relevant procedure decided by the Department Assembly. **Notification of the Assessment Criteria:** The evaluation criteria are made known during the first lecture and are clearly stated on the course website and e-class. The answers to the exam questions are posted at eclass after the exam date. Students have the opportunity to discuss their exam paper with the course instructor (at the posted office hours) after the announcement of the course grades.

4. SUGGESTED BIBLIOGRAPHY

-Suggested Bibliography :
  • Book [4274]: Decision Support Systems [in Greek], G.P. Chondrokoukis
  • Book [32997695]: Information Systems for Economic and Administration Sciences [in Greek], A. Gotsinas, K. Kalovrektis
  • Book [2717]: Information Systems for Business Administration [in Greek], Economou G., Georgopoulos N.
-Scientific Journals: not applicable
-Lecture Notes
-Laboratory Workbook