



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	Elective
	B.Sc. in Industrial Engineering	Elective
	B.Sc. in Mechanical Engineering	Elective

Course Code	COMP 100			
Course Title in English	Introduction to Computer Engineering			
Course Title in Turkish	Bilgisayar Mühendisliğine Giriş			
Language of Instruction	English			
Type of Course	Lecture / Laboratory			
Level of Course	Undergraduate			
Course Category (by % of Content)	Basic Science	Basic Engineering	Engineering Design	General Education
	10	70	20	10
Semester Offered	Fall			
Contact Hours per Week	Lecture: 2 hours	Recitation: -	Lab:-	Other:-
Estimated Student Workload	81 hours			
Number of Credits	3 ECTS			
Grading Mode	Standard Letter Grade			
Pre-requisites	None			
Expected Prior Knowledge	None			
Co-requisites	None			
Registration Restrictions	Only Undergraduate Students			
Overall Educational Objective	To learn Computer Engineering as a profession, MEF's Computer Engineering program, programming in Python and basics of computing systems.			
Course Description	This course provides an introduction to some fundamental aspects of Computer Engineering. The following topics are covered: introduction to Computer Engineering. Employment opportunities for Computer Engineers. Research areas in Computer Engineering. Courses offered in the Computer Engineering Program at MEF. Introduction to Programming in Python and computing systems.			
Course Description in Turkish	Bu derste; Bilgisayar Mühendisliği programının temel kavramları şu konu başlıklar altında incelenmektedir: Bilgisayar mühendisliğine giriş. Bilgisayar mühendisliğinde iş olanakları. Bilgisayar mühendisliğinin araştırma alanları. Bilgisayar mühendisliği programındaki dersler. Python dilinde programlamaya giriş ve bilgisayar sistemlerine giriş.			
Course Learning Outcomes and Competences	Upon successful completion of the course, the learner is expected to: <ol style="list-style-type: none">1. recognize the Computer Engineering program and its continuous improvement;2. explain the professional and ethical responsibilities of a Computer engineer;3. describe the basic concepts and formal design process in Computer Engineering;4. function effectively on a team;5. prepare a technical report and verbal presentation about a state-of-the art application in the field of Computer Engineering;6. identify computer engineering problems, solutions, and application areas;7. acquire and apply new knowledge as needed.			

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	6	Exams, Project
(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	S	3	Exams, Project
(3) an ability to communicate effectively with a range of audiences	S	5	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	1,2	Exams, Project
(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	4	Project
(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	S	7	Project
Prepared by and Date	Prof. Dr. Muhittin Gökmen / June 2019		
Semester	Fall 2019-2020		
Name of Instructor	Prof. Dr. Muhittin Gökmen		
Course Contents	Week	Topic	
	1.	Introduction to Computer Engineering	
	2.	Computer Engineering at MEF	
	3.	Software Engineering § Algorithms	
	4.	Algorithm development by iterative improvement	
	5.	Programming with Python – variables, expressions	
	6.	Programming with Python – conditional expressions, loops	
	7.	Programming with Python - functions	
	8.	Programming with Python – strings, files, lists, tuples, dictionaries	
	9.	Introduction to Computing Systems – Layers of abstraction	
	10.	Introduction to Computing Systems – Bits, data types, operations	
	11.	Introduction to Computing Systems – Digital logic structures	
	12.	Introduction to Computing Systems – The Von Neumann Model	
	13.	Invited talk: Employment Opportunities	
	14.	Student presentations	
	15.	Final Exam/Project/Presentation Period	
	16.	Final Exam/Project/Presentation Period	
Required/Recommended Readings	Y. N. Patt, and S. J. Patel, Introduction to Computing Systems, from bits & gates to C & beyond, Second Edition, McGraw-Hill, 2004.		
Teaching Methods	Lecturing in the class. Teamwork in the project.		
Homework and Projects	1 Term Project		
Laboratory Work	None		
Computer Use	For Programming with Python		
Other Activities	Poster presentation, report		
Assessment Methods	Students will be assessed based on their exams, project report and presentation.		

	Quiz (2): 20 % Midterm (2): 40 % Term Project: 40 %
Course Administration	Instructor's office and phone number, office hours, email address: To be announced -Office: 5th Floor, #18 -Phone number: 0 212 395 36 26 - Email address: gokmenm@mef.edu.tr Rules for attendance, late submissions, missing an exam, etc.: To be announced A reminder of proper classroom behavior, code of student conduct: To be announced Academic dishonesty and 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	14	1	2		42	A*(B+C+D)
	Quizzes					0	A*(B+C+D)
	Midterm(s)	1	1	2	0	3	A*(B+C+D)
	Project, Presentation, Report	6	3	3	0	36	A*(B+C+D)
	Final Examination						A*(B+C+D)
	Total Workload					81	
	Total Workload/25					3,24	
	ECTS					3	