

Faculty	Faculty of Engineering		
Program	B.Sc. in Civil Engineering	Elective	
	B.Sc. in Computer Engineering	Elective	
	B.Sc. in Electrical-Electronics Engineering	Elective	
	B.Sc. in Industrial Engineering	Elective	
	B.Sc. in Mechanical Engineering	Elective	

Course Code	COMP 464			
Course Title in English	Web Programming and Internet Technologies			
Course Title in Turkish	Web Programlama ve İnternet Teknolojileri			
Language of Instruction	English			
Type of Course	Flipped Classroom/Lecture/Exercise			
Level of Course	Undergraduate			
Course Category (by % of Content)	Basic Science 10	Basic Engineering 30	Engineering Design 60	General Education 0
Semester Offered	Fall			
Contact Hours per Week	Lecture: 3 hours	Recitation: -	Lab: -	Other:-
Estimated Student Workload	158 hours			
Number of Credits	6 ECTS			
Grading Mode	Standard Letter Grade			
Pre-requisites	COMP 201 Data Structures and Algorithms			
Expected Prior Knowledge	Data Structures and Algorithms			
Co-requisites	None			
Registration Restrictions	Only Undergraduate Students			
Overall Educational Objective	To learn fundamentals of internet technologies while practicing how to design and program a web site.			
Course Description	<p>This course covers the fundamentals of all basic component of Internet. The course will be taught under two sections: Theory and Application. The theory section covers the following topics: Two-tiered client server architecture; Three-tier architects with Model-Presentation-Control (MVC) architecture; Web servers and web server extensions such as Java servlets and JSP; Service-oriented architecture and components, web services, semantic web; Internet protocols (HTTP, SOAP);Cloud Computing.</p> <p>In the application section, the student will practice the client side web technologies like HTML, CSS, JavaScript and become familiar with how to design and implement efficient, scalable and secure database backed web sites.</p>			
Course Description in Turkish	<p>Bu ders internetin tüm temel bileşenlerinin temellerini kapsamaktadır. Ders iki bölüm halinde öğretilecektir: Teori ve Uygulama. Teori bölümü aşağıdaki konuları kapsamaktadır:İki katmanlı istemci sunucu mimarisi; Model-Sunum-Kontrol (MVC) mimarisine sahip üç katmanlı mimarlar; Java sunucuları ve JSP gibi web sunucuları ve web sunucusu uzantıları;Servis odaklı mimari ve bileşenler, web servisleri, semantik web; İnternet protokolleri (HTTP, SOAP); Bulut bilişimi,</p> <p>Uygulama bölümünde, öğrenci HTML, CSS, JavaScript gibi istemci tarafındaki web teknolojilerini deneyimleyecek ve verimli, ölçeklenebilir ve güvenli veritabanı destekli web sitelerinin nasıl tasarlanacağı ve uygulanacağı konusunda bilgi sahibi olacaktır.</p>			
Course Learning Outcomes and Competences	<p>Upon successful completion of the course, the learner is expected to:</p> <ol style="list-style-type: none"> gain a working knowledge of the basic mechanisms, services and protocols of the global Internet; become proficient in development and management of web services; 			

3. demonstrate skills for web servers and web server extensions such as Java servlets and JSP;
4. master the programming languages JavaScript, HTML, CSS on a professional level;
5. design and implement efficient, scalable and secure database backed web sites.

Relationship of the Course with the Student Outcomes	Level	Learning Outcome(s)	Assessed by
Student Outcomes	N=None S=Supportive H=High		Exam, Project, HW, Experiment, Presentation , etc.
(1) an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	H	1	Exams, Assignments
(2) an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	H	4,5	Exams, Assignments , Term Project
(3) an ability to communicate effectively with a range of audiences	S	3	Assignments , Term Project
(4) an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts	S	2	Assignments , Term Projects
(5) an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives			
(6) an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions			
(7) an ability to acquire and apply new knowledge as needed, using appropriate learning strategies			

Prepared by and Date	Assist. Prof. Dr. Tuna Çakar / June 2019	
Semester	Fall 2019-2020	
Name of Instructor	Assist. Prof. Dr. Tuna Çakar	
Course Contents	Week	Topic
	1.	Introduction
	2.	Paradigms and Applications in HCI (Principles I)
	3.	Design Process: Basics & Rules
	4.	Design Process: Support & Evaluation Techniques
	5.	Models and Theories: Cognitive Models
	6.	Socio-organizational Issues
	7.	Task Analysis
	8.	Midterm Examination
	9.	Dialog Notations & Design
	10.	System and Rich Interaction
	11.	Current Applications & Groupware
	12.	Augmented Reality
	13.	Project Presentations
	14.	General Review
	15.	Final Exam/Project/Presentation
	16.	Final Exam/Project/Presentation

Required/Recommended Readings	Dix A. et al., Human-Computer Interaction. Harlow, England: Prentice Hall, 2004, ISBN-10: 0130461091. Shneiderman, B., & Plaisant, C. Designing the User Interface. Pearson Publishing, 2013.
Teaching Methods	Flipped classroom. Students work individually for assignments.
Homework and Projects	Assignments & Project
Laboratory Work	Laboratory study
Computer Use	Required
Other Activities	-
Assessment Methods	Midterm Exam (15%), Final Exam (20%), In-Class Work (20%), Assignments (20%), Quizzes (10%), Term-Project (15%)
Course Administration	Instructor's office: 5th floor Phone number: 0 212 395 37 45 Office hours: After the lecture hours. E-mail address: cakart@mef.edu.tr Rules for attendance: No attendance required. Statement on plagiarism: YÖK Regulations

ECTS Student Workload Estimation	Activity	No/Weeks	Hours			Calculation	Explanation
		No/Weeks per Semester (A)	Preparing for the Activity (B)	Spent in the Activity Itself (C)	Completing the Activity Requirements (D)		
	Lecture/Flipped Classroom	14	1	3		56	A*(B+C+D)
	Quizzes	10	1	1		20	
	Midterm(s)	1	8	2	0	10	A*(B+C+D)
	Assingments	10	1	2	0	30	A*(B+C+D)
	Final Examination	1	10	2	0	12	A*(B+C+D)
	Term-project	1	10	20	0	30	
	Total Workload					158	
	Total Workload/25					6.32	
	ECTS					6	