COURSE DESCRIPTION FORM	
Course Code and Name	CENG366 SYSTEM ANALYSIS (TECH.ELECT.)
Course Semester	6
Catalogue Data of the Course (*Course Content*)	Traditional (Structured) and Object-Oriented (OO) Approaches to Systems Analysis and Design Topics
Course Textbooks	1. Systems Analysis and Design in a Changing World 7/E, John W. Satzinger, Robert B. Jackson, Stephen D. Burd, Course Technology, 2015.
Supplementary Textbooks	1. Systems Analysis and Design 6/E, Alan Dennis, Barbara Haley Wixom, Roberta M. Roth, Wiley, 2014. 2. Systems Analysis and Design 11/E, Scott Tilley, Harry J. Rosenblatt, Cengage Learning, 2016.
Credit (*ECTS*)	6
Prerequisites for the Course (*Attendance Requirements*)	Attendance mandatory
Course Type	Technical Elective
Language of Instruction	English
Course Objectives	The course teaches both traditional (structured) and object-oriented (OO) approaches in the field of systems analysis and design. Its aim is to introduce the necessary use cases, use case diagrams, and use case descriptions for the modeling approach. These are demonstrated through the application to traditional, web development, object-oriented, and service-oriented architecture approaches.
Course Learning Outcomes	1. Explains system functions and components. 2. Examines the system development life cycle, analysis tools, and techniques. 3. Describes information requirements in information system modeling, data definition, and data dictionary with data flow diagrams. 4. Performs system design and implementation. 5. Defines the stages of information system development and conducts system analysis. 6. Explains the identification of information requirements, the use of system analysis tools, and the classification of information systems. 7. Studies computer-aided software engineering tools.
Instruction Method *(Face-to-face, Distance education etc.)*	Face-to-face
Weekly Schedule of the Course	1.Week: System Functions and Components 2.Week: Problem Presentation and Resolution principles 3.Week: System Development Life Cycle 4.Week: Analysis Tools and Techniques 5.Week: Data Flow diagrams and an Information System Modeling 6.Week: Data Definition and Data Dictionary for the Information Requirements 7.Week: System Design and Implementation 8.Week: Computer entries, Outcomes, and the Registrar of Control, Design 9.Week: Information Systems Development and Systems Analysis Phase. Feasibility Study 10.Week: Management function, Data and Information Concepts 11.Week: Determination of Information Requirements 12.Week: System Analysis Tools 13.Week: Classification of Information Systems 14.Week: Computer Aided Software Engineering Tools
Teaching Activities *(The time spent for the activities listed here will determine the amount of credit required)*	Weekly theoretical course hours: 3 Reading activities Internet search and library work Midterm and revision for midterm

	Final exam and revision for final exam

Assessment Criteria

	Number(s)	Weight (%)
Midterm exam	1	30
Assignment	3	30
Application		
Project		
Practice		
Quiz		
Final exam		40
Total	4	100

Workload of the Course

Activity	Number of Weeks	Duration (Weekly Hour)	End of Semester Total Workload
Weekly theoretical course hours	14	3	42
Weekly practical course hours			
Reading activities	10	4	40
Internet search and library work	10	4	40
Designing and implementing materials			
Making a report			
Preparing and making presentations			
Midterm and revision for midterm	1	13	13
Final exam and revision for final exam	1	15	15
Total workload			150
Total workload/ 25			6
Course Credit (ECTS)			6

Contribution Level between Course Outcomes and Program Outcomes

No	Program Outcomes	1	2	3	4	5
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.					
	7	Acting in accordance with engineering professional principles and knowledge on ethical responsibility; awareness of acting impartially, without discrimination on any issue, and being inclusive of diversity.		X			
	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.					
	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	Assist. Prof. Dr. Çağrı Şahin cagrisahin@gazi.edu.tr						