

<b>Course Description Form</b>	
<b>Course Code and Name</b>	CENG366 SYSTEM ANALYSIS (TECH.ELECT.)
<b>Course Semester</b>	6
<b>Catalog Content</b>	<p>System functions and components. Problem Definition and Solution Principles.</p> <p>System Development Life Cycle. Analysis Tools and Techniques.</p> <p>A Data System Modeling with Data-Flow Schemes. Data Definition and Knowledge Requirements in Data Dictionary.</p> <p>System Design and Application. Computer Inputs, Outputs, Controls and Records, Design.</p> <p>IT Systems Development Phases and System Analysis.</p> <p>Feasibility Study. Administration Function, Data and Knowledge Concepts.</p> <p>Determination of Knowledge Requirements.</p> <p>System Analysis Tools.</p> <p>IT Systems Classification.</p> <p>Computer Aided Software Engineering Tools.</p>
<b>Textbook</b>	Systems Analysis and Design in a Changing World 6/E, John W. Satzinger, Robert B. Jackson, Stephen D. Burd, Course Technology, 2011.
<b>Supplementary Textbooks</b>	<p>- Systems Analysis and Design 6/E, Alan Dennis, Barbara Haley Wixom, Roberta M. Roth, Wiley, 2014.</p> <p>- Systems Analysis and Design 11/E, Scott Tilley, Harry J. Rosenblatt, Cengage Learning, 2016.</p>
<b>Credit</b>	6
<b>Prerequisites of the Course</b> ( Attendance Requirements)	-
<b>Type of the Course</b>	Technical Elective
<b>Instruction Language</b>	English
<b>Course Objectives</b>	<p>To provide knowledge about System functions and components. Problem Definition and Solution Principles.</p> <p>System Development Life Cycle. Analysis Tools and Techniques.</p> <p>A Data System Modeling with Data-Flow Schemes. Data Definition and Knowledge Requirements in Data Dictionary.</p> <p>System Design and Application. Computer Inputs, Outputs, Controls and Records, Design.</p> <p>IT Systems Development Phases and System Analysis.</p> <p>Feasibility Study. Administration Function, Data and Knowledge Concepts.</p> <p>Determination of Knowledge Requirements.</p> <p>System Analysis Tools.</p> <p>IT Systems Classification.</p> <p>Computer Aided Software Engineering Tools.</p>

<p><b>Course Learning Outcomes</b></p>	<p>System functions and components. Problem Definition and Solution Principles.  System Development Life Cycle. Analysis Tools and Techniques.  A Data System Modeling with Data-Flow Schemes. Data Definition and Knowledge Requirements in Data Dictionary.  System Design and Application. Computer Inputs, Outputs, Controls and Records, Design.  IT Systems Development Phases and System Analysis.  Feasibility Study. Administration Function, Data and Knowledge Concepts.  Determination of Knowledge Requirements.  System Analysis Tools.  IT Systems Classification.  Computer Aided Software Engineering Tools.</p>			
<p><b>Instruction Methods</b></p>	<p>The mode of delivery of this course is face to face</p>			
<p><b>Weekly Schedule</b></p>	<p>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</p>			
<p><b>Teaching and Learning Methods</b>   <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  Material Design and Implementation  Preparation of Midterm and Midterm Exam  Final Exam and Preparation for Final Exam</p>			
<p><b>Assessment Criteria</b></p>		<p><b>Numbers</b></p>	<p><b>Total Weighting (%)</b></p>	
	Midterm Exams	1	30	
	Assignment	5	30	
	Application			
	Projects			
	Practice			
	Quiz			
	Percent of In-term Studies (%)		60	
	Percentage of Final Exam to Total Score (%)		40	
	Attendance			
<p><b>Workload</b></p>	<p><b>Activity</b></p>	<p><b>Total Number of Weeks</b></p>	<p><b>Duration (weekly hour)</b></p>	<p><b>Total Period Work Load</b></p>
	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	13	13
Final Exam and Preparation for Final Exam	1	15	15
Other ( should be emphasized)			0
Total Workload			150
Total Workload / 25			6
Course Credit (ECTS)			6

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				

**Contribution Level Between Course Learning Outcomes and Program Outcomes**

	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		
<b>The Course's Lecturer(s) and Contact Information</b>		<p>Prof. Dr. M. Ali AKCAYOL akcayol@gazi.edu.tr</p>					