COURSE PROFILE

Course Name	Code	Semester	Term	Theory+PS+Lab (hour/week)	Local Credits	ECTS
Agile Information Systems Development	IT488	Spring	8	3 + 0 + 0	3	6

Prerequisites	None

Course Language	English
Course Type	Elective
Course Lecturer	Assoc. Prof. Vedat Coskun
Course Assistant	Büsra Özdenizci
Course Objectives	This course aims to give knowledge and skills about how to use agile methods in IT projects appropriately.
Course Learning Outcomes	Upon successful completion of the course, students will: • understand differences between agile and conventional ISD methods. • determine underpinnings of agile methods. • be able to analyse and apply a typical agile method in real-life projects. • be able to evaluate how agile methods are characterized, selected and adopted to the project situation at hand. • understand the use of agile methods in different project settings and applications (global SW development, business driven). • have ability to assess and use agile tools effectively. • be able to perform hands-on experience on settings up project team and plan based on agile philosophy.
Course Content	Basic principles of agile approaches to information systems development; method engineering and modeling in agile context, contemporary methods (SCRUM, DSDM), techniques (Timeboxing, pair programming), and tools; method adaptations at the organization and project levels; agile project management in offshore and globally distributed work setting; agile IS in object-oriented development environment.

COURSE CONTENT

Week	Subjects	Related
1	Approaches to System Development, Case Method DSDM	
2	Approaches to System Development, Case Method DSDM	
3	Agile Modeling, Prototyping	
4	Agile Modeling, Prototyping, Case Method: RUP	
5	Agile Modeling, Prototyping, Case Method: RUP	
6	Paper 2: Agile Software Development in Practice	
7	Paper 1:New directions on agile methods: a comparative analysis, Case Method: SCRUM	
8	Paper 3: Understanding Agile Software, Extreme Programming, and Agile Modelling	
9	Case Method: XP Method Composition and Method Engineering	
10	Paper 4: Adaptation of an Agile Information System Development Method	
11	Agile methods and global SW development, Invited Speaker	
12	Agile Methods and Global SW Development	
13	Agile Methods and Offshore SW Development	
14	Presentations	

Course Textbook	Systems Analysis and Design, Kendall & Kendall, Prentice Hall, 7th Ed. ISBN-13: 978013 157986-6, Chapter 6: Agile Modeling and Prototyping
	Systems Analysis and Design in a Changing World, Course Technology, 5th ed., Satzinger, Jackson and Burd, Chapter 2: Approaches to System Development
	Siau, Kendall (2007) Research Issues in Systems Analysis and Design, Databases and Software Development, IGI Publishing, Hershey, USA
	-Paper1:New directions on agile methods: a comparative analysis,
	P Abrahamsson, J Warsta, MT Siponen, 2003
	-Paper2: Agile Software Development in Practice (pages 1-32)
	Matti Rossi (Helsinki School of Economics, Finland), Hilkka

	Merisalo-Rantanen (Helsinki School of Economics, Finland), and Tuure Tuunanen
	-Paper 3: Understanding Agile Software, Extreme Programming, and Agile Modeling (pages 33-53)
	John Erickson (University of Nebraska – Omaha, USA), Kalle Lyytinen (Case Western Reserve University, USA), and Keng Siau (University of Nebraska – Omaha, USA)
	-Paper4: Adaptation of an Agile Information System Development Method (pages 54-88)
	Mehmet N. Aydin (University of Twente, The Netherlands), Frank Harmsen (Capgemini, USA), Jos van Hillegersberg (University of Twente, The Netherlands), and Robert A. Stegwee (University of Twente, The Netherlands)
Recommended References	

Semester Requirements	Number	Percentage of Grade
Attendance/Participation		
Laboratory		
Application		
Special Course Internship (Work Placement)		
Quizzes/Studio Critics		
Homework Assignments		
Presentation		
Project	1	35
Seminar/Workshop		
Midterms/Oral Exams	1	30
Final/Resit Exam	1	35
Total		100

PERCENTAGE OF SEMESTER WORK		65
PERCENTAGE OF FINAL WORK		35
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	X				

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

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION

Activities	Number	Duration	Total Workload
Course Hours (Including Exams)	14	3	42
Tutorials			
Laboratory			
Application			
Special Course Internship (Work			
Field Work			
Study Hours Out of Class	14	4	56
Presentations / Seminar			
Project			
Preparatory reading	14	4	56
Homework Assignments			
Quizzes			
Midterm Exams	1	2	2
Final / Resit Exam	1	2	2
		Total Workload	158

COURSE CATEGORY

ISCED GENERAL AREA CODES	GENERAL AREAS	ISCED BASIC AREA CODES	BASIC EDUCATIONAL AREAS	
1	Education	14	Teacher Training and Educational Sciences	0
2	Humanities and Art	21	Art	0
2	Humanities and Art	22	Humanities	0
3	Social Sciences, Management and Law	31	Social and Behavioural Sciences	50
3	Social Sciences, Management and Law	32	Journalism and Informatics	0
3	Social Sciences, Management and Law	38	Law	0
4	Science	42	Life Sciences	0
4	Science	44	Natural Sciences	0
4	Science	46	Mathematics and Statistics	0
4	Science	48	Computer	50
5	Engineering, Manufacturing and Civil	52	Engineering	0
5	Engineering, Manufacturing and Civil	54	Manufacturing and Processing	0
5	Engineering, Manufacturing and Civil	58	Architecture and Structure	0
6	Agriculture	62	Agriculture, Forestry, Livestock, Fishery	0
6	Agriculture	64	Veterinary	0
7	Medicine and Welfare	72	Medical	0
7	Medicine and Welfare	76	Social Services	0
8	Service	81	Personal Services	0
8	Service	84	Transport Services	0
8	Service	85	Environment Protection	0
8	Service	86	Security Services	0