COURSE OUTLINE

1. GENERAL INFORMATION

SCHOOL	MARITIME AND INDUSTRIAL STUDIES
DEPARTMENT	INDUSTRIAL MANAGEMENT AND TECHNOLOGY
LEVEL OF STUDY	UNDERGRADUATE
COURSE UNIT CODE	ΤΕΠΛΗ08 **SEMESTER OF STUDY** 8th
COURSE TITLE	WEB BASED INFORMATION SYSTEMS (ELECTIVE COURSE)

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 / English (in ERASMUS class)
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	https://eclass.unipi.gr/courses/BDT212/

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*

This course covers the fundamental principles of global web-based information systems and key issues related to information management, implementation of applications and access to global web data through interfaces. Students are trained in the design and development of web-based applications. The course presents the strategy of digital marketing and its applications with the help of information systems, IT tools and Internet models / applications (electronic, mobile marketing and social media marketing). Emphasis is given to modern IT tools and technologies for the management of marketing decision making in the digital environment.

Upon successful completion of the course, the students will be able to:
- Demonstrate knowledge on modern information and marketing technologies
- Use information systems and modern technologies / tools
- Implement electronic and mobile marketing as well as social media marketing
- Handle tools to measure the effectiveness of the above applications

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aims

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
Working in an international environment
Working in an interdisciplinary environment
Introduction of innovative research

Project planning and management
Respect for difference and multiculturalism
Environmental awareness
Social, professional and ethical responsibility and sensitivity to gender issues
Critical consciousness, criticism and self-criticism
Development of free, creative and inductive thinking

- 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
- Working in an international environment (ERASMUS)
- Working in an interdisciplinary environment (ERASMUS)
- Introduction of innovative research
- Project planning and management
- Respect for difference and multiculturalism
- Environmental awareness
- 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 Information Systems
    1.1 Information System
    1.2 IS Capabilities
    1.3 data and Information
    1.4 The System concept
    1.5 IS Parameters
2 Worldwide Web
    2.1 Worldwide Web Overview
    2.2 Hypertext and hypermedia
    2.3 Building elements of worldwide web
    2.4 Single Resource Identifier
    2.5 The HTTP protocol
        2.5.1 History
        2.5.2 Basic elements of HTTP protocol
    2.6 The client / server architecture
    2.7 Worldwide Web servers
        2.7.1 Basic functions of the Worldwide Web servers
    2.8 Worldwide Web Customers
        2.8.1 Browsers
        2.8.2 Basic functions of browsers
        2.8.3 browser architecture
        2.8.4 Filter browser flow
3. Web1.0 - Web2.0

3.1 From Web1.0 to Web2.0
3.2. Web1.0 and Web 2.0 examples and applications
3.3 Moving towards Web2.0
      3.3.1. Social networks
      3.3.2 Ending of the so-called "perpetual beta"
      3.3.3. Ease of optimization
      3.3.4. Innovation is systems networking
      3.3.5. Software over the level of a single device, enhancing the power of "Long Tail"
3.4 The four hierarchy levels of Web2.0
4. Overview of technologies and applications of Web2.0 and their comparison with Web1.0
      4.1. Web2.0 technologies
            4.1.1. The Ajax technology
            4.1.2. Syndication and RSS technique
            4.1.3. Blog
            4.1.4. Videoblogs
            4.1.5. Wikis
            4.1.6. Trackback
            4.1.7. Podcasting
            4.1.8. Cost per click
      4.2 Web2.0 applications and their comparison with Web1.0
            4.2.1. Britannica Online (Web1.0.) – Wikipedia (Web2.0)
            4.2.2. Mp3.com (Web1.0) – Napster (Web2.0)
            4.2.3. Ofoto (Web1.0) – Flickr (Web2.0)
            4.2.4 Barnesandnoble (Web1.0) – Amazon (Web2.0)
            4.2.5 YouTube (Web2.0)
            4.2.6 Del.icio.us (Web2.0)
            4.2.7 Facebook (Web2.0)
5. Activities with Web2.0 technologies and collaborative learning
      5.1 Activities with Del.icio.us
      5.2. Activities with Facebook
      5.3. Activities with Podcasting
      5.4. Activities with Rollyo
      5.5. Activities with RSS (Really Simple Syndication)
      5.6 Activities with YouTube
      5.7. Activities with Wikis
      5.8. Activities with Flickr

The course involves two-hour weekly lectures as well as 4 two-hour laboratory classes. The laboratory part is conducted at the Laboratory of Production Management Information Systems. Commercial software packages are used. Students are trained in workshops with a rotation system. The workshop program is posted on the course website and at eclass at the beginning of the semester. The laboratory part includes the following sections:

Students also attend a laboratory training program in the 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: Basic concepts for Web Information Systems. Design and implementation of applications for the Internet using modern environments and techniques (Java, XML, PHP).
- Laboratory 2: Information models and structures for efficient data management using applications and tools (PHP, MySQL) to access data on the Web. Infrastructures and protocols for Web applications
- Laboratory 3: The Web social environment and data management applications with Web 2.0 technologies. Web search engines and their functionality

- Laboratory 4: Social Media. Online marketing of social media for businesses. Tools provided: Facebook, Youtube, Reddit, Pinterest, Twitter, LinkedIn, Tumblr, Google+.

Also, students are divided into groups for the elaboration of team projects.

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 commercial software packages **Communication with students:** face-to-face at office hours, email, eclass

COURSE DESIGN *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.* *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*	Activity / Method	Semester Workload
	Lectures	42
	Laboratory	10
	Laboratory exercises (report)	28
	Project	29.5
	Self-study of lecture material and lab exercises	25.5
	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

 Evaluation criteria are specifically defined and given as well as if and where they are reported and accessible to students. | **Language of exams:** Greek / English (in ERASMUS class)

 Assessment Methods: After the last lecture, the exam material is posted at eclass. The final course grade is formed as follows:
 • By the project (30%)
 • By the lab grade (30%)
 • By the written exams (40%) taken in the examination period of the spring semester and, in case of failure, in the September resits.

 The written examination includes problem solving / exercises and short-answer 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 :*
-Scientific Journals: not applicable
-Lecture Notes
-Laboratory Workbook |