

COURSE OUTLINE

(1) GENERAL

SCHOOL	School of Engineering		
ACADEMIC UNIT	Department of Financial and Management Engineering		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE	FE0160	SEMESTER	5th
COURSE TITLE	Business Applications of Information Systems		
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	
	3	5	
<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>	Compulsory		
PREREQUISITE COURSES:			
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek (Lectures and main educational material in English)		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes		
COURSE WEBSITE (URL)	http://www.fme.aegean.gr/el/c/epikheiresiakes-epharmoges-eu http://www.fme.aegean.gr/en/c/business-applications-information-systems		

(2) LEARNING OUTCOMES

Learning outcomes

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.

Consult Appendix A

- Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area
- Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B
- Guidelines for writing Learning Outcomes

Upon completion of the course, students will be able to:

- Have acquired sufficient cross-disciplinary theoretical and conceptual background to understand the managerial and technical issues of the modern Enterprise Information Systems (through cases, theory, examples and “on-hands” experience)

- Understand critical aspects of the Enterprise Information Systems Development (architecture, layers of functionality, client-server interaction modes, Application Programming Interfaces/APIs, etc.)
- Increase awareness of the role of APIs in the modern economy and the linkages between businesses and their activities (industry value chains, value nets etc.)
- Familiarize themselves with the use of an APIs to access and re-use the functionality of an Information System through laboratory work
- Learn best practices and techniques for API design and efficient use through API Management Platforms

General Competences

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>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Project planning and management</i>
<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>
<i>Decision-making</i>	<i>Respect for the natural environment</i>
<i>Working independently</i>	<i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i>
<i>Team work</i>	<i>Criticism and self-criticism</i>
<i>Working in an international environment</i>	<i>Production of free, creative and inductive thinking</i>
<i>Working in an interdisciplinary environment</i>	<i>.....</i>
<i>Production of new research ideas</i>	<i>Others...</i>
	<i>.....</i>

Business Knowledge

Problem Solving

Use of IT applications in Problem Solving

Search for, analysis and synthesis of data and information, with the use of the necessary technology

Working Independently

Working in an Interdisciplinary Environment

Production of Creative and Inductive Thinking

(3) SYLLABUS

Course Description: This course provides a set of fundamental concepts and "hands-on experience" for understanding the potential impact of information technology (IT) on business strategy, structure, and growth – with specific reference to current Information Systems and to Application Programming Interfaces (APIs) that allow for the efficient re-use of Information Systems functionality inside and outside of the enterprise.

Course Topics:

- Fundamental concepts and frameworks for understanding the potential impact of information technology (IT) on business strategy and structure
 - Computers and Information Systems (IS)
 - The business value chain
 - Information Systems
- Information Systems: Functionality, Architectures, Structure

- Client-Servers Models, Peer-to-Peer, Microservices
- Multi-tier architectures and Layered organization
- Business integration through Enterprise Application Integration
- Information Systems in practice: How does the modern enterprise use Application Programming Interfaces (APIs)?
 - Methods and examples
 - “Hands-on” experience with APIs by using [Postman API Collaboration Platform](#)

Course Structure:

- Introduction - Scope of the course and method of study
- Introduction to the Enterprise Information Systems
- Key Enterprise Technologies
- Application Programming Interfaces: Theory and Use
- Application Programming Interfaces: Exercises and “Hands-on” experience

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face-to-face; additional short online meetings for coordination and supervision of students’ work. Teaching methods for this course are based on lectures and presentation / discussion of theory, methodology, examples and "hands-on" experience (students learn how to use APIs to access functionality and data from existing Information Systems). Working closely with students on concrete API examples is essential and helps students understand the basic concepts and tools of the course.	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	The second part of the course is developed as a laboratory where students design and verify API example cases.	
TEACHING METHODS <i>The manner and methods of teaching are described in detail. Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc. 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>	Activity	Semester workload
	Lectures	39
	Study of bibliography	39
	Work Assignment	40
	Personal exercise (non-directed study)	20
	Exams	2
	Course total	140
STUDENT PERFORMANCE EVALUATION		

<p><i>Description of the evaluation procedure</i></p> <p><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></p> <p><i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i></p>	<p>Language of evaluation: Greek for local students, English for ERASMUS students.</p> <p>Students Evaluation Scheme:</p> <p>Class Participation (20%)</p> <p>Assignments (20%)</p> <p>Final Exam (60%)</p>
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(5) ATTACHED BIBLIOGRAPHY

- Suggested bibliography:

Πληροφοριακά Συστήματα Διοίκησης, K. C. Laudon & J. Laudon

- <http://www.klidarithmos.gr/plhroforiaka-systhmata-dioikhshs-11h-amerikanikh-ekdosh>

Ανάλυση και Σχεδίαση Πληροφοριακών Συστημάτων, 5η Έκδοση, Hoffer-Valacich-George

- <https://www.tziola.gr/book/val/>