COURSE DESCRIPTION FORM							
Course Code and Name	CENG361 OBJECT ORIENTED ANALYSIS AND DESIGN (TECH.ELECT.)						
Course Semester	5						
Catalogue Data of the Course (Course Content)	Object-oriented analysis and design (OOAD), modern and traditional softward development approaches. key OOAD concepts like UML through practical workshops and real-world project applications						
Course Textbooks	McLaughlin, B., Pollice, G., & West, D. (2004). Head first object-oriented analysis and design. O'Reilly Media.						
Supplementary Textbooks	Fowler, M. (2018). UML distilled: A brief guide to the standard object modeling language (3rd ed.). Addison-Wesley Professional.  Parker, R. L. (2020). The no-code revolution: Using no-code tools to build business applications. Pearson.						
Credit (ECTS)	6						
Prerequisites for the							
Course (Attendance Requirements)	There is no prerequisite or co-requisite for this course.						
Course Type	Elective						
Language of Instruction	English						
Course Objectives	<ol> <li>Apply key OOAD principles (encapsulation, inheritance, polymorphism, etc.) to real-world problems.</li> <li>Design and implement UML diagrams for system modeling by the end of the semester.</li> </ol>						
Course Learning Outcomes	Analyze and design complex software systems using OOAD methodologies.     Effectively communicate design ideas through UML diagrams and presentations.     Develop essential skills for successful careers in software development."						
Instruction Method (Face-to-face, Distance education etc.)	The mode of delivery of this course is face to face.						
Weekly Schedule of the Course	Week 1: Introduction to OOAD & UML Week 2: Comparative Analysis of Software Development Methods Week 3: Design Criteria & OO Programming Principles Week 4: System Modeling Week 5: Class Diagrams & Relationships Week 6: Advanced UML Diagrams & Design Patterns Week 7: Midterm Exam & Review Week 8: Project Initiation & Requirements Gathering Week 9: No-Code Platform Selection & Design Approach Week 10: No-Code Prototyping & Design Iteration Week 11: No-Code Integration & Data Management Week 12: Project Testing & Deployment Week 13: Project Presentation & Evaluation Week 14: Wrap-up & Future Trends						
Teaching Activities (The time spent for the activities listed here will determine the amount of credit required)	Weekly theoretical course hours Reading activities Designing and implementing materials Midterm and revision for midterm Final exam and revision for final exam						
Assessment Criteria	Midterm exam Assignment Application Project Practice Quiz	1 5	30 30 30				

	Final exam		1			4	0			
	Total 7				40 100					
	Activity		Number of Weeks	Duration (Weekly Hour)		ly	End of Semester Total Workload			
Workload of the Course	Weekly theoretical course hours			14	3			42		
	Weekly practical course hours									
	Reading activities		12	4			48			
	Internet search and library work									
	Designing and implementing materials		10		3		30			
		Making a report								
	Preparing and making presentations			1	1.5			1.5		
	Midterm and revision for midterm Final exam and revision for final		1	15			15			
	exam		1	15			15			
	Total workload						150			
	Total workload/ 25				6					
	Course Cre	Course Credit (ECTS)				6				
Contribution Level	No		Program Ou			1	2	3	4	5
between Course Outcomes				cs, science, basic	;					
and Program Outcomes	1		engineering, computing, and computer engineering; ability to use this knowledge in							X
				ring problems.	111					
			Ability to define, formulate and analyze							
	2	complex engineering problems using basic								
		science, mathematics and engineering knowledge and considering the UN						X		
		Sustainable Development Goals relevant to			О					
		the problems								
		Ability to des								
		complex engineering problems; ability to design complex systems, processes, devices,			es,					
	3	software, algo	orithms or p	roducts to meet					X	
		current and future requirements, considering realistic constraints and conditions.								
				develop appropri	riate					X
		techniques, resources and modern								
	4	engineering and informatics tools, including								
		estimation and modeling, for the analysis and solution of complex engineering problems								
		while being aware of their limitations.			,					
			Ability to use research methods to examine							
		complex engineering problems or research topics in computer engineering, including								
	5	reviewing the literature, designing						x		
		experiments, conducting experiments,								
			a, analyzing	g and interpreting						
		results.	f the effects	of engineering						
				ds used in these						
		practices on society, health and safety,								
	0 ,	economy, sustainability and environment within the scope of the UN Sustainable						x		
		Development Goals; awareness of the								
		consequences	of engineer	gineering solutions in the						
		fields of information security and law.					1			
	7 Acting in accordance with engineering professional principles and knowledge on					X				
		ethical responsibility; awareness of acting								

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		impartially, without discrimination on any					
		issue, and being inclusive of diversity.					
	8	Ability to work effectively individually and					
		as a team member or leader in			x		
		intradisciplinary and multidisciplinary teams			A		
		(face-to-face, remote, or hybrid).					
	9	Ability to conduct effective verbal and					
		written communication on technical issues in					
		Turkish or English, prepare reports, make					
		effective presentations and prepare software			X		
		documentation, considering the various					
		differences of the target audience (such as					
		education, language, profession).					
		Knowledge of business practices such as					
	1.0	project, risk and change management and					
	10	economic feasibility analysis; awareness of		X			
		entrepreneurship and innovation.					
		Lifelong learning skill that includes the					
		ability to learn independently and					
	11	continuously, to adapt to new and developing					
		scientific practices and technologies, and to			X		
		think inquisitively about technological					
		changes.					
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	Lecturer's First/Last Name: Assoc. Prof. Dr. Murat YILMAZ E-mail address: my@gazi.edu.tr						
Lecturer(s) and Contact							
Information							