COURSE OUTLINE

1. GENERAL INFORMATION

SCHOOL	MARITIME AND INDUSTRIAL STUDIES		
DEPARTMENT	INDUSTRIAL MANAGEMENT AND TECHNOLOGY		
LEVEL OF STUDY	POSTGRADUATE		
COURSE UNIT CODE		**SEMESTER OF STUDY**	3rd
COURSE TITLE	SYSTEMS IN PROJECT MANAGEMENT - APPLICATIONS WITH SAP		

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**
	3	6
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*	Skills development
PREREQUISITE COURSES:	
LANGUAGE OF INSTRUCTION and EXAMINATION/ASSESSMENT:	
THE COURSE IS OFFERED TO ERASMUS STUDENTS	
COURSE WEBSITE (URL)	

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 course "ERP Systems in Project Management and Product Development – Applications with SAP" benefits of the main advantage of ERP systems, that is, business process integration. With this approach one achieves addressing issues pertinent to Project Management and Product Development, as well as, teaching how business processes interact and exchange information to make decisions. The Business Processes which are presented and used during the Course are related to the corresponding SAP Module:

Business Process	Module
Project Management / Product Development	(PS) – Project System
Financial Management / Controlling	(FI/CO) – Financial Management / Controlling
Production Management	(PP) – Production Planning and Control
Human Resource Management	(HCM) – Human Capital Management
Maintenance	(EAM) – Enterprise Asset Management

In a nutshell, the aim of the course ""ERP Systems in Project Management and Product Development – Applications with SAP" is to provide to the students both the theoretical concepts and the practical skills in integrated ERP systems with emphasis in Project Management and Product Development. More specifically, the course aims to demonstrate all the mechanisms which an ERP Systems offers, to support the business decision-making process along with the Project Management / Product Development processes. Furthermore, students will come across

with a variety of real - daily basis Project Management Process problems and difficulties, which should overcome using ERP's functionalities.

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	*Project planning and management*
Adapting to new situations	*Respect for difference and multiculturalism*
Decision-making	*Environmental awareness*
Independent work	*Social, professional and ethical responsibility and sensitivity to gender issues*
Team work	*Critical consciousness, criticism and self-criticism*
Working in an international environment	*Development of free, creative and inductive thinking*
Working in an interdisciplinary environment	
Introduction of innovative research	

The general competences that the student should have acquired and that the course is aimed at are:

- *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*
- *Working in an interdisciplinary environment*
- *Social, professional and ethical responsibility and sensitivity to gender issues*
- *Critical consciousness, criticism and self-criticism*
- *Development of free, creative and inductive thinking*

3. COURSE CONTENT

The course ""**ERP Systems in Project Management and Product Development – Applications with SAP**" begins by presenting the theoretical background of ERP systems and familiarizes students with the Graphical User Interface of the SAP system. In the main part, students are taught the modeling of resources for a project and a production system to develop products and the main functionality an ERP system offers to Project Management, by combining the theoretical background with the respective functional areas of the SAP system, to support production, human resource management, financial management, and plant maintenance. The course contains a broad spectrum of knowledge corresponding to complex business problems, covering the following subjects:

1. Theoretical background of ERP systems (functionality, architecture, implementation project planning)
2. Familiarization with use of ERP systems (GUI environment)
3. Modeling of basic data of production planning for product development (material, work centers, bill of materials, production phases)
4. Modeling of basic data of projects for product development (Work Breakdown Structure, Project Networks, Resources)
5. Modeling of financial data, financial management and costing
6. Modeling and planning of human resources
7. Modeling and planning of plant maintenance
8. Project Management

Week	Course Topic
1	Introduction – Course Overview • Theoretical background, business goals – ERP Systems Architecture - Case Studies – Project Management of ERP Systems Implementation
2	User Environment in the ERP SAP R/3 • Integration to the User Environment for SAP R/3 – Graphical User Interface – Basic functions – Navigation – Presentation of the GBI Bikes Scenario
3	Theory on Material Management and Production Planning • Materials management, forecasting, Production modeling, MRP
4	Production Modeling in SAP R/3 (PP module) • Basic production data (Materials, Bill of Materials, Work Centers, Routings), Demand management, production orders
5	Project Management Theory • Project data, project analysis, WBS, Networks, project monitoring

6	Project Management in SAP R/3 (PS module) • WBS, Networks, Relationships, Milestones, Services, (Project Builder), Analysis, Monitoring, Postings (Project Planning Board)
7	Resource Management Theory
8	Human Resource Management in SAP R/3 (HCM module) • Organization Structures, Basic Personnel data, Infotypes, Roles, Admissions, Skills, Performance Monitoring
9	Enterprise Asset Management in SAP R/3 – Plant Maintenance (EAM module) • Failures, maintenance orders, planning, confirmations
10	Financial Management Theory - Financial Management in SAP R/3 (FI, CO modules) • Accounting Plan, Costing • Chart of Accounts, Credit Control, Business Area, Balance Sheet, P/L Statement
11	FINAL EXAM

4. TEACHING METHODS - ASSESSMENT

<table>
<tr><td>TEACHING MODE
Face-to-face, in-class lecturing, on distance teaching and distance learning etc.</td><td>Weekly lectures using instructor presentations and SAP UA material, consisting of theoretical part overview of the respective Project Management functionality, case studies, and application of the respective ERP SAP modules in lab conditions. The students may have access to the SAP system from their own PC throughout the semester, using their private account to carry-out projects and exercises and familiarize with the SAP system.

Notes:

1. The course is based in extensive use of PCs throughout. The course is run on the SAP system provided within the framework of cooperation between the University of Piraeus and the SAP University Alliances (UA) Program, through the SAP University Competence Center.

2. SAP System remote access: Given that the University of Piraeus participates in SAP UA, the students are offered the option of remote login from their own space. The students are encouraged to use the system during the entire semester, to explore capabilities and functionalities. However, students must be extremely cautious to nor modify data created by themselves (especially, customizing and data from other students).

3. Wherever needed, selected real-life problems will be presented, after adaptation to the course needs.</td></tr>
<tr><td>USE OF INFORMATION AND COMMUNICATION TECHNOLOGY
Use of ICT in Teaching, Laboratory Education, Communication with students</td><td>Teaching: Lectures with audiovisual media, support of the learning process through the eclass platform.
Laboratory Education: Use of SAP/R3 and SAP/HANA
Communication with students: Face-to-face at office hours, email, eclass</td></tr>
<tr><td>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</td><td><table><tr><th>Activity / Method</th><th>Semester Workload</th></tr><tr><td>Lectures</td><td>30</td></tr><tr><td>Individual Project</td><td>45</td></tr><tr><td>Self-study of lecture material</td><td>70</td></tr><tr><td>Exams (written)</td><td>3</td></tr><tr><td>Counselling</td><td>2</td></tr><tr><td>Course Total</td><td>150</td></tr></table></td></tr>
<tr><td>STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS</td><td>Language of exams: Greek

Assessment Methods: The final grade of the course is as follows:</td></tr>
</table>

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.*	• Class participation during lectures and SAP scenario realization → 20% • Individuals' homework for every module performed in SAP during the semester and submitted by the final exam date → 40% • Final exam for every SAP module → 40% In case of failure, in the September re-sits, the grade of the course is formed based on the above scale. 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. The written exam and the submission of Case Studies is compulsory. Absence of failure to submit corresponds to nullification of the respective grade. It is compulsory to attend at least 80% of the lectures. Students who fail to complete the minimum number of attendance, will not be accepted to the final test. Project topics are presented at the 3rd week of classes. The evaluation criteria are posted on eclass at the beginning of the semester. Notification of the Assessment Criteria: The evaluation criteria are made known during the first lecture and are clearly stated on the course website and/or eclass. Students have the opportunity to receive explanations about the grade they received.

5. SUGGESTED BIBLIOGRAPHY

The following will be provided in electronic form

- Notes and presentation of instructors
- Teaching material of SAP University Alliance (UA) for every module, comprising of presentations, case studies and exercises
- Functions-in-Detail manuals for every module
- Print files manuals (SAP Help)
- Concise manuals

In addition to the above, the following book is recommended:

[1] Magal, S.R., Word, J. (2009), Essentials of Business Processes and Information Systems, ISBN 978-0-470-23059-6, Wiley.