



MARMARA UNIVERSITY - FACULTY OF ENGINEERING

2017-2018 Fall

CSE4059 Internet Programming

**COURSE DESCRIPTION FORM**

<b>Offering Department</b>		Department of Computer Engineering		Technical Elective					
<b>Course Code</b>		CSE4059							
<b>Course Name</b>		Internet Programming							
<b>Language of Instruction</b>		English							
<b>ECTS</b>		5							
<b>Contact Hours</b>		Theoretical (T): 3		Practice (P): -		Laboratory(L): -			
<b>Pre-requisites</b>									
<b>Instructor</b>		<b>Name</b>		Murat Can Ganiz					
		<b>E-mail</b>		murat.ganiz@marmara.edu.tr					
<b>Course Materials</b>		<b>Mandatory</b>		"An Introduction to Network Programming with Java", Jan Graba, Springer.					
				Grinberg, M. (2014). Flask web development: developing web applications with python. " O'Reilly Media, Inc."					
		<b>Recommended</b>		"Core Web Programming", 2nd edition, Marty Hall, Sun Microsystems Press. (use <a href="http://www.coreservlets.com/">http://www.coreservlets.com/</a> instead!)					
<b>Course Objectives</b>		The aim of this course is to teach basic concepts and techniques for internet programming and for developing scalable and secure web applications.							
<b>Course Content</b>		Basic concepts about network programming, server - client architectures and remote procedure operation, basic concepts about creating web pages, basic concepts and techniques for developing web-based scalable and secure applications.							
<b>Learning Outcomes</b>		<b>LO1</b>		General knowledge about network programming, server - client architecture.					
		<b>LO2</b>		To have general information about remote procedure operation and web services.					
		<b>LO3</b>		Creating and structuring web pages					
		<b>LO4</b>		Developing web-based, interactive software					
		<b>LO5</b>		To have information about the security of web applications.					
		<b>LO6</b>		To have knowledge about scalability of web applications.					
<b>Program Outcomes</b>				<b>LO1</b>	<b>LO2</b>	<b>LO3</b>	<b>LO4</b>	<b>LO5</b>	<b>LO6</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).					b		
<b>PO4</b>		Ability to devise (a), select, and use (b) modern techniques and tools needed for engineering practice (1); ability to employ information technologies effectively (2).					2	2	2
<b>PO6</b>		Ability to work efficiently in intra-disciplinary (a) and multi-disciplinary teams (b); ability to work individually (c).					a		
<b>PÇ10</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>PO13</b>		Knowledge of mathematics, basic sciences (a), computer science (b) and engineering sciences (c) required for the design and analysis of complex electrical and electronic devices, software and systems including hardware and software.		b	b	b			
<b>Subjects (Knowledge, Skills and Behaviours), Contributions of Subjects to Learning</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>LO6</b>
	<b>S1</b>	1-2	Basic concepts of Internet programming	MF,H					
	<b>S2</b>	3	Network programming, server - client architecture	MF,H					
	<b>S3</b>	4	Remote procedure execution and web services		MF,H				
	<b>S4</b>	5	Restful API, json, XML			MF,P			
	<b>S5</b>	6	Micro service architectures		MF,P				

<b>Outcomes, Assessment Methods</b>	<b>S6</b>	7-9	Introduction to web programming, creating and shaping static web pages, writing programs that generate dynamic web pages		MF,H															
	<b>S7</b>	10	Web forms			MF,P														
	<b>S8</b>	11	Interacting with Databases			MF,P														
	<b>S9</b>	12-13	Ensure scalability of web applications						MF											
	<b>S10</b>	14	Securing web applications					MF,P												
<b>Assessment Methods and Weights</b>	<b>No</b>	<b>Type</b>	<b>Weight</b>	<b>Implementation Rule</b>	<b>Make-up Rule</b>															
	<b>MF</b>	Midterm, Final	60%	Exams, are done by books and all course materials closed. No calculation and communication tools are allowed during exams.	Marmara University regulations will be followed for make-up exams.															
	<b>H</b>	Homeworks	10%	The deadline for homework is one week before the oral exams. Oral exams are held randomly from the attendance list every week.	-															
	<b>P</b>	Project	30%	Application of the topics on real world projects in teams	-															
	<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, project and homeworks.</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>Homeworks</th> <th>Final</th> <th>TOTAL</th> </tr> </thead> <tbody> <tr> <td>Weight</td> <td>20</td> <td>30</td> <td>10</td> <td>40</td> <td>100</td> </tr> </tbody> </table>									Assessment	Midterm	Project	Homeworks	Final	TOTAL	Weight	20	30	10	40
Assessment	Midterm	Project	Homeworks	Final	TOTAL															
Weight	20	30	10	40	100															
<b>Teaching Method, Student Work Load</b>	<b>Time 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.					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.					35												
	9	Homeworks	The students solve the problems given as homework.					5												
	10	Pre-class learning of Course Material	The students study and learn the new subjects from course materials.																	
11	Review of Course Material	Students review the course subjects from course materials to prepare for the exams and homeworks.					36													
12	Office Hour	Students ask questions to the instructor or the assistant during office hours.					2													
<b>TOTAL</b>						<b>124</b>														
<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.																			