

### COURSE PROFILE

Course Name	Code	Semester	Term	Theory+PS+Lab (hour/week)	Local Credits	ECTS
Information Systems Analysis and Design	MIS222	Spring	4	3 + 0 + 2	4	7

<b>Prerequisites</b>	None
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<b>Course Language</b>	English
<b>Course Type</b>	Required
<b>Course Lecturer</b>	Assist. Prof. Dr. Gülay Ünel
<b>Course Assistant</b>	Büsra Özdenizci
<b>Course Objectives</b>	This course aims to give essentials of system development life cycle, systems analysis, overview of architectures, systems design, system implementation, tools and methods for analysis and design, requirement analysis and specification.
<b>Course Learning Outcomes</b>	<p>Upon successful completion of the course, students will be able to:</p> <ul style="list-style-type: none"> <li>• Understand fundamental ideas and concepts for information systems analysis and design (ISAD)</li> <li>• Augment how to use appropriate methods, approaches to analysis and design</li> <li>• Understand and practice contemporary techniques for ISAD</li> <li>• Exercise the use of analysis and design models along with UML in the context of ISAD</li> <li>• Capable to make sense of differences among SDLC and OO approach and models</li> <li>• Aware of practical issues related to ISAD and contextualize them from underlying perspectives</li> </ul>
<b>Course Content</b>	Traditional and object-oriented systems development. Contemporary conceptual modelling tools and languages for information systems aspects concerning data and process. Systematic methodology for analysing a business problem and specifying the requirements for the information systems. Applications.

## COURSE CONTENT

<b>Week</b>	<b>Subjects</b>	<b>Related</b>
<b>1</b>	An Overview of ISAD	
<b>2</b>	Object Oriented Systems Analysis and Design using UML: Investing Systems Requirements	
<b>3</b>	Object Oriented Systems Analysis and Design using UML: Use Cases	
<b>4</b>	Object Oriented Systems Analysis and Design using UML: Domain Modelling	
<b>5</b>	Traditional Approaches to Requirements	
<b>6</b>	Extending the Requirements Model	
<b>7</b>	Essential of Design and Design Activities	
<b>8</b>	Traditional Approaches to Design	
<b>9</b>	Approaches to System Development	
<b>10</b>	Approaches to System Development	
<b>11</b>	Object Oriented Design Principles	
<b>12</b>	OO Design: Use Case Realization	
<b>13</b>	Current Trends	
<b>14</b>	Review	

<b>Course Textbook</b>	Introduction to Systems Analysis and Design – An Agile, Iterative Approach Satzinger, Jackson, Burd, 6th Ed. ISBN-13: 978 1111972264
<b>Recommended References</b>	Systems Analysis and Design – In a changing world, 5th Edition, Satzinger et al.

<b>Semester Requirements</b>	<b>Number</b>	<b>Percentage of Grade</b>
Attendance/Participation		
Laboratory	1	40
Application		
Special Course Internship (Work Placement)		
Quizzes/Studio Critics		
Homework Assignments		
Presentation		
Project		
Seminar/Workshop		
Midterms/Oral Exams	1	30
Final/Resit Exam	1	30
<b>Total</b>	<b>3</b>	<b>100</b>

<b>PERCENTAGE OF SEMESTER WORK</b>	2	70
<b>PERCENTAGE OF FINAL WORK</b>	1	30
<b>Total</b>	<b>3</b>	<b>100</b>

<b>Course Category</b>	Core Courses	X
	Major Area Courses	
	Supportive Courses	
	Media and Management Skills Courses	
	Transferable Skill Courses	

**COURSE'S CONTRIBUTION TO PROGRAM**

#	Program Qualifications / Outcomes	* Level of Contribution				
		1	2	3	4	5
<b>1</b>	A foundation in mathematics and basic sciences and ability to apply acquired knowledge as they relate to the study and practice of information technology		X			
<b>2</b>	An ability to analyze a problem, identify and define the computing requirements appropriate to its solution, to understand, select and use appropriate technology, tools, standards, protocols, building blocks, and components to solve the problem					X
<b>3</b>	An ability to propose, analyze, design, develop, test and maintain an information technology system including software solutions, security model, computer and network infrastructure, information systems etc. to solve information technology problems					X
<b>4</b>	An ability to analyze local and global impact of computing on individuals, organizations and society; and the ability to apply information technology techniques, skills, and tools for regular computing practices as well as to improve effectiveness of current methodologies					X
<b>5</b>	An ability to effectively communicate in oral and written media with all kinds of related audiences; and prepare documentation for this purpose as required					X
<b>6</b>	An understanding of professional, ethical, legal, and social issues and responsibilities of information technology profession				X	
<b>7</b>	A taste and breadth of knowledge across several social topics outside the immediate requirements of the information technology profession, and the ability to work within heterogeneous teams to accomplish a common goal including people from the information technology area as well as other disciplines					X
<b>8</b>	An ability to engage in life-long learning and professional development for personal improvement to follow contemporary information technology issues	X				

\*1 Lowest, 2 Low, 3 Average, 4 High, 5 Highest

**ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION**

<b>Activities</b>	<b>Number</b>	<b>Duration (Hours)</b>	<b>Total Workload</b>
Course Hours (Including Exams)	14	3	42
Tutorials			
Laboratory	14	2	28
Application			
Special Course Internship (Work Placement)			
Field Work			
Study Hours Out of Class	14	4	56
Presentations / Seminar			
Project			
Preparatory reading	14	4	56
Homework Assignments			
Quizzes			
Midterm Exams	1	2	2
Final / Resit Exam	1	2	2
		<b>Total Workload</b>	186

**COURSE CATEGORY**

<b>ISCED GENERAL AREA CODES</b>	<b>GENERAL AREAS</b>	<b>ISCED BASIC AREA CODES</b>	<b>BASIC EDUCATIONAL AREAS</b>	
1	Education	14	Teacher Training and Educational Sciences	0
2	Humanities and Art	21	Art	0
2	Humanities and Art	22	Humanities	0
3	Social Sciences, Management and Law	31	Social and Behavioural Sciences	20
3	Social Sciences, Management and Law	32	Journalism and Informatics	0
3	Social Sciences, Management and Law	38	Law	0
4	Science	42	Life Sciences	0
4	Science	44	Natural Sciences	0
4	Science	46	Mathematics and Statistics	0
4	Science	48	Computer	80
5	Engineering, Manufacturing and Civil	52	Engineering	0
5	Engineering, Manufacturing and Civil	54	Manufacturing and Processing	0
5	Engineering, Manufacturing and Civil	58	Architecture and Structure	0
6	Agriculture	62	Agriculture, Forestry, Livestock, Fishery	0
6	Agriculture	64	Veterinary	0
7	Medicine and Welfare	72	Medical	0
7	Medicine and Welfare	76	Social Services	0
8	Service	81	Personal Services	0
8	Service	84	Transport Services	0
8	Service	85	Environment Protection	0
8	Service	86	Security Services	0