



ECTS COURSE INFORMATION FORM

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

Course Code	COMP 109			
Course Title in English	Computer Programming (Java)			
Course Title in Turkish	Bilgisayar Programlama (Java)			
Language of Instruction	English			
Type of Course	Flipped Classroom/Lecture/Exercise			
Level of Course	Undergraduate			
Course Category (by % of Content)	Basic Science 30	Basic Engineering 30	Engineering Design 30	General Education 10
Semester Offered	Fall			
Contact Hours per Week	Lecture: 3 hours	Recitation: -	Lab: 2 hours	Other:-
Estimated Student Workload	151 hours			
Number of Credits	6 ECTS			
Grading Mode	Standard Letter Grade			
Pre-requisites	-			
Expected Prior Knowledge	Basic mathematics knowledge			
Co-requisites	None			
Registration Restrictions	Only Undergraduate Students			
Overall Educational Objective	To learn fundamentals of computer programming, how to design and implement computer algorithms to solve basic engineering problems in Java programming language.			
Course Description	This course provides a comprehensive understanding of computer programming. The following topics are covered: Fundamentals of computers and computer programming; variables and data types; control flow and conditionals; functions; loops; methods and debugging; single and multi-dimensional arrays.			
Course Description in Turkish	Bu ders, bilgisayar programlamanın kapsamlı bir şekilde anlaşılmasını sağlamaktadır. Aşağıdaki konular işlenmektedir: Bilgisayar programlamanın temelleri, program kontrol, fonksiyonlar, diziler, katarlar, işaretçiler, dosya işleme ve yapılar.			
Course Learning Outcomes and Competences	Upon successful completion of the course, the learner is expected to: <ol style="list-style-type: none">1. identify, formulate, and solve fundamental computer science and basic engineering problems by applying principles of engineering, science, and mathematics;2. recognize ethical and professional responsibilities related to computer science and while providing informed judgments under restricted contexts;3. acquire and apply fundamentals of computers and computer programming as needed, using appropriate learning strategies.			

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	Lab work, HW, 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			
(3) an ability to communicate effectively with a range of audiences			
(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	Lab work, HW, 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			
(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	H	3	Lab work, HW, Exam
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 to Computers & Programming	
	2.	Variables and Data Types I	
	3.	Variables and Data Types II	
	4.	Control Flow and Conditionals I	
	5.	Control Flow and Conditionals II	
	6.	Functions I	
	7.	Functions II	
	8.	Functions III	
	9.	Loops I	
	10.	Loops II	
	11.	Methods and Debugging I	
	12.	Methods and Debugging II	
	13.	Single-Dimensional Arrays	
	14.	Multi-Dimensional Arrays	
	15.	Final Exam/Project/Presentation Period	
	16.	Final Exam/Project/Presentation Period	
Required/Recommended Readings	Intro. to Java Programming: Comprehensive Ed. (11th Ed., Pearson, 2014), Daniel Liang.		
Teaching Methods	Flipped classroom. Students work individually for assignments.		
Homework and Projects	Assignments		
Laboratory Work	Laboratory study		
Computer Use	Required		

Other Activities	-
Assessment Methods	Midterm Exam (15%), Final Exam (40%), Lab Work (20%), Class Assignments (10%), Lab Assignments (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)
	Lab Work	10	1	2	1	40	
	Midterm(s)	1	10	2	0	12	A*(B+C+D)
	Assignments (HW)	5	1	3	0	20	A*(B+C+D)
	Final Examination	1	20	3	0	23	A*(B+C+D)
	Total Workload					151	
	Total Workload/25					6.04	
	ECTS					6	