

COURSE PROFILE

Course Name	Code	Semester	Term	Theory+PS+Lab (hour/week)	Local Credits	ECTS
Object Oriented Software Development	IT411	Fall	7	3 + 0 + 0	3	6

Prerequisites	None
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Course Language	English
Course Type	Elective
Course Lecturer	Assoc. Prof. Dr. Vedat Coskun
Course Assistant	Büsra Özdenizci
Course Objectives	This course aims to introduce software development, with continued emphasis on the separation of abstraction and implementation, and to extend programming skills and knowledge necessary for effective software development.
Course Learning Outcomes	Upon successful completion of the course, students will: <ul style="list-style-type: none">• understand the main principles of good object oriented design• understand what major tasks are appropriate to developing OO models and software• be able to have competence in object oriented analysis and design to tackle a complete object oriented project• be able to acquire Unified Modeling Language (UML), a common language for talking about requirements, designs, and component interfaces.
Course Content	Object oriented concepts, analysis and design, Unified Modeling Language (UML), object oriented languages and environments, visual programming, rapid application development.

COURSE CONTENT

Week	Subjects	Related
1	Introduction to Object Models, Classes, Classification	
2	Object Oriented Systems, Complexity	
3	Object Oriented Analysis	
4	Object Oriented Design	
5	Object Oriented Design	
6	Modelling with UML	
7	Modelling with UML	
8	Domain Specific Modelling	
9	Domain Specific Modelling	
10	Domain Specific Modelling	
11	Dealing with Complexity	
12	Object Oriented Programming Languages	
13	Object Oriented Programming Languages	
14	Review	

Course Textbook	No textbook is required
Recommended References	Object-Oriented Analysis and Design with Applications by G. Booch et al. 3rd Edition, Addison-Wesley, 2007.

Semester Requirements	Number	Percentage of Grade
Attendance/Participation		
Laboratory		
Application		
Special Course Internship (Work Placement)		
Quizzes/Studio Critics	2	20
Homework Assignments		
Presentation		
Project		
Seminar/Workshop		
Midterms/Oral Exams	1	40
Final/Resit Exam	1	40
Total		100

PERCENTAGE OF SEMESTER WORK		60
PERCENTAGE OF FINAL WORK		40
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	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
Course Hours (Including Exams)	14	3	42
Tutorials			
Laboratory			
Application	14	2	28
Special Course Internship (Work			
Field Work			
Study Hours Out of Class	14	4	56
Presentations / Seminar			
Project			
Preparatory reading	14	2	28
Homework Assignments			
Quizzes	2	2	4
Midterm Exams	1	2	2
Final / Resit Exam	1	2	2
		Total Workload	162

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	0
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	100
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