COURSE PROFILE

Course Name	Code	Semester	Term	Theory+PS+Lab (hour/week)	Local Credits	ECTS
Business Value of Software Development	MIS534	Spring		3 + 0 + 0	3	8

Prerequisites	None

Course Language	English
Course Type	Departmental Elective
Course Lecturer	Assoc. Prof. Dr. Vedat Coskun
Course Assistant	Büşra Özdenizci
Course Objectives	This course aims the students to maximize business value during project development.
Course Learning Outcomes	Students will be able to do the following: • Evaluate quality of software • Be aware of RoI during Software Development • Compare and evaluate cost and benefit of software projects
Course Content	Execution of best quality software development and testing while maximizing business value. Managing globalization of software development. Return of Investment (ROI) and Total Cost of Ownership (TCO) in the context of agile methodologies such as Scrum, extreme programming (XP), as well as traditional methodologies. Formulation of a comprehensive methodology for quantifying the costs and benefits to create innovative software products. Complete business value comparison between traditional and agile methods.

COURSE CONTENT

Week	Subjects	Related
1	Review of Software Development Process	
2	Cost Estimation of Software Development Phases	
3	Requirements Management	Chapter 5-7
4	Identifying & Managing Software Risk	Chapter 25
5	Function Point Analysis	Chapters 25-26
6	Support for Expert Estimation	
7	Parametric Cost Models	
8	Dealing with Cost Estimation Uncertainties	
9	End to End Estimation Process	
10	Expectation Management: Managing Customer Expectations	
11	Project Tracking & Reporting	
12	Managing Technical People and Leadership Errors	
13	Building Quality into Software: Defining Processes	Chapters 14, 16, 23
14	Review	

Course Textbook	*Software Engineering: A Practitioner's Approach,* by Roger S. Pressman
Recommended References	

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	1	40
Final/Resit Exam	1	60
Total		100

PERCENTAGE OF SEMESTER WORK	1	40
PERCENTAGE OF FINAL WORK	1	60
Total		100

Course Category	Core Courses	
	Major Area Courses	X
	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				X	

*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	1	2	2
Final / Resit Exam	1	2	2
		Total Workload	200

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	