COURSE PROFILE

Course Name	Code	Semester	Term	Theory+PS+Lab (hour/week)	Local Credits	ECTS
Information System Administration and Operations	IT424	Spring	8	3 + 0 + 0	3	6

Prerequisites	None

Course Language	English
Course Type	Departmental Elective
Course Lecturer	Assist. Prof. Dr. Fatih Özaydın
Course Assistant	Murat Kaya
Course Objectives	This course aims to provide means of determining organizational information requirements through interviews and company document analysis, provide current structured methodologies for systems analysis and design of information systems such as data flow diagrams, entity relationship diagrams, data dictionaries, structured chart and explain object-oriented techniques for analysis and design such as use cases, class diagrams, sequence diagram.
Course Learning Outcomes	Upon successful completion of the course, students will be able to: • understand how to determine organizational information requirements • learn structured methodologies for analysis and design of information systems • learn object-oriented techniques for analysis and design
Course Content	Definition of system. Approaches to system development. System life cycle. Project management. The survey phase. Tools of structured analysis. Requirements, design and analysis.

COURSE CONTENT

Week	Subjects	Related
1	Introduction: Definition of system, Approaches to system development. System Life Cycle.	
2	Project Management , Teaming of groups, CASETOOL: Using VISIBLE ANALYST	
3	The survey phase. Information gathering and interviewing , Tools of structured analysis: data flow diagrams (DFD),	
4	Tools of structured analysis: data flow diagrams (DFD), Events and Data Stores	
5	Entity Relationship Diagram, Data dictionary, Process specification	
6	Proposal presentation. Exam review.	
7	Midterm 1	
8	Progress report: Cost and benefit analysis (sample), Event list, Process Specification Example, Work on progress report	
9	Progress report presentation	
10	RMO, evaluating alternatives for requirements	
11	The object-oriented approach to requirements: Class diagram	
12	Design, Transform Analysis	
13	Qualities of a good Design: programming simplicity and system morphology	
14	Object oriented design, exam review	

Course Textbook	Systems Analysis & Design in a Changing World by Satzinger, Jackson, and Burd, Course Technology 2008, 5th edition, ISBN: 1-4239-0228-9 (amazon's website on 4th edition)
Recommended References	1. Modern Structured Analysis by Yourdon, Prentice Hall 1989, ISBN 0-13-598624-9, (amazon's website on structured analysis) 2. Practical Guide to Structured Systems Design by Page-Jones, Prentice-Hall 1988, ISBN: 0-13-690769-5. 3. Use Cases --Requirements in Context, by Kulak and Guiney, Addison-Wesley, Pearson Education, 2nd edition, 2004, ISBN 0-321-15498-3. 4. Use Case Modeling, by Kurt Bittner and Ian Spence, Addison-Wesley, Pearson Education, 2003, ISBN 0-201-70913-9.

Semester Requirements	Number	Percentage of Grade
Attendance/Participation		1
Laboratory		
Application		
Special Course Internship (Work Placement)		
Quizzes/Studio Critics		
Homework Assignments		4
Presentation		
Project		40
Seminar/Workshop		
Midterms/Oral Exams		55
Final/Resit Exam		
Total		100

PERCENTAGE OF SEMESTER WORK		45
PERCENTAGE OF FINAL WORK		55
Total		100

	Core Courses	
	Major Area Courses	X
Course Category	Supportive Courses	
	Media and Management Skills Courses	
	Transferable Skill Courses	

COURSE'S CONTRIBUTION TO PROGRAM

#	Program Qualifications / Outcomes	* Level of Contribution				
		1	2	3	4	5
1	A foundation in mathematics and basic sciences and ability to apply acquired knowledge as they relate to the study and practice of information technology					X
2	An ability to analyze a problem, identify and define the computing requirements appropriate to its solution, to understand, select and use appropriate technology, tools, standards, protocols, building blocks, and components to solve the problem					X
3	An ability to propose, analyze, design, develop, test and maintain an information technology system including software solutions, security model, computer and network infrastructure, information systems etc. to solve information technology problems			X		
4	An ability to analyze local and global impact of computing on individuals, organizations and society; and the ability to apply information technology techniques, skills, and tools for regular computing practices as well as to improve effectiveness of current methodologies	X				
5	An ability to effectively communicate in oral and written media with all kinds of related audiences; and prepare documentation for this purpose as required	X				
6	An understanding of professional, ethical, legal, and social issues and responsibilities of information technology profession		X			
7	A taste and breadth of knowledge across several social topics outside the immediate requirements of the information technology profession, and the ability to work within heterogeneous teams to accomplish a common goal including people from the information technology area as well as other disciplines		X			
8	An ability to engage in life-long learning and professional development for personal improvement to follow contemporary information technology issues					

*1 Lowest, 2 Low, 3 Average, 4 High, 5 Highest

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION

Activities	Number	Duration (Hours)	Total Workload
Course Hours (Including Exams)	14	3	42
Tutorials			
Laboratory			
Application			
Special Course Internship (Work Placement)			
Field Work			
Study Hours Out of Class	14	4	56
Presentations / Seminar			
Project			
Preparatory reading	14	3	42
Homework Assignments	4	1	4
Quizzes	4	1	4
Midterm Exams	1	2	2
Final / Resit Exam	1	2	2
		Total Workload	152

COURSE CATEGORY

ISCED GENERAL AREA CODES	GENERAL AREAS	ISCED BASIC AREA CODES	BASIC EDUCATIONAL AREAS	
1	Education	14	Teacher Training and Educational Sciences	
2	Humanities and Art	21	Art	
2	Humanities and Art	22	Humanities	
3	Social Sciences, Management and Law	31	Social and Behavioural Sciences	45
3	Social Sciences, Management and Law	32	Journalism and Informatics	
3	Social Sciences, Management and Law	38	Law	
4	Science	42	Life Sciences	
4	Science	44	Natural Sciences	
4	Science	46	Mathematics and Statistics	25
4	Science	48	Computer	30
5	Engineering, Manufacturing and Civil	52	Engineering	
5	Engineering, Manufacturing and Civil	54	Manufacturing and Processing	
5	Engineering, Manufacturing and Civil	58	Architecture and Structure	
6	Agriculture	62	Agriculture, Forestry, Livestock, Fishery	
6	Agriculture	64	Veterinary	
7	Medicine and Welfare	72	Medical	
7	Medicine and Welfare	76	Social Services	
8	Service	81	Personal Services	
8	Service	84	Transport Services	
8	Service	85	Environment Protection	
8	Service	86	Security Services	