

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 428			
Course Title in English	Human-Computer Interaction			
Course Title in Turkish	İnsan-Bilgisayar Etkileşimi			
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 40	Engineering Design 40	General Education 10
Semester Offered	Fall			
Contact Hours per Week	Lecture: 2 hours	Recitation: -	Lab: 2 hours	Other:-
Estimated Student Workload	157 hours			
Number of Credits	6 ECTS			
Grading Mode	Standard Letter Grade			
Pre-requisites	-			
Expected Prior Knowledge	-			
Co-requisites	None			
Registration Restrictions	Only Undergraduate Students			
Overall Educational Objective	To learn to understand the principles and characteristics of human-computer interaction, such as direct manipulation, usability affordances, and interaction design heuristics; the workflow for designing and evaluating user-centered designs, from need-finding to prototyping to evaluation; the current state of research and development in human-computer interaction, such as augmented reality, wearable devices, and robotics.			
Course Description	This course is an introductory course on human-computer interaction. It does not presuppose any earlier knowledge of human-computer interaction, computer science, or psychology. The class covers three broad categories of topics within human-computer interaction: (a) the principles and characteristics of the interaction between humans and computers; (b) the techniques for designing and evaluating user-centered systems; and (c) current areas of cutting-edge research and development in human-computer interaction.			
Course Description in Turkish	Bu ders insan-bilgisayar etkileşimi üzerine bir giriş dersidir. İnsan-bilgisayar etkileşimi, bilgisayar bilimi veya psikoloji ile ilgili daha önceki herhangi bir bilgiyi varsaymaz. Ders, insan-bilgisayar etkileşimi içerisinde üç geniş kategorideki konuyu kapsar: (a) insanlar ve bilgisayarlar arasındaki etkileşimin ilkeleri ve özellikleri; (b) kullanıcı merkezli sistemleri tasarlamak ve değerlendirmek için kullanılan teknikleri; (c) insan-bilgisayar etkileşiminde günümüzdeki en ileri araştırma ve geliştirme alanları.			
Course Learning Outcomes and Competences	Upon successful completion of the course, the learner is expected to:			
	<ol style="list-style-type: none"> 1. explain and discuss the main issues related to human-computer interaction context; 2. design user interfaces and experiences grounded in known principles of usability and human-computer interaction; 3. iteratively prototype, evaluate, and improve user-centered designs with user feedback; 4. apply the skills acquired throughout the term to open or new areas of development in human-computer interaction; 			

	5. acknowledge and elaborate on the ethical and professional issues with required background knowledge;		
	6. perform effectively in a project team;		
	7. acquire and apply new knowledge from the given resources.		
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	S	3	Lab work + Project + Exam
(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	2	Lab work + Project + Exam
(3) an ability to communicate effectively with a range of audiences	S	1	Video Assignments + Project Presentation
(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	5	Lab Work + Project + Exam
(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	S	6	Project
(6) an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions	H	4	Lab work + Project + Exam
(7) an ability to acquire and apply new knowledge as needed, using appropriate learning strategies	H	7	Lab Work + Project + Exam
Prepared by and Date	Assist. Prof. Dr. Tuna Çakar / February 2020		
Semester	Spring 2019-2020		
Name of Instructor	Assist. Prof. Dr. Tuna Çakar		
Course Contents	Week	Topic	
	1.	Introduction to HCI	
	2.	Exploring HCI and Principles	
	3.	Feedback Cycles and Direct Manipulation	
	4.	Human Abilities and Design Principles	
	5.	Mental Models and Representations	
	6.	Task Analysis and Distributed Cognition	
	7.	Interfaces and Politics; Conclusions	
	8.	Intro to Methods; Ethics and Human Research	
	9.	Needfinding and Requirement Gathering	
	10.	Design Alternatives and Prototyping	
	11.	Evaluation; HCI and Agile Development	
	12.	Applications: Technology, Ideas, and Domains	
	13.	Related Fields and Next Steps	
	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	Exam (25%), Lab Work (25%), Assignments/Quizzes (25%), Term-Project (25%)
Course Administration	Instructor's office: 5th floor Phone number: 0 212 395 37 50 + 0 530 922 55 05 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	2	4		84	A*(B+C+D)
Quizzes					0		
Midterm(s)					0	A*(B+C+D)	
Assingments	5	2	3	0	25	A*(B+C+D)	
Final Examination	1	15	3	0	18	A*(B+C+D)	
Term-project	1	10	20	0	30		
Total Workload					157		
Total Workload/25					6.28		
ECTS					6		