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 software 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	1. Apply key OOAD principles (encapsulation, inheritance, polymorphism, etc.) to real-world problems. 2. Design and implement UML diagrams for system modeling by the end of the semester.
Course Learning Outcomes	1. Analyze and design complex software systems using OOAD methodologies. 2. Effectively communicate design ideas through UML diagrams and presentations. 3. 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		Number(s)	Weight (%)
	Midterm exam	1	30
	Assignment	5	30
	Application		
	Project		
	Practice		
	Quiz		

	Activity	Number of Weeks	Duration (Weekly Hour)	End of Semester Total Workload
	Final exam	1		40
	Total	7		100

	Activity	Number of Weeks	Duration (Weekly Hour)	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			
	Midterm and revision for midterm	1	15	15
	Final exam and revision for final exam	1	15	15
	Total workload			150
	Total workload/ 25			6
	Course Credit (ECTS)			6

	No	Program Outcomes	1	2	3	4	5
Contribution Level between Course Outcomes and Program Outcomes	1	Knowledge of mathematics, science, basic engineering, computing, and computer engineering; ability to use this knowledge in solving complex engineering problems.					x
	2	Ability to define, formulate and analyze complex engineering problems using basic science, mathematics and engineering knowledge and considering the UN Sustainable Development Goals relevant to the problems addressed.				x	
	3	Ability to design creative solutions to complex engineering problems; ability to design complex systems, processes, devices, software, algorithms or products to meet current and future requirements, considering realistic constraints and conditions.				x	
	4	Ability to select, use and develop appropriate techniques, resources and modern engineering and informatics tools, including estimation and modeling, for the analysis and solution of complex engineering problems while being aware of their limitations.					x
	5	Ability to use research methods to examine complex engineering problems or research topics in computer engineering, including reviewing the literature, designing experiments, conducting experiments, collecting data, analyzing and interpreting results.			x		
	6	Knowledge of the effects of engineering practices and the standards used in these practices on society, health and safety, economy, sustainability and environment within the scope of the UN Sustainable Development Goals; awareness of the consequences of engineering solutions in the fields of information security and law.				x	
	7	Acting in accordance with engineering professional principles and knowledge on ethical responsibility; awareness of acting			x		

		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 intradisciplinary and multidisciplinary teams (face-to-face, remote, or hybrid).				x	
	9	Ability to conduct effective verbal and written communication on technical issues in Turkish or English, prepare reports, make effective presentations and prepare software documentation, considering the various differences of the target audience (such as education, language, profession).				x	
	10	Knowledge of business practices such as project, risk and change management and economic feasibility analysis; awareness of entrepreneurship and innovation.			x		
	11	Lifelong learning skill that includes the ability to learn independently and continuously, to adapt to new and developing scientific practices and technologies, and to think inquisitively about technological changes.				x	

Lecturer(s) and Contact Information	Lecturer's First/Last Name: Assoc. Prof. Dr. Murat YILMAZ E-mail address: my@gazi.edu.tr