

Course Description Form	
Course Code and Name	BM103 INTRODUCTION TO COMPUTER ENGINEERING
Course Semester	1
Catalog Content	Basic concepts about computer software and hardware, algorithm design, software development process, known operating systems, information about data structures
Textbook	Introduction to Computing Systems: From Bits and Gates to C and Beyond, 2nd Edition by Yale N. Patt (Author), Sanjay J. Patel (Author), McGraw-Hill Education, 2003
Supplementary Textbooks	Introduction to Computer Engineering: Hardware and Software Design 3rd Edition by T. L. Booth (Author), Wiley, 1984 The Beginner's Guide to Engineering: Computer Engineering by James Lance (Author), CreateSpace Independent Publishing Platform, 2013
Credit	4
Prerequisites of the Course (Attendance Requirements)	There is no prerequisite or co-requisite for this course.
Type of the Course	Compulsory
Instruction Language	Turkish
Course Objectives	To bring forward the technical subjects that fall within the scope of Computer Science and to provide permanent basic information about related topics.
Course Learning Outcomes	<ol style="list-style-type: none"> 1. Learning the fundamental concepts of computer engineering 2. Understanding the concept of software and hardware development processes and models 3. Learning computer engineering requirements and fundamentals 4. Learning different approaches to software and hardware development
Instruction Methods	The mode of delivery of this course is face to face and laboratory exercises.
Weekly Schedule	<ol style="list-style-type: none"> 1. Basic Concepts in Computer Engineering 2. Boolean Algebra 3. Algorithms 4. Programming Languages 5. Operating Systems 6. Data Structures 7. Data Models 8. Database Management 9. File Organization 10. Software Engineering 11. Computer Networks 12. Microprocessors 13. Microprocessors 14. Artificial Intelligence
Teaching and Learning Methods <i>(These are examples. Please fill which activities you use in the course)</i>	Weekly theoretical course hours: 1 Weekly tutorial hours: 2 Reading Activities Internet browsing, library work Preparation of Midterm and Midterm Exam Final Exam and Preparation for Final Exam

Assessment Criteria		Numbers	Total Weighting (%)				
	Midterm Exams	1	30				
	Assignment	0	0				
	Application	14	30				
	Projects	0	0				
	Practice	0	0				
	Quiz	0	0				
	Percent of In-term Studies (%)	0	60				
	Percentage of Final Exam to Total Score (%)	0	40				
	Attendance	-	-				
Workload	Activity	Total Number of Weeks	Duration (weekly hour)	Total Period Work Load			
	Weekly Theoretical Course Hours	14	1	14			
	Weekly Tutorial Hours	14	2	28			
	Reading Tasks	14	1	14			
	Studies	12	2	24			
	Material Design and Implementation	0	0	0			
	Report Preparing	0	0	0			
	Preparing a Presentation	0	0	0			
	Presentations	0	0	0			
	Midterm Exam and Preparation for Midterm Exam	1	10	10			
	Final Exam and Preparation for Final Exam	1	10	10			
	Other (should be emphasized)	0	0	0			
	Total Workload			100			
	Total Workload / 25			4			
	Course Credit (ECTS)			4			
Contribution Level Between Course Learning Outcomes and Program Outcomes	No	Program Outcomes	1	2	3	4	5
	1	Sufficient knowledge on mathematics, science and computer engineering; ability to apply theoretical and practical knowledge in these areas to model and solve engineering problems				X	
	2	Ability to identify, define, formulate and solve complex engineering problems; ability to choose and apply appropriate analysis and modelling methods for these purposes			X		
	3	Ability to design a complex system, process, device, software, algorithm, or product under realistic constraints and circumstances to meet certain requirements; ability to apply modern design techniques for this purpose		X			
	4	Ability to choose, develop and use modern techniques and tools necessary for engineering applications; ability to effectively use computing technologies			X		
	5	Ability to design and implement systems or experiments to solve engineering problems, collect and interpret data to evaluate and analyze the results of solutions		X			

	6	Ability to work effectively in intradisciplinary and interdisciplinary teams or individually	X				
	7	Ability to efficiently prepare, evaluate and interpret reports					X
	8	Ability to make presentations and conduct effective verbal and written communication in Turkish and English	X				
	9	Awareness of the necessity of lifelong learning; ability to access information, follow scientific and technological developments; ability to perpetually renew oneself				X	
	10	Awareness of professional and ethical responsibility, ability to act in accordance with ethical principles			X		
	11	Ability to apply knowledge on project management, risk management and change management				X	
	12	Awareness of entrepreneurship and innovation, ability to design and build	X				
	13	Ability to devise local and global solutions to contemporary issues considering the effects of engineering applications on health, environment and security	X				
	14	Awareness of the legal consequences of engineering solutions		X			
	15	Ability to apply knowledge on software development process and documentation rules			X		
	16	Knowledge on standards used in engineering applications			X		
17	Awareness of occupational health and security, information security and privacy		X				
The Course's Lecturer(s) and Contact Information		Asst. Prof. Dr. Uraz Yavanoğlu uraz@gazi.edu.tr					