



MARMARA UNIVERSITY - FACULTY OF ENGINEERING

2017-2018 Spring

CSE4053 Information Systems: Analysis and Design

**COURSE DESCRIPTION FORM**

<b>Offering Department</b>	Department of Computer Engineering		Technical Elective					
<b>Course Code</b>	CSE4053							
<b>Course Name</b>	Information Systems: Analysis and Design							
<b>Language of Instruction</b>	English							
<b>ECTS</b>	5							
<b>Contact Hours</b>	Theoretical (T): 3	Practice (P): 0	Laboratory(L): 0					
<b>Pre-requisites</b>								
<b>Instructor</b>	<b>Name</b>	Asst.Prof. Murat Can Ganiz						
	<b>E-mail</b>	murat.ganiz@marmara.edu.tr						
<b>Course Materials</b>	<b>Mandatory</b>	Systems Analysis and Design; 6th Edition; Roberta M. Roth, Alan Dennis, Barbara Haley Wixom; Wiley						
	<b>Recommended</b>	Modern System Analysis and Design; 7th Edition; J. A. Hoffer, J. F. George, J. S. Valacich, Prentice Hall.						
<b>Course Objectives</b>	The aim of the course is to introduce the concepts of information system and system analyst and to teach the planning, analysis, design, testing, implementation, system maintenance and support stages and processes through examples and applications.							
<b>Course Content</b>	System development methodologies, roles of system analyst, project management stages, requirement analysis, functional modeling and structural modeling, design stages, user interface design, implementation, system maintenance and support with transition to the new system.							
<b>Learning Outcomes</b>	<b>LO1</b>	Developing the project idea and giving a project proposal.						
	<b>LO2</b>	Plan the proposed information system project.						
	<b>LO3</b>	Analyze the system and process.						
	<b>LO4</b>	System modeling, design and realization.						
	<b>LO5</b>	Teaching system distribution, maintenance and support.						
<b>Program Outcomes</b>	<b>LO1</b>	<b>LO2</b>	<b>LO3</b>	<b>LO4</b>	<b>LO5</b>			
<b>PO2</b>	Ability to identify, formulate, and solve complex engineering problems (a); ability to select and apply proper analysis and modelling methods for this purpose (b).	a,b	b	b				
<b>PO3</b>	Ability to design a complex system, process, device or product under realistic constraints and conditions, in such a way so as to meet the desired result (a); ability to apply modern design methods for this purpose (b).		a,b	a				
<b>PO7</b>	Ability to communicate effectively in Turkish, both orally and in writing (a); ability to write effective reports, to understand written reports and to prepare design/production reports in a foreign language (b); ability to do effective presentations; ability to take and give clear instructions (c).	b						
<b>PO10</b>	Information about business life practices such as project management, risk management, and change management (a); awareness of entrepreneurship, innovation (b), and sustainable development (c).				a			
<b>Subjects (Knowledge, Skills and Behaviours), Contributions of Subjects to Learning Outcomes, Assessment Methods</b>	<b>No</b>	<b>Week</b>	<b>Subjects</b>	<b>LO1</b>	<b>LO2</b>	<b>LO3</b>	<b>LO4</b>	<b>LO5</b>
	<b>S1</b>	1	System analyst and system development	MF				
	<b>S2</b>	2	Select, manage, and launch a project		P			
	<b>S3</b>	3	Requirements analysis		P			
	<b>S4</b>	4	Use case analysis		P			
	<b>S5</b>	5	Process modeling			MF,P		
	<b>S6</b>	6	Data modeling				P	
	<b>S7</b>	7	Introduction to design and architectural design				P	
	<b>S8</b>	9	User interface design				MF	
	<b>S9</b>	10	Program design					MF
	<b>S10</b>	11	Data storage design					MF
	<b>S11</b>	12-13	Implementations					MF
	<b>S12</b>	14	Switch to the new system					MF
<b>S13</b>	15	Switch to objects					MF	
<b>Assessment</b>	<b>No</b>	<b>Type</b>	<b>Weight</b>	<b>Implementation Rule</b>		<b>Make-up Rule</b>		

<b>Methods and Weights</b>	<b>MF</b>	Midterm, Final	70%	One midterm and one final exam will be held. Exams are held as close noted. Calculation and communication tools are not allowed during the exam.	Marmara University regulations will be followed for make-up exams.									
	<b>P</b>	Project	30%	4 or 5 projects are given. In these projects, the student is asked to select a project idea, to determine the system requirements of this project, to create documentation and use cases scenarios. The stages of modeling and design are given as a project and the student is expected to apply these stages to the system they proposed. The implementation and completion is given as a separate project.										
	<b>TOTAL</b>		100%											
<b>Determining Letter Grades</b>	<ul style="list-style-type: none"> <li>The letter grades will be determined based on the midterm and final exams, projects.</li> <li>In order to determine the letter grade, a curve or catalog based method will be followed based on the total average scores of the students.</li> <li>The final exam score and the total average score of the student must be at least 35 to pass the course.</li> <li>According to Marmara University Undergraduate regulations, the weight of the final exam must be at least 40 out of 100.</li> </ul>													
	<table border="1"> <thead> <tr> <th>Assessment</th> <th>Midterm</th> <th>Project</th> <th>Final</th> <th>TOTAL</th> </tr> </thead> <tbody> <tr> <td>Weight</td> <td>30</td> <td>30</td> <td>40</td> <td>100</td> </tr> </tbody> </table>					Assessment	Midterm	Project	Final	TOTAL	Weight	30	30	40
Assessment	Midterm	Project	Final	TOTAL										
Weight	30	30	40	100										
<b>Teaching Method, Student Work Load</b>	<b>Tme Applied by Instructor</b>													
	<b>No</b>	<b>Method</b>	<b>Explanation</b>		<b>Hours</b>									
	1	Lectures	Lectures are given in class using the board or via presentations. Example questions are solved to enhance the concepts. Shorter scripts and their sample (s) and animations are shown to consolidate learning (examples of case scenarios, mock-up, etc.)		14x3=42									
	2	Problem Session/ Practice	Problems related to the course topics are solved on the board.		-									
	3	Laboratory	Experiments are done in the laboratory or theoretical concepts covered during the lectures are practiced using computer exercises.		-									
	4	Interactive Courses	Questions are asked to students during lectures and they are encouraged to guess the answers (peer learning is also in this category)		-									
	5	Field Work	Students attend activities outside the campus.		-									
	6	Midterm	Midterm exam is given during the midterm week.		2									
	7	Final	Final exam is given during the final exam week.		2									
	<b>Estimated Time to be Allocated by a Student</b>													
	8	Project	The students carry out research about the problem given in the project, design and implement their solution and prepare a report.		48									
	9	Homeworks	The students solve the problems given as homework.		-									
	10	Pre-class learning of Course Material	The students study and learn the new subjects from course materials.		10									
11	Review of Course Material	Students review the course subjects from course materials to prepare for the exams and homeworks.		20										
12	Office Hour	Students ask questions to the instructor or the assistant during office hours.		2										
<b>TOTAL</b>				126										
<b>Academic Honesty</b>	Violations of scholastic honesty include, but are not limited to cheating, plagiarizing, fabricating information or citations, facilitating acts of dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students.													
	In case academic dishonesty is observed, the first authority is the instructor of the course. The instructor may decide to give the student zero for the homework(s)/lab(s)/exam(s), give the letter grade FF, or may take disciplinary action.													