

School of Engineering and Natural Sciences / Industrial Engineering (English)

2022 - 2023 Academic Year

HUMAN MACHINE INTERACTION

Syllabus

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
HUMAN MACHINE INTERACTION	IND4268020	Spring Semester	3+0	3	6
Prerequisites Courses	NESNE TABANLI PROGRAMLAMA				
Recommended Elective Courses					
Language of Instruction	English				
Course Level	First Cycle (Bachelor's Degree)				
Course Type	Elective				
Course Coordinator	Prof.Dr. Selim AKYOKUŞ				
Name of Lecturer(s)	Assist.Prof. Muhsin Zahid UĞUR				
Assistant(s)					
Aim	This course covers the basic concepts, fundamental theories and current researches in human-computer interaction. Topics include principles, theories, methodologies, design, implementation, evaluation and research in computer interfaces. The objectives of this course are: <ul style="list-style-type: none"> • to familiarize students with basic concepts of human computer interaction • to introduce students to theories and principles in computer interface design • to develop students' ability to design, conduct and analyze user studies for computer software • to provide students with the knowledge of the design process for user interfaces. 				
Course Content	This course contains; What is interaction design?,The Process of Interaction Design, Conceptualizing Interaction,Cognitive Aspects,Interfaces I,Interfaces II,Discovering Requirements,Data Gathering,Data Analysis, Interpretation, and Presentation,Mid-Semester Presentation,Design, Prototyping, and Construction,Data at Scale, Interaction Design in Practice,Introducing Evaluation, Evaluation Studies: From Controlled to Natural Settings,Evaluation: Inspections, Analytics, and Models,Social Interaction, Emotional Interaction and Final Presentation.				
Course Learning Outcomes			Teaching Methods	Assessment Methods	
Understand and apply fundamental concepts in human-computer interaction					
Design and conduct user experiments for computer interface					
Analyze and interpret data collected from user experiments					
Design computer interfaces to meet desired needs within realistic constraints					
Communicate effectively with stakeholders					
Teaching Methods					
Assessment Methods					
Lecture Schedule					
Sequence	Topics	Preliminary Preparation			
1	What is interaction design?				
2	The Process of Interaction Design, Conceptualizing Interaction				
3	Cognitive Aspects				
4	Interfaces I				
5	Interfaces II				
6	Discovering Requirements				
7	Data Gathering				
8	Data Analysis, Interpretation, and Presentation				
9	Mid-Semester Presentation				
10	Design, Prototyping, and Construction				
11	Data at Scale, Interaction Design in Practice				
12	Introducing Evaluation, Evaluation Studies: From Controlled to Natural Settings				
13	Evaluation: Inspections, Analytics, and Models				
14	Social Interaction, Emotional Interaction and Final Presentation				
Evaluation Methods		Weight(%)			
Midterm Exam		30			
General Exam		70			

Resources
Interaction Design - Beyond Human-Computer Interaction by Helen Sharp, Yvonne Rogers, Jennifer Preece (5th edition, 2019)Lecture notes that will be delivered during the classes.