COURSE PROFILE

Course Name	Code	Semester	Term	Theory+PS+Lab (hour/week)	Local Credits	ECTS
Analysis and Design of Information Systems	MIS521	Spring	1	3 + 0 + 0	3	6

Prerequisites	None

Course Language	English
Course Type	Departmental Elective
Course Lecturer	Assist. Prof. Dr. Gülay Ünel
Course Assistant	
Course Objectives	This course aims to give essentials of system development life cycle, systems analysis, overview of architectures, systems design, system implementation, tools and methods for analysis and design, requirement analysis and specification.
Course Learning Outcomes	Upon successful completion of the course, students will be able to: • Understand fundamental ideas and concepts for information systems analysis and design (ISAD) • Augment how to use appropriate methods, approaches to analysis and design • Understand and practice contemporary techniques for ISAD • Exercise the use of analysis and design models along with UML in the context of ISAD • Capable to make sense of differences among SDLC and OO approach and models Aware of practical issues related to ISAD and contextualize them from underlying perspectives
Course Content	Traditional and object-oriented systems development. Contemporary conceptual modelling tools and languages for information systems aspects concerning data and process. Systematic methodology for analysing a business problem and specifying the requirements for the information systems. Applications.

COURSE CONTENT

Week	Subjects	Related
1	Introduction, Terminology, Objective and Scope, life cycle of ISAD	
2	Agile Method in a nutshell, Conducting Research in ISAD	
3	Object-oriented Modeling (Methods, Tools, Languages- UML)	
4	Object-oriented Modeling (Methods, Tools, Languages- UML)	
5	Object-oriented Modeling (Methods, Tools, Languages- UML)	
6	Socio-technical structure clashes in global software development context	
7	Check point for research and project	
8	Reference Model Use for Software Mass Customization	
9	Case Study: Methodologies in Practice (Finance Industry)	
10	Modeling Methods for Service Architecture Development	
11	Agile Off Shore Systems Development Methods	
12	Check point for research and project –draft (peer review)	
13	Conceptual Framework	
14	Research Presentation	

Course Textbook	Kendall and Kendall (2008) Systems Analysis and Design, 7th ed. Prentice Hall, ISBN-13:9780131579866
Recommended References	Siau, Kendall (2007) Research Issues in Systems Analysis and Design, Databases and Software Development, IGI Publishing, Hershey, USA

Semester Requirements	Number	Percentage of Grade
Attendance/Participation		
Laboratory		
Application		
Special Course Internship (Work Placement)		
Quizzes/Studio Critics		
Homework Assignments		
Presentation		
Project		
Seminar/Workshop		
Midterms/Oral Exams	2	60
Final/Resit Exam	1	40
Total	3	100

	Number	Percentage of Grade
PERCENTAGE OF SEMESTER WORK	2	60
PERCENTAGE OF FINAL WORK	1	40
Total	3	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	An ability to use the theoretical and applied foundations in mathematics and basic sciences acquired in the undergraduate level to the solutions of problems in information technology area					X
2	An ability to analyze a graduate level 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 graduate level information technology problems			X		
4	An ability to analyze and communicate 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, prepare documentation for this purpose; and acquire academic writing skills in a foreign language	X				
6	An ability to understand and teach professional, ethical, legal, and social issues and responsibilities of information technology profession and research		X			
7	An ability to gain knowledge and conduct research on topics inside and outside the requirements of the information technology profession, and the ability to lead and work within heterogeneous teams of people from different research areas to accomplish interdisciplinary research		X			
8	An ability to engage in life-long learning and professional development for personal improvement to follow contemporary information technology research					

*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	5	70
Presentations / Seminar			
Project			
Preparatory reading	14	6	84
Homework Assignments			
Quizzes			
Midterm Exams	2	2	4
Final / Resit Exam	1	2	2
		Total Workload	202

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	40
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	
4	Science	48	Computer	60
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	