

Course Description Form	
Course Code and Name	CENG356 ASSEMBLY LANGUAGES (TECH.ELECT.)
Course Semester	6
Catalog Content	The details of the assembler language with basic computer architecture, programming with assembly language, command formats and different addressing techniques
Textbook	Assembly Language for x86 Processors (7th Edition) by Kip R. Irvine, 2014.
Supplementary Textbooks	Assembly Language Step-by-Step: Programming with Linux 3rd Edition by Jeff Duntemann, 2009. MIPS Assembly Language Programming by Robert Britton, 2003.
Credit	6
Prerequisites of the Course (Attendance Requirements)	-
Type of the Course	Elective
Instruction Language	English
Course Objectives	Teaching the details and design of basic computer architecture and programming languages. It is aimed to learn the machine language and command formats by programming in assembler language.
Course Learning Outcomes	<ol style="list-style-type: none"> 1. Learning the basic computer architecture and programming languages 2. Being able to use Assembler language 3. Learning the instruction types and different addressing technique
Instruction Methods	The mode of delivery of this course is face to face
Weekly Schedule	<ol style="list-style-type: none"> 1. Week: Basic computer architecture and programming languages 2. Week: Commands and use 3. Week: Commands and use 4. Week: Command formats 5. Week: Command formats 6. Week: Addressing techniques 7. Week: Addressing techniques 8. Week: Assembler language programming 9. Week: Assembler language programming 10. Week: Assembler general concepts: Macros 11. Week: Assembler general concepts: Macros 12. Week: Subroutines 13. Week: Binding 14. Week: Installation

<p>Teaching and Learning Methods</p> <p><i>(These are examples. Please fill which activities you use in the course)</i></p>	<p>Weekly theoretical course hours: 3 Reading Activities Internet browsing, library work Preparation of Midterm and Midterm Exam Final Exam and Preparation for Final Exam</p>			
<p>Assessment Criteria</p>		<p>Numbers</p>	<p>Total Weighting (%)</p>	
	Midterm Exams	1	30	
	Assignment	5	30	
	Application	0		
	Projects	0		
	Practice	0		
	Quiz	0		
	Percent of In-term Studies (%)		60	
	Percentage of Final Exam to Total Score (%)		40	
	Attendance		-	

Workload	Activity	Total Number of Weeks	Duration (weekly hour)	Total Period Work Load			
	Weekly Theoretical Course Hours	14	3	42			
	Weekly Tutorial Hours			0			
	Reading Tasks	10	4	40			
	Studies	10	4	40			
	Material Design and Implementation			0			
	Report Preparing			0			
	Preparing a Presentation			0			
	Presentations			0			
	Midterm Exam and Preparation for Midterm Exam	1	12	12			
	Final Exam and Preparation for Final Exam	1	16	16			
	Other (should be emphasized)			0			
	Total Workload			150			
	Total Workload / 25			6			
	Course Credit (ECTS)			6			
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 sustainable systems	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		Computer Engineering Department Chair bmbb@gazi.edu.tr						