T.C.YEDİTEPE UNIVERSITY

FACULTY OF COMMERCE

INFORMATION SYSTEMS AND TECHNOLOGIES

BOLOGNA INFORMATION PACKET

(ENGLISH)

FACULTY OF COMMERCE

INFORMATION SYSTEMS AND TECHNOLOGIES

BOLOGNA INFORMATION PACKET

PROGRAMME DIRECTOR AND ECTS COORDINATOR

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PROGRAMME INFORMATION

Aim: Information Systems and Technologies department, with a knowledge centered approach that created the modern sciences and technologies and an interdisciplinary education framework, aims to train capable and protean IT professionals who will successfully work in today's complex work areas.

Objective: The objective of the department is to offer up-to-date and theoretical knowledge to its students, providing them the opportunity to practice the theories they learn, training creative individuals with solid research and problem solving talents with a practical and analytical attitude of mind.

PROGRAMME LEARNING OUTPUTS

Knowledge

1. Information Systems graduates have the knowledge and skills to design and develop complete systems for multimedia visual user interface.

2. Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multimedia.

3. Information Systems graduates have the knowledge and skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.

Skills and Capability

4. Information Systems graduates have the knowledge and skills to design and develop computer applications, based on user specificed requirements, using modern structured development tools; and to install them on various hardware platforms and deploy their usage.
5. Information Systems graduates have the knowledge and skills to design and develop computer applications, based on user specificed requirements, using modern object-oriented development tools; and to install them on various hardware platforms and deploy their usage.
6. Information Systems graduates have the knowledge and skills to design and develop data models serving different requirements; and database applications that would access and process data using various types of software, including queries, reports and business applications.

Competence

7. Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.
8. Information Systems graduates have the knowledge and skills to design and develop business applications that would provide data acess, modification and processing for data kept in enterprise database systems.
9. Information Systems graduates have the knowledge about computer networks and the skills to design, develop and monitor computer networks; knowing how to configure them and maintain their performance.
10. Information Systems graduates have the knowledge and skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, and how to deploy them in enterprises.

Education Methods and Techniques

The teaching - learning methods and strategies are selected in a way that aims to the individual development of the students and that will increase their skills such as lifelong learning, teaching to others, presentation, creative and critical thinking, cooperative working, and effective utilization of the technology.

Methods Techniques	Characteristics aimed to be developed	Characteristics related to the teaching environment
Lecturing	Cognitive characteristics such as listening, interpretation and commenting; and proficiencies specific to the affective field such as awareness development and value system formation.	Standard classroom technologies, multimedia tools, projector, computer, overhead projector

Role playing	Cognitive characteristics such as listening, interpretation and commenting; and proficiencies specific to the affective field such as awareness development and value system formation; psychomotor characteristic such as imitation and skill development.	Standard classroom technologies, multimedia tools, projector, computer, overhead projector
Presentation	Cognitive characteristics such as listening, interpretation and commenting and proficiencies specific to the affective field such as awareness development and value system formation; psychomotor characteristic such as imitation and skill development.	
Problem Solving	Cognitive characteristics such as listening, interpretation and commenting and proficiencies specific to the affective field such as awareness development and value system formation; psychomotor characteristic such as imitation and skill development.	Standard classroom technologies, special hardware
Case study	Cognitive characteristics such as listening, interpretation and commenting and proficiencies specific to the affective field such as awareness development and value system formation; psychomotor characteristic such as imitation and skill development.	
Simulation	Cognitive characteristics such as listening, interpretation and commenting and proficiencies specific to the affective field such as awareness development and value system formation; psychomotor characteristic such as imitation and skill development.	
Seminar	Cognitive characteristics such as listening, interpretation and commenting and proficiencies specific to the affective field such as awareness development and value system formation; psychomotor characteristic such as imitation and skill development.	Standard classroom technologies, multimedia tools, projector, computer, overhead projector
Group work	Cognitive characteristics such as listening, interpretation and commenting and proficiencies specific to the affective field such as awareness development and value system formation; psychomotor characteristic such as imitation and skill development.	Standard classroom technologies, multimedia tools, projector, computer, overhead projector
Individual work	Cognitive characteristics such as listening, interpretation and commenting and proficiencies specific to the affective field such as awareness development and value system formation; psychomotor characteristic such as imitation and skill development.	Real or artificial environment that will allow observation

Panel	Cognitive characteristics such as listening, interpretation and commenting and proficiencies specific to the affective field such as awareness development and value system formation; psychomotor characteristic such as imitation and skill development.	Real or artificial environment that will allow observation
Guest speaker	Cognitive characteristics such as listening, interpretation and commenting and proficiencies specific to the affective field such as awareness development and value system formation; psychomotor characteristic such as imitation and skill development.	Standard classroom technologies, multimedia tools, projector, computer, overhead projector, special hardware
Brainstorming	Cognitive characteristics such as listening, interpretation and commenting and proficiencies specific to the affective field such as awareness development and value system formation; psychomotor characteristic such as imitation and skill development.	Internet databases, library databases, e-mail, online conversation, Web based discussion forums
Exercise	Cognitive characteristics such as listening, interpretation and commenting and proficiencies specific to the affective field such as awareness development and value system formation; psychomotor characteristic such as imitation and skill development.	
Experiment	Cognitive characteristics such as listening, interpretation and commenting and proficiencies specific to the affective field such as awareness development and value system formation; psychomotor characteristic such as imitation and skill development.	Special hardware
Observation	Cognitive characteristics such as listening, interpretation and commenting and proficiencies specific to the affective field such as awareness development and value system formation; psychomotor characteristic such as imitation and skill development.	Internet databases, library databases, e-mail

DEPARTMENT OF INFORMATION SYSTEMS AND TECHNOLOGIES
CIRCULLIUM

CODE	COURSE NAME	PQ	CR.	ECTS
I				
HUM 103	Humanities		2	3
AFE 131	Academic English I		3	4
MATH 133	Basic Mathematics		3	5
ACM 105	Informatics Management		3	5
ECON 111	Principles of Microeconomics		3	7
ACM 111	Int. to Comp and Inf. Processing		3	6
			17	**30**
II				
MATH 134	Advanced Mathematics		3	5
ECON 122	Principles of Macroeconomics		3	7
ACM 262	Introduction to Web Design		3	6
ACM 112	Int. to Graphics Design		3	5
ACM 221	System Analysis & Algorithms		3	7
			15	**30**
III				
TKL 201	Turkish Lng. I		2	2
ACM 222	Structural Prog.	x	3	6
ACM 365	Advanced Web Design	x	3	6
STAT 410	Statistics		3	5
ACM 211	Data Structures and Database App.		3	6
	Free Elective I		3	5
			17	**30**
IV				
TKL 202	Turkish Lng. II		2	2
ACM 321	Object Oriented Prog.	x	3	6
AFN 132	Principles of Financial Accounting		3	6
STAT 411	Advanced Statistics Applications	x	3	5
ACM 212	Advanced Database Applications	x	3	6
	Free Elective II		3	5
			17	**30**
V				
HTR 301	History of Turkish Revolutions I		2	2
ACM 361	Networking I		3	4
ACM 431	Programming Mobile Devices		3	6
ACM 413	Object Oriented Software Development II	x	3	6
ACM 369	Operating Systems I		3	6
	Departmental Elective I		3	6
			17	**30**
VI				
HTR 302	History of Turkish Revolutions II		2	2
ACM 412	Network Programming	x	3	4
ACM 312	Management Information Systems		3	6
ACM 394	Internship in MIS		3	6
ACM 368	Web Programming		3	6
ACM XXX	Departmental Elective II		3	6
			17	**30**
ACM 363	Wireless Networks and Mobile Com. Sys.		3	6
ACM 311	Visual Prog. I	x	3	6
ACM 362	Networking II	x	3	6
ACM 364	Database Management Systems	x	3	6
VII				
ACM 411	Ethical and Human side of IT		3	6
ACM 421	Project Management		3	6
ACM 373	Scripting Languages		3	6
	Departmental Elective III		3	6
	Departmental Elective IV		3	6
			15	**30**
ACM 331	Concepts of Programming Languages	x	3	6
ACM 462	Decision Support Systems		3	6
ACM 471	Knowledge Management		3	6
ACM 472	3-D Design and Game Programming		3	6
VIII				
ACM 498	Graduation Thesis		3	6
ACM 414	Virtualization and Introductory Cloud Computing		3	6
ACM 474	Information Systems Security		3	6
	Departmental Elective V		3	6
	Departmental Elective VI		3	6
			15	**30**
ACM 366	E-Business		3	6
ACM 432	Enterprise Information Systems	x	3	6
ACM 468	Virtual Reality Technologies		3	6
ACM 476	Data Mining		3	6
	Total Credits		130	240

Information Systems and Technologies Department
RELATION OF PROGRAMME LEARNING OUTPUTS WITH THE COURSE OUTPUTS

Lectures	*PLO 1*	*PLO 2*	*PLO 3*	*PLO 4*	*PLO 5*	*PLO 6*	*PLO 7*	*PLO 8*	*PLO 9*	*PLO 10*
Introduction to Computer and Information Processing	1	2	4	4	2	4	3	3	3	3
Introduction to Graphics Design	4	0	0	0	0	0	0	0	0	0
Information Systems for Trade	1	2	4	4	2	4	3	3	3	3
Data Structures and Database Applications	3	2	1	4	2	1	5	5	2	2
Advanced Database Applications	3	2	1	4	2	1	5	5	2	2
Systems Analysis and Algorithms	3	4	5	4	3	5	5	4	3	4
Structural Programming	0	0	5	4	0	0	0	0	0	0
Introduction to Web Design	4	4	2	4	2	3	2	3	3	3
Visual Programming I	5	4	4	5	3	1	1	1	3	5
Object Oriented Programming	2	4	5	4	5	1	1	2	3	4
Visual Programming II	5	4	4	5	3	1	1	1	3	5
Networking	1	3	1	3	3	4	1	2	5	4
Wireless Networks and Mobile Communication Systems	0	1	0	1	0	3	0	0	5	0
Database Management Systems	3	2	1	4	2	1	5	5	2	2
Advanced Web Design	5	5	4	4	4	3	3	3	3	3
Web Programming	5	5	5	5	3	3	5	4	3	5
Operating Systems I	0	2	4	3	4	5	2	0	4	2
Operating Systems II	0	1	4	3	4	5	2	0	4	3
Scripting Languages	3	0	5	5	5	3	2	4	0	4
Network Programming	5	4	4	5	3	1	1	1	3	5
Mobile Programming	1	3	1	3	3	4	1	2	5	4
Decision Support Systems	3	2	1	4	2	1	5	5	2	2
Virtual Reality Technologies	4	4	4	3	3	3	3	3	3	4
Web Programming II	5	5	5	5	4	4	5	4	4	5
Data Mining	3	2	1	4	2	1	5	5	2	2
Graduation Thesis	0	0	0	0	0	0	0	0	0	0

Degree to be obtained:

This department is subject to the first stage degree system having 240 ECTS credits in the field of Information Systems and Technologies.

When the programme is completed successfully and the programme proficiencies are satisfied, the undergraduate degree in the field of Information Systems and Technologies is obtained.

Acceptance Conditions:

The student wanting to register to the department is obliged to complete the processes determined by ÖSYM (SSPC) within the framework of the academic and legal legislation of the university / to succeed in the examinations. A student starting his/her education in a domestic or foreign equivalent programme can apply for undergraduate transfer. The acceptance of the students is examined before the term starts by considering the conditions of each student and the degree to which they apply and is evaluated specially. More detailed information regarding the entrance to the university is available in the Corporation Introduction Catalogue.

The students coming from abroad within the content of the student exchange programmes approved by the university and whose constraints are determined with an agreement can take the courses given in English. If the student has the Turkish grammar proficiency, s/he can also register to any Turkish course mentioned in the Course Plan.

Employment opportunities of the graduates and transition to the upper level:

Graduates of the Information Systems and Technologies Department can serve in positions related to information systems such as a system designer and manager, network manager, database systems specialist, web designer, programmer and software developer, information security expert; as well as working in managerial areas such as e-business, decision support systems, project management, banking, insurance, accounting, management and consultancy.

Graduation Conditions:

There is not special term-end examination or final examination period which is required to be made at the end of the academic year or following the completion of the programme to obtain the degree / complete the programme. At the same time, at the end of every term, generally following the just the end of the term, there are two week term-end examinations. Also, for the graduation, it is required that the student should realize the requirements of the observation course in the schools, complete 130 course credits and should realize 40 days summer internship successfully. The experience is to be obtained with the internships and required workload has been considered within the content, application and workloads of the related courses in the programme.

Course List	**ECTS**
Support Courses	
Academic Reading ,Writing and Critical Thinking	3
Financial Accounting	6
Introduction to Law	4
Introduction to Economics I	7
Introduction to Economics II	7
Business Statistics I	5
Business Statistics II	5
Calculus I	5
Calculus II	5
Total	**47**
Basic Vocational Courses	
Networking	4
Informatics Management	5
Introduction to Computer and Information Processing	6
Advanced Web Design	6
Object Oriented Programming	6
Project Management	6

Systems Analysis and Algorithms	7
Data Structures and Database Applications	6
Introduction to Web Design	6
Structural Programming	6
Management Information Systems	6
Total	**64**
Expertise Courses	
Network Programming	4
Scripting Languages	6
Knowledge Management	6
Ethical and Human Side of Information Technologies	6
Graduation Thesis	6
E-Business	6
Concepts of Programming Languages	6
Information Systems Security	6
Visual Programming I	6
Introduction to Graphics Design	5
Advanced Database Applications	6
Operating Systems I	6
Seminar in Business	6
Decision Support Systems	6
Enterprise Resource Systems	6
Mobile Programming	6
Object Oriented Programming	6
Virtual Reality Technologies	6
Virtualization and Introductory Cloud Computing	6
Data Mining	6
Database Management Systems	6
Web Programming	6
Wireless Networks and Mobile Communication Systems	6
3-D Design and Game Programming	6
Internship in MIS	6
Total	**147**
Human, Communication and Management Skills Courses	
HISTORY OF TURKISH REVOLUTION I/II	4
HUMANITIES	3
TURKISH LANGUAGE AND LITERATURE I/II	4
Total	**11**
AKTS Total of all courses	**269**

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
Informatics Management	ACM105	1	3 + 0	3	6

Prerequisites	-

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programmes)
Course Type	Compulsory
Course Coordinator	
Instructors	Assist. Prof. Dr. Mustafa Asım Kazancıgil
Assistants	
Goals	The aim of the course is to familiarize students with basic concepts of informatics management; conceptual foundations of informatics management; the modern business and management; systems approach; informatics; history of information management; information managing organizations; information society; information management technologies.
Content	Basic concepts of informatics management; conceptual foundations of informatics management; modern management; systems approach; informatics; history of information management; information managing organizations; information society; information management technologies; human-computer interaction.

Learning Outcomes	**Program Learning Outcomes**	**Teaching Methods**	**Assessment Methods**
1. A brief understanding of management and its informatics environment.	8,11	1,12,3	A,C
2. Ability to distinguish basic concepts of information.	7,8	1,2,3	A,C
3. A brief understanding of functions and processes related to data and information.	7,8,9	1,12,3	A,C
4. Planning the decision-making process and developing strategies for satisfying user requirements.	8	1,2,3,12	A,C
5. Appreciating the widespread use of information and informatics-related concepts in different fields and studying the differences and similarities between them.	11	1,2,3,12	A,C
6. Understanding the administrative aspects of information management.	11	1,2,3,12	A,C

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 9: Simulation, 12: Case Study
Assessment	A: Testing, B: Presentation, C: Homework, D: Project,

Methods:	E: Laboratory

COURSE CONTENT		
Week	**Topics**	**Study Materials**
1	Introduction	Basics of computer literacy
2	Information Science and the Informatics profession	Basics of the automatic data processing scene
3	Information and Organizations	Information about organizations
4	Operational Informatics Management	Case studies of informatics in business
5	Structuring the informatics infrastructure of contemporary businesses	Execution of strategies
6	Creation, organization, distribution and control of information	Importance of information in business opportunities
7	Planning, decision-making, strategy developing	Different strategies
8	Storage, security and disposal	Data and network security
9	Midterm Exam	
10	Human Computer Interaction and Resource Management	HCI and HR practices
11	Determining user needs and resource analysis	Case Studies
12	Information Systems Analysis and evaluation	Case Studies
13	Information resources and planning	Information Processing (ACM 111)
14	Ethical, Social and Political Aspects	Different values
15	Final Exam	

RECOMMENDED SOURCES	
Textbook	Laudon, K.C. and Laudon, J.P. (2016): Management Information Systems: Managing The Digital Firm, 14th Ed. Upper Saddle River, N.J. Pearson/Prentice Hall. Evans, A., Martin, K., and Poatsy, M.A. (2015). Technology In Action, Complete, 12th Ed. USA, Pearson. ISBN-10: 0133949567, ISBN-13: 9780133949568. Bovee, C. L. and Thill, J.V. (2014). Business in Action, 7th Ed. USA, Pearson. ISBN-10: 0136154085, ISBN-13: 978-0136154082. Laudon, K.C. and Traver, C.G. (2014). E-Commerce 2014, 10th Ed. Pearson/Prentice Hall. Motiwalla, L.F. and Thompson, J. (2012). Enterprise Systems for Management, 2nd Ed. USA, Pearson. ISBN-10: 0132145766, ISBN-13: 978-0132145763. Middleton, Michael (2002). Information Management, A consolidation of operations analysis and strategy. Center for

	Information Studies, Charles Sturt University, NSW, Australia, ISBN 1-876938-36-6.
Additional Resources	LaBerta, Catherine (2012). Computers Are Your Future, 12th Ed. Pearson/Prentice Hall. Maeder, M., Hädrich, T. and Peinl, R. (2009): Enterprise Knowledge Infrastructures, 2nd Ed., Springer. eBook ISBN: 978-3-540-89768-2. Softcover ISBN: 978-3-540-89767-5.

MATERIAL SHARING	
Documents	Course slides, additional reading material
Assignments	Homework
Exams	Midterm Exam, Final Exam

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-term examination	1	40
Assignment	1	20
Total		**60**
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE	1	40
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		60
Total		**100**

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM							
No	Program Learning Outcomes	Contribution					
		1	2	3	4	5	
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.						
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.						
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.						
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.						

5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.					
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.					
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.		X			
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data access, modification and processing for data kept in enterprise database systems.				X	
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance.	X				
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.					
11	Information Systems graduates, within his/her job responsibilities can communicate the necessary information both written and orally in Turkish, English and another foreign language, respecting the values the societal institutions and establishments, of which he/she has acquired in the program.			X		

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)

Course Duration (Including the exam week: 15x Total course hours)	15	3	45
Hours for off-the-classroom study (Pre-study, practice)	15	3	45
Mid-term examination	1	18	18
Homework	4	1	4
Final examination	1	25	25
Total Work Load			137
Total Work Load / 25 (h)			5,48
ECTS Credit of the Course			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
Graduate Thesis	ACM 498	8	3+0+0	3	6

Prerequisites	Senior Standing

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	IS&T (Required), MIS (Required)
Course Coordinator	Prof. Dr. Avadis Hacınlıyan
Instructors	All instructors in the department
Assistants	All research assistants in the department
Goals	Introduce students to research methods, literature search, reporting, written and oral scientific presentation and create opportunity for programming, software development or cooperation with the sector as far as possible.
Content	Detailed analysis, design and realization of a special project that is available for applied sciences, presentation of the results in the form of project report, seminar and demonstration; under surveillance of a faculty advisor.

Learning Outcomes	**Program Learning**	**Teaching Methods**	**Assessment Methods**

Outcomes			
Knows about the literature	1,2,3,4,5,6,7,8,9,10	2,5	A,B,D
Knows about literature search	1,2,3,4,5,6,7,8,9,10	2,5	A,B,D
Knows research methods	1,2,3,4,5,6,7,8,9,10	1,2,3,4	A,B,D
Knows how to prepare scientific documents	1,2,3,4,5,6,7,8,9,10	3,4	A,C,D
Knows how to present a scientific discussion	1,2,3,4,5,6,7,8,9,10	3,4	A,B,D
Develops capability of oral and written expression.	1,2,3,4,5,6,7,8,9,10	1,2	A,B,C,D
Develops capability to collaborate with the sector.	1,2,3,4,5,6,7,8,9,10	2,3,4	D

Teaching Methods:	1:Question-Answer, 2: Discussion, 3: Application 4: Case Study 5:Literature search
Assessment Methods:	A: Written report, B: Oral Presentation C: Use of Scientific English. D: Project

COURSE CONTENT		
Week	**Topics**	**Study Materials**
1	Literature Search	
2	Literature Summary	
3	Formulation of Research Problem and Tentative Work Plan	
4	Organizing Introduction part of the thesis	
5	Research	
6	Development	
7	PRESENTATION OF PRELIMINARY RESULTS AND FINALIZATION OF PROBLEM AND WORK PLAN	
8	Additional Research	
9	Additional Development	
10	Integration of results	
11	Preparation of software or administrative solution	
12	Preliminary Report and its Turnitin check	
13	Preparation of Final Report and Presentatiion.	
14	WRITTEN THESIS AND ORAL PRESENTATION	

RECOMMENDED SOURCES	
Textbook	Depends on the topic chosen
Additional Resources	Depends on the topic chosen

MATERIAL SHARING	
Documents	Depends on the topic chosen
Assignments	Depends on the topic chosen
Exams	Former theses

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Attendance	1	25
Preliminary Presentation	1	50
Assignment	1	25
Total		100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		70
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		30
Total		100

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM							
No	Program Learning Outcomes Contribution depends on the topic selected, so that no assessment is made.	Contribution					
		1	2	3	4	5
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.						
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.						
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems						

	of information processing, within the framework of discrete mathematics.
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data access, modification and processing for data kept in enterprise database systems.
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance.
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION

Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	15	2	30
Hours for off-the-classroom study (Pre-study, practice)	15	4	60
Mid-terms			
Homework	16	1	16
Project	1	40	40
Final examination	1	1	1

Total Work Load	147
Total Work Load / 25 (h)	5.88
ECTS Credit of the Course	6

COURSE INFORMATON

Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
Introduction to Comp. and Info. Processing	ACM111	1	3+0	3	6

Prerequisites	-

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	Compulsory
Course Coordinator	
Instructors	Assis. Prof. Dr. Mustafa Asım KAZANCIGIL, Assis. Prof. Dr. Manu DUBE, Inst. Şenol Sürer, Inst. Mehmet Kemal ÖZ, Inst. Devrim Kartal
Assistants	
Goals	This course aims to impart basic computer knowledge to students. The course includes the following topics: Main features of microprocessors and data processing operations, binary digit systems, computer hardware, Windows operating system, office programs such as Word, Excel, Powerpoint.
Content	Hardware, CPU, software, operating systems, internet, management information systems, ERP systems

Learning Outcomes	**Program Learning Outcomes**	**Teaching Methods**	**Assessment Methods**
1 Student analyzes information systems.	1	1,2,3	A,C
2 Student compares hardware components.	1	1,2,3	A,C
3 Student explains different types of software.	1	1,2,3	A,C
4 Student explains the components of internet.	1	1,2,3	A,C
5 Student analyzes ERP systems.	1	1,2,3	A,C

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion
Assessment Methods:	A: Testing, C: Homework

COURSE CONTENT

Week	Topics	Study Materials
1	INTRODUCTION TO INFORMATION SYSTEMS	Lecture notes
2	HARDWARE COMPONENTS I	Lecture notes
3	HARDWARE COMPONENTS II	Lecture notes
4	SOFTWARE COMPONENTS I	Lecture notes
5	SOFTWARE COMPONENTS II	Lecture notes
6	INTERNET	Lecture notes
7	MIDTERM	Lecture notes
8	WIRELESS COMMUNICATION	Lecture notes
9	MANAGEMENT INFORMATION SYSTEMS I	Lecture notes
10	MANAGEMENT INFORMATION SYSTEMS II	Lecture notes
11	ERP SYSTEMS I	Lecture notes
12	ERP SYSTEMS II	Lecture notes
13	SAP I	Lecture notes
14	SAP II	Lecture notes
15	FINAL	

RECOMMENDED SOURCES

Textbook	Laudon, K.C. and Laudon, J.P.: Management information systems : managing the digital firm, Upper Saddle River, N.J. Pearson/Prentice Hall 2007. Maier, R., Haedrich, T. & Peinl, R.: Enterprise Knowledge Infrastructures, 2nd Edition, Springer, 2009. ITGI (2003): IT Governance Institute. (2003). Board Briefing on IT Governance. 2nd Edition. Sap Sd Handbook: Kogent learning Solutions, Inc (The Jones and Bartlett Publishers Sap Book Series)
Additional Resources	

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-terms	1	60
Quizzes	1	20
Homework	1	20
	Total	100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		60
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		40
	Total	100

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM							
No	Program Learning Outcomes	Contribution					
		1	2	3	4	5	
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.	X					
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.		X				
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.					X	
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.					X	
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.		X				
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.					X	

7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.	X
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data access, modification and processing for data kept in enterprise database systems.	X
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance.	X
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.	X

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 15x Total course hours)	15	4	60
Hours for off-the-classroom study (Pre-study, practice)	15	3	45
Mid-terms	1	10	10
Quiz	1	8	8
Homework	1	10	10
Final examination	1	10	10
Total Work Load			143
Total Work Load / 25 (h)			5.72
ECTS Credit of the Course			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*

Introduction to Graphics Design	ACM112	2	0+3	3	5

Prerequisites	-

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	Compulsory
Course Coordinator	
Instructors	Assis. Prof. Dr. Mustafa Asım KAZANCIGIL, Z. Erdinç Akın
Assistants	
Goals	To distinguish the components of the visual design, to use advanced design and processing software (Photoshop, Fireworks, Freehand, ...), to make page designs according to the visual principles.
Content	This course is laboratory oriented and comprises of two parts. First part of the course will provide an overview of graphic design software: Images, color modes, making color and tonal adjustments, selecting, editing and retouching, painting, using channels and masks, using layers, using filters, saving and exporting images, printing. The second part of the course covers concepts on page layout: Palettes, command reference, basic concepts, constructing a publication, text formatting and word processing, composition and typography, graphics and text objects, indexes and pagination, defining and applying color, color management.

Learning Outcomes	Teaching Methods	Assessment Methods
1. The course describes the concept of informatics software.	1,2	A
2. The course describes the characteristics of information science.	1,2	A
3. The course describes the importance of the information sector.	1,2	A
4. The course analyzes the relationship between informatics and the side fields.	1,2	A
5. The course describes the location of the graphics programs in information sector.	1,2	A
6. The course describes the analysis of software share of graphics programs.	1,2	A
7. Links to different graphic programs software processes are examined in the course.	1,2	A

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 9: Simulation, 12: Case Study

Assessment Methods:	A: Testing, C: Homework

COURSE CONTENT

Week	Topics	Study Materials
1	Introduction to graphic design programs.	Theoretical informations
2	Introducing related graphic programs.	Theoretical informations
3	The line, color, perspective, typography and photography. The three main graphic form triangle, square and circle. The importance of the construction and processing of graphics in geometric forms definitions.	Theoretical informations
4	Examination of line which is an important element of graphic design and its computer studies.	Applications
5	With the curve and straight line work and drawings of this working method, the implementation of a working model of a field within the still-life.	Applications
6	Color applications of virtual three-dimensional geometric lumps with three basic geometric forms and regenerated forms in the computer environment.	Applications
7	Midterm	Applications
8	Exercises in Freehand programs. Creating a layout using two dimensions of grapgic design elements.	Applications
9	Introducing the icons of Photoshop programs and examination of the degree of severity of the program in graphic design.	Applications
10	Changing on the selected photo and examining how the studies done on the each floor of Layer.	Applications
11	Investigation of two photos passing into each other and studying of opacite settings.	Applications
12	Mixing of two gradient photos, tissue transport, applying filters.	Applications
13	Making liqifye on the selected photo, tissue transport, modifying and coloring on the selected photo.	Applications
14	The final review and studies needed to be done for final exam.	Applications

RECOMMENDED SOURCES

Textbook	The theoretical informations given in the course.
Additional Resources	

MATERIAL SHARING

Documents	Does not exist
Assignments	Does not exist
Exams	

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-terms	1	70
Quizzes	2	20
Assignment	1	10
Total		100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		60
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		40
Total		100

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM							
No	Program Learning Outcomes	Contribution					
		1	2	3	4	5	
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.				x		
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.						
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.						
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.						
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.						

6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.	
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.	
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data access, modification and processing for data kept in enterprise database systems.	
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance.	
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.	

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 15x Total course hours)	15	3	45
Hours for off-the-classroom study (Pre-study, practice)	15	4	60
Mid-terms	1	10	10
Homework			
Final examination			
Total Work Load	1	10	10
Total Work Load / 25 (h)			125
ECTS Credit of the Course			5

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
DATA STRUCTURES AND DATABASE APPLICATIONS	ACM 211	3	3+0	3	6

Prerequisites	-

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	IS&T (Required), MIS (Required)
Course Coordinator	Asst. Prof. Dr. Aşkın Demirağ
Instructors	Asst. Prof. Dr. Aşkın Demirağ, Asst. Prof. Dr. Çağla ŞENELER
Assistants	-
Goals	Understanding the concept of data, modeling the different structures, to list functions of databases, to develop queries using relational databases.
Content	This course covers the following topics: the concept of data, data structures, data models, introduction to databases, components of the databases, relational databases, table creation, indexing, sorting and querying.

Learning Outcomes	**Program Learning Outcomes**	**Teaching Methods**	**Assessment Methods**
Learn the data and database concepts with examples.	1	1,2,3	A,C
Focuses on the relational data model, and to establish a relationship between the tables to learn.	1	1,2,3,4	A,E
Design the tables to meet the needs of data storage and query design of an organization.	1	1,4	A,E
Learn how to import data from another formats.	1	1,4	A,E
Performs various queries on the tables.	1	1,2,4	A,E
Design the data entry forms.	1	1,2,4	A,E,C
Learn to bring the data into a report.	1	1,2,4	A,E,C,D

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 4: Lab Work
Assessment Methods:	A: Testing, B: Presentation C: Homework D: Project E: Laboratory

COURSE CONTENT

Week	Topics	Study Materials
1	Introduction to Database, Data Concepts	
2	What is Database?, Database Management Systems (DBMA) , Components of DBMS	
3	Data Models ,The Relational Model, Relationship Types	
4	Microsoft Office Access , Create Tables, Microsoft Access Data Types and Properties	
5	Import /Link / Export Data, Select Query (Sort, And, Or, Like)	
6	Make-table Query ,Update Query, Text Functions, IIF Function	
7	Append Query, Delete Query, Crosstab Query, Find Duplicates Query Find Unmatched Query	
8	MIDTERM	
9	Form Design	
10	Form Design	
11	Report Design	
12	Report Design	
13	Macros and Modules	
14	Macros and Modules	
15	FINAL	

RECOMMENDED SOURCES

Textbook	**DATABASE SYSTEMS**, Thomas CONNOLLY-Carolyn BEGG, Pearson Education, 5. Edition
Additional Resources	

MATERIAL SHARING

Documents	Sample database files and documents.
Assignments	

Exams

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-term	1	70
Project	1	20
Homework	1	10
Total		100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		40
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		60
Total		100

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM							
No	Program Learning Outcomes	Contribution					
		1	2	3	4	5	
1	MIS graduate, has the knowledge to model data, analyze data using statistical methods, to use various query and report generation softare, to generate SQL to query data and analze the results.	X					
2	MIS graduate, knows how to identify the firms' IT needs, define them and design using modern tehcnologies.						
3	MIS graduate is qualified to design and develop solutions for company's IT requirements, using extant modelling methods and technologies.						
4	MIS graduate is qualified to design and implement pilot projects for end users which would enable them to conribute to IT solutions desgined for the company.						
5	MIS graduate has the necessary communication and social skills to assume responsibility by herself/himself or to work as an effective team player.						
6	MIS graduate is qualified to follow the most recent developments in IT and management issues, and learn to apply the new methods and technologies.						
7	MIS graduate is qualified to communicate orally and in written with a second foreign language, in addition to Turkish amd English, with his/her colleagues, and is able to produce presentations, reports as his/her job requires and can explain new technologies to others.						
8	MIS graduate is qualified to act as an entrepreneur that would develop and implement strategies and business models in Internet ve mobile platforms.						
9	MIS graduate is qualified to foresee the effects of IT systems and organizations and users, to take precautions for security and privacy, inform						

	the necessary partners, and if possible develop the necessary solutions.
10	MIS graduate, while developing IT solutions for organizations, obeys by the ethical rules of their profession, knows the legislation about the IT matters.

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	15	3	45
Hours for off-the-classroom study (Pre-study, practice)	15	3	45
Mid-term	1	3	3
Project	1	30	30
Homework	5	3	15
Final examination	1	3	3
Total Work Load			141
Total Work Load / 25 (h)			5.64
ECTS Credit of the Course			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
ADVANCED DATABASE APPLICATIONS	ACM 212	4	3+0	3	6

Prerequisites	ACM211

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programmes)
Course Type	IS&T (Compulsory), MIS (Compulsory)

Course Coordinator	Asst. Prof. Dr. Aşkın Demirağ
Instructors	Asst. Prof. Dr. Aşkın Demirağ
Assistants	-
Goals	Access to data by using the SQL language, reports and analysis of query results graphs, tables, reports. In addition, recognition of the Oracle relational database systems, with PL / SQL to develop advanced data processing tools.
Content	This course covers following topics: Making relationships in relational databases, form design for data input, subforms, creating macros, data graphics, data access pages and creating reports in design view.

Learning Outcomes	**Program Learning Outcomes**	**Teaching Methods**	**Assessment Methods**
Queries the data in tables using SQL commands.	7,8	1,2,3,4	A,C
Creates the tables using SQL commands.	7,8	1,2,3,4	A,E
Inserts records into tables using SQL commands.	7,8	1,4	A,E
Updates the records in the table using SQL commands..	7,8	1, 4	A,E
Learn how to import data from another formats.	7,8	1, 4	A,C,E

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 4: Lab Work
Assessment Methods:	A: Testing, B: Presentation C: Homework D: Project E: Laboratory

COURSE CONTENT		
Week	**Topics**	**Study Materials**
1	Introduction to SQL.	
2	Retrieving data using the SQL SELECT statement.	
3	Restricting and sorting data.	
4	Using functions and conditional expressions.	
5	Displaying data from multiple tables using joins.	
6	Using subqueries to solve queries.	
7	Create and manage tables.	

8	MIDTERM
9	Creating database objects.
10	Controlling user access
11	Managing database objects.
12	Data dictionary
13	Managing large data sets.
14	Time-zone parameters and subqueries.
15	FINAL

RECOMMENDED SOURCES	
Textbook	DATABASE PROCESSING, David M.Kroenke, David J.Auer, Pearson Education, 12.Edition
Additional Resources	ORACLE Database: SQL Fundamentals Student Guide I / II

MATERIAL SHARING	
Documents	Sample databse files and documents.
Assignments	
Exams	

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-term	1	70
Project	1	20
Homework	3	10
Total		100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		40
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		60
Total		100

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM							
No	Program Learning Outcomes	Contribution				
		1	2	3	4	5
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.			X		
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.		X			
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.	X				
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.				x	
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.		x			
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.	x				
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.					x
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data acess, modification and processing for data kept in enterprise database systems.					x
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance.		x			

10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.	x
11	Information Systems graduates, within his/her job responsibilities can communicate the necessary information both written and orally in Turkish, English and another foreign language, respecting the values the societal institutions and establishments, of which he/she has acquired in the program.	

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	15	3	45
Hours for off-the-classroom study (Pre-study, practice)	15	3	45
Mid-term	1	3	3
Project	1	30	30
Homework	3	6	18
Final examination	1	3	3
Total Work Load			144
Total Work Load / 25 (h)			5.76
ECTS Credit of the Course			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
INFORMATION ANALYSIS AND SYSTEM DESIGN	ACM 213	3	3+0	3	6

Prerequisites	-

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	MIS (Compulsory)
Course Coordinator	
Instructors	Asst. Prof. Dr. CAGLA SENELER, Inst. Leman TURKOGLU
Assistants	
Goals	Enable learners to gain an understanding of the principles of systems analysis and equip them with the skills to analyse business requirements and design solutions to meet business needs.
Content	This course introduces the fundamental concepts, frameworks, methodologies, techniques and tools that are crucial to improve the skills to manage and develop information systems (IS). Topics covered include all the phases of Systems Development Life Cycle (SDLC)**.**

Learning Outcomes	**Program Learning Outcomes**	**Teaching Methods**	**Assessment Methods**
Understand the principle of the system analysis	2,3,4	1,2,3	
Be able to specify requirements of the system	2,3,4	1,2,3,12	
Be able to design system components and environments	2,3,4	1,2,3	
Be able to build detailed models to support programmers	2,3,4	1,2,3,12	
Be able to understand database components for input, output and controls of the user interfaces	2,3,4	1,2,3,12	C
Solve a wide range of problems related to the analysis, design and construction of IS	2,3,4,5,6	1,2,3	

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 4: Simulation, 5: Case Study
Assessment Methods:	A: Testing, B:Presentation, C: Homework, D: Project, E: Laboratory

COURSE CONTENT

Week	Topics	Study Materials
1	INTRODUCTION	COURSE SYLLABUS
2	SYSTEM ANALYSIS AND FUNDAMENTALS	CHP1
3	BUSINESS JUSTIFICATION	CHP2
4	PROJECT MANAGEMENT	CHP3
5	DETERMINING REQUIREMENTS	CHP4
6	DATA AND PROCESS ANALYSIS	CHP5
7	OBJECT ANALYSIS	CHP6
8	OPTIONS FOR DEVELOPMENT	CHP7
9	DESIGNING THE INTERFACE	CHP8
10	DESIGNING THE DATA	CHP9
11	SYSTEM CONSTRUCTION PLANNING	CHP10
12	MAKING SYSTEM OPERATIONAL	CHP11
13	SECURING AND SUPPORTING SYSTEMS	CHP12
14	REVIEW	
15	Final	

RECOMMENDED SOURCES	
Textbook	Gary B. Shelly and Harry J. Rosenblatt, *Analysis & Design for Systems*, 2012, International 9th Edition, Course Technology
Additional Resources	

MATERIAL SHARING
Documents
Assignments
Exams

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-terms	1	80
Assignment	5	20

	Total	100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		50
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		50
	Total	100

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM							
No	Program Learning Outcomes	Contribution					
		1	2	3	4	5
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.					
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.					
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.					x
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.					
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.					
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.					
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.					x
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data access, modification and processing for data kept in enterprise database systems.					x
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer					

	networks, how to configure them and how to maintain their performance.
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.
11	Information Systems graduates, within his/her job responsibilities can communicate the necessary information both written and orally in Turkish, English and another foreign language, respecting the values the societal institutions and establishments, of which he/she has acquired in the program.

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	15	3	45
Hours for off-the-classroom study (Pre-study, practice)	15	3	45
Mid-terms	1	3	3
Homework	5	10	50
Final examination	1	3	3
Total Work Load			146
Total Work Load / 25 (h)			5,84
ECTS Credit of the Course			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
System Analysis & Algorithms	ACM 221	2	3+0	3	7

Prerequisites	ACM111

Language of Instruction	English

Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	IS&T (Compulsory), MIS (Compulsory)
Course Coordinator	Assis.Prof.Dr. Aziz TÜTER
Instructors	Assis.Prof.Dr. Aziz TÜTER
Assistants	-
Goals	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.
Content	This course covers the following subjects: Introduction to computer logic, theoretical principles of problem solving, basic properties of algorithms, pseudocode, control structures, iterative algorithms, functions, modular design, built-in data types, basic I/O structures, control structures, functions, arrays, searching/ sorting algorithms indexes, cryptology and matrices.

Learning Outcomes	**Program Learning Outcomes**	**Teaching Methods**	**Assessment Methods**
Understands the logic of the computer.	3,4	1,2,3	A,C
Learn to draw flow charts.	3,4	1,2,3,4	A,E
Learn the theoretical principles of problem solving.	3,4	1,4	A,E
Learn the basic principles of algorithms and encodings.	3,4	1,4	A,E
Improve the examples on arrays.	3,4	1,2,4	A,E
Analyzes searching and sorting algorithms.	3,4	1,2,4	A,E,C
Learn the matrices and cryptology topics.	3,4	1,2,4	A,E,C,D

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 4: Lab Work
Assessment Methods:	A: Testing, B: Presentation C: Homework D: Project E: Laboratory

COURSE CONTENT		
Week	**Topics**	**Study Materials**
1	Introduction to computer logic	

2	Introduction to computer logic
3	Introduction to computer logic
4	Flow-chart, theoretical principles of problem solving.
5	Basic Properties of Algorithms, pseudocode.
6	Control structures, iterative algorithms.
7	Functions, modular design.
8	Built in data types, basic I/O structures
9	Midterm
10	Arrays and Aplication(One, two and tree dimension)
11	Searching/ Sorting Algorithms
12	Searching/ Sorting Algorithms indexes applications.
13	Cryptology
14	Matrices
15	Final

RECOMMENDED SOURCES
Textbook
Additional Resources

MATERIAL SHARING
Documents
Assignments
Exams

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-terms	2	40
Quizzes	2	20
Assignment	1	40
	Total	**100**

CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE	60	
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE	40	
Total	**100**	

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM							
No	Program Learning Outcomes	Contribution					
		1	2	3	4	5	
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.			x			
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.				x		
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.					x	
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.				x		
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.			x			
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.					x	
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.					x	

8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data acess, modification and processing for data kept in enterprise database systems.	x
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance.	x
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.	x
11	Information Systems graduates, within his/her job responsibilities can communicate the necessary information both written and orally in Turkish, English and another foreign language, respecting the values the societal institutions and establishments, of which he/she has acquired in the program.	

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 15x Total course hours)	15	3	45
Hours for off-the-classroom study (Pre-study, practice)	15	3	45
Mid-terms	2	10	20
Homework	10	5	50
Ouiz	2	1	2
Final examination	1	3	3
Total Work Load	45	25	165
Total Work Load / 25 (h)			6.6
ECTS Credit of the Course			7

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
Structural Programming	ACM222	3,4	2+2	3	6

Prerequisites	ACM221

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	IS&T (Compulsory), MIS (Compulsory)
Course Coordinator	Asst. Prof. Dr. Manu DUBE
Instructors	Staff
Assistants	Staff
Goals	To introduce students to high-level, general-purpose, structured programming languages and applications.
Content	Introduction to the concepts of programming languages. Low- and high-level languages, compilers, structured programming, modular programming. C language is used for the study of basic data types, variables, user-defined functions, arrays, file usage.

Learning Outcomes	**Program Learning Outcomes**	**Teaching Methods**	**Assessment Methods**
Understand the basic terminology used in computer programming	3,4,8	Lecture, practice	Laboratory assignment, testing
write, compile and debug programs in C language.	3,4,8	Lecture, practice	Laboratory assignment, testing
use different data types in a computer program.	3,4,8	Lecture, practice	Laboratory assignment, testing
design programs involving decision structures, loops and functions	3,4,8	Lecture, practice	Laboratory assignment, testing
explain the difference between call by value and call by reference	3,4,8	Lecture, practice	Laboratory assignment, testing
understand the dynamics of memory by the use of pointers	3,4,8	Lecture, practice	Laboratory assignment, testing

use different data structures and create/update basic data files.	3,4,8	Lecture, practice	Laboratory assignment, testing

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 4: Simulation, 5: Case Study
Assessment Methods:	A: Testing, B: Presentation, C: Homework, D: Project, E: Laboratory

COURSE CONTENT

Week	Topics	Study Materials
1	Introduction and overview. Programming language concepts. Low and high level programming languages.	
2	Introduction to C.Data types, variables, input, output.	
3	Decision structures, if/else.	
4	While loops.	
5	For-loops.	
6	Functions: User-defined.	
7	Functions: Standard libraries.	
8	Arrays	
9	Pointers	
10	Pointers	
11	Strings	
12	Structures	
13	Structures	
14	File input/output	
15	Final	

RECOMMENDED SOURCES

Textbook	Deitel&Deitel, *C-How To Program*, Pearson Prentice Hall.
Additional Resources	

MATERIAL SHARING

Documents	
Assignments	
Exams	

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Practice hours (laboratory)	12	20
Midterm exam	1	40
Quiz	4	40
	Total	**100**
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		40
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		60
	Total	100

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM							
No	Program Learning Outcomes	Contribution					
		1	2	3	4	5
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.					
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.					
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.					x
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.				x	
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.					
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.					

7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data acess, modification and processing for data kept in enterprise database systems.
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance.
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.
11	Information Systems graduates, within his/her job responsibilities can communicate the necessary information both written and orally in Turkish, English and another foreign language, respecting the values the societal institutions and establishments, of which he/she has acquired in the program.

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 14x Total course hours)	15	4	60
Hours for off-the-classroom study (Pre-study, practice)	15	5	75
Study for quizzes	4	1	4
Mid-term exam	1	2	2
Final exam	1	2	2
Total Work Load			143
Total Work Load / 25 (h)			5,72
ECTS Credit of the Course			6

COURSE INFORMATON

Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
Introduction to Web Design	ACM262	2	3+0	3	6

Prerequisites	-

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	-
Course Coordinator	-
Instructors	Asst. Prof. Mustafa Asım KAZANCIGIL, Asst. Fazlı YILDIRIM, Inst. Senol SURER
Assistants	-
Goals	To teach the students fundamentals of website design.
Content	Website design basics, HTML and CSS.

Learning Outcomes	Program Learning Outcomes	Teaching Methods	Assessment Methods
Fundamentals of HTML	1-2	1-2	A,C
Using Cascading Style Sheets	1-2	1-2	A,C

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 9: Simulation, 12: Case Study
Assessment Methods:	A: Testing, C: Homework

COURSE CONTENT		
Week	**Topics**	**Study Materials**
1	Basics of HTML	

2	Adding text and formatting text	
3	Adding pictures and hyperlinks	
4	Working with tables and frames	
5	Working with frames	
6	Designing web pages with examples	First 5 weeks
7	Midterm	
8	Introduction to CSS	
9	Formatting text with CSS	
10	Formatting pictures and hyperlinks with CSS	
11	Formatting forms and tables with CSS	
12	Controlling layout with CSS	
13	Designing webpages with HTML + CSS with examples	First 12 weeks
14	Designing webpages with HTML + CSS with examples	First 12 weeks

RECOMMENDED SOURCES	
Textbook	Wooldridge, Mike. Wooldridge, Linda. Teach Yourself Visually HTML and CSS.
Additional Resources	MacFarland, David Sawyer, CSS Missing Manual

MATERIAL SHARING	
Documents	www.silentblade.com
Assignments	From the website
Exams	

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-terms	1	50
Quizzes	5	50
Total		**100**
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		60

CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE	40	
	Total	**100**

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM

No	Program Learning Outcomes	Contribution				
		1	2	3	4	5
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.				x	
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.				x	
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.		x			
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.				x	
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.		x			
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.			x		
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.		x			
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data access, modification and processing for data kept in enterprise database systems.			x		
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance.			x		
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-			x		

	tier client/server configurations, how to deploy them in enterprises.
11	Information Systems graduates, within his/her job responsibilities can communicate the necessary information both written and orally in Turkish, English and another foreign language, respecting the values the societal institutions and establishments, of which he/she has acquired in the program.

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	15	3	45
Hours for off-the-classroom study (Pre-study, practice)	15	4	60
Mid-terms	1	3	3
Quiz	5	2	10
Problem Session	10	2	20
Final examination	1	10	10
Total Work Load			148
Total Work Load / 25 (h)			5,92
ECTS Credit of the Course			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
Visual Programming I	ACM 311	5	3+0	3	6

Prerequisites	ACM 221

Language of Instruction	English
Course Level	Bachelor's Degree
Course Type	MIS (Compulsory), IS&T (Elective)

Course Coordinator	Asst.Prof Gokhan Sahin
Instructors	Asst. Prof. Hacı Ahmet Yıldırım, Asst.Prof Gokhan Sahin
Assistants	
Goals	The course provides information and skills directly related to the development of programs using Visual Basic language in NET environment.
Content	The course begins with an introduction to NET, Programming. Then the first part covers the following topics: an introduction to visual programming, labels, textboxes, introduction to debugging, variables, memory concepts, the debugger: breakpoints, algorithms, pseudo-codes, checkboxes, logical operators. ''If...Then...Else, Debugger'' statement: watch window, '2Do While Loop'', ''For...next'' repetition statements. The second part includes ''Select Case''. Classes, procedures, functions, date variables, passing arguments, by value, by reference, random number generation, arrays.

Learning Outcomes	**Program Learning Outcomes**	**Teaching Methods**	**Assessment Methods**
Design solutions to real world problems using a visual programming language	1,2,3,4	1,2,3,5	A,C,D
Demonstrate how to debug a visual program	1,2,3,4	1,2,3,5	A,C,D

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 4: Simulation, 5: Case Study
Assessment Methods:	A: Testing, B: Presentation, C: Homework, D: Project, E: Laboratory

COURSE CONTENT

Week	**Topics**	**Study Materials**
1	Introducing Computers, the Internet and Visual Basic	Test-Driving a Painter App
2	**Welcome App** **Introducing the Visual Basic 2010 Express IDE**	**the Visual Basic IDE**
3	**Introducing TextBoxes and Button**	**Designing the Inventory App**
4	**Introducing Programming**	**Completing the Inventory App**
5	**Introducing Variables, Memory Concepts and Arithmetic**	**Enhancing the Inventory App**
6	Introducing Algorithms, Pseudocode and Program Control	Wage Calculator App

7	**Midterm**	Accessing the Media, Media Access Control Addressing and Framing Data
8	**CheckBoxes and Message Dialogs**	**Dental Payment AppIntroducing**
9	**Introducing the Do While…Loop and Do Until…Loop Repetition Statements**	**Car Payment Calculator App**
10	Introducing the Do…Loop While and Do…Loop Until Repetition Statements	Class Average App
11	**Introducing the For…Next Repetition Statement and NumericUpDown Control**	**Interest Calculator App**
12	Introducing the Select Case Multiple-Selection Statement	Security Panel App
13	Midterm	
14	Introducing Function Procedures and Sub Procedures	Enhancing the Wage Calculator App
15	Final	

RECOMMENDED SOURCES	
Textbook	**Visual Basic 2010 How to Program**
Additional Resources	

MATERIAL SHARING	
Documents	PPT Slides
Assignments	
Exams	2

COURSE'S CONTRIBUTION TO PROGRAM

No	Program Learning Outcomes	Contribution					
		1	2	3	4	5	
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.				x		

2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.		x				
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.				x		
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.					x	
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.					x	
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.	x					
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.	x					
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data acess, modification and processing for data kept in enterprise database systems.		x				
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance.	x					
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.		x				

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-terms	2	80
Quizzes	3	10
Assignment	8	10

Total	100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE	40
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE	60
Total	100

COURSE CATEGORY	Expertise/Field Courses

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	15	3	45
Hours for off-the-classroom study (Pre-study, practice)	15	4	60
Mid-terms	2	10	20
Homework	4	1	4
Final examination	8	3	24
Total Work Load	5	1	5
Total Work Load / 25 (h)	2	10	20
ECTS Credit of the Course			154
			6.16
			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
Management Information Systems	ACM 312	6	3 + 0	3	6

Prerequisites	-

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	IS&T (Compulsory), MIS (Compulsory)

Course Coordinator	Uğur Kaplancalı
Instructors	Uğur Kaplancalı
Assistants	
Goals	Understand the role of Information Systems in organizations. Understand the IT implications of a particular business need or problem. Learn how Ecommerce has changed how we do business. Understand the impact of technological change in accessing and disseminating information. Be able to use information systems as a resource in decision making.
Content	Topics include Introduction to the development of information systems, the portfolio of the application development, and requirement analysis and determination, structured analysis development strategy, application prototype development strategy, and systems design, designing of computer output, input-output, and online dialogue; design of files and use of auxiliary devies; the design of database interaction, and data communications; quality assurance; management of system implementation and MIS development, and hardware and software selection.

Learning Outcomes	**Program Learning Outcomes**	**Teaching Methods**	**Assessment Methods**
1) Understand the modern IT systems, and the forces and trends that influence these systems through technological, organizational, social and managerial perspectives.	2,3,6	1,2,3	A,C
2) List the names and functions of latest IT systems.	2,3,6	1,2,3	A,C
3) Understand the processes of designing, developing and deploying IT systems established according tothe specific needs of companies.	2,3,4	1,2,3	A,C
4) Design and analyze the components of an IT system, specifically built to solve a given problem.	1,2,3,4	1,2,3,12	A,C
5) Know the essential components of IT systems, understand the methods used to deploy IT systems, balancing the factors related to the organization, technology and management, and finally analyze problems.	2,3,4,6,8	1,2,3,12	A,C

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 4: Simulation, 5: Case Study
Assessment Methods:	A: Testing, B:Presentation, C: Homework, D: Project, E: Laboratory

COURSE CONTENT		
Week	**Topics**	**Study Materials**
1	**Information Systems in Global Business Today**	

2	**Global E-Business: How Businesses Use Information Systems**	
3	**Information Systems, Organizations, and Strategy**	
4	Ethical and Social Issues in Information Systems	
5	**IT Infrastructure and Emerging Technologies**	
6	**Midterm**	
7	**Foundations of Business Intelligence: Databases and Information Management**	
8	**Telecommunications, the Internet, and Wireless Technology**	
9	**Securing Information Systems**	
10	**Achieving Operational Excellence and Customer Intimacy: Enterprise Applications**	
11	**E-Commerce: Digital Markets, Digital Goods**	
12	**Managing Knowledge, Chp. 12 Enhancing Decision Making**	
13	**Building Information Systems**	
14	Project presentations	

RECOMMENDED SOURCES	
Textbook	**Laudon, Kenneth C. and Jane P. Laudon,** 2010, "Management Information Systems: Managing the Digital Firm", 11th Edition, Prentice-Hall. Inc. *(the copy in the library is 9th edition, its code is T58.6/.M36 L372)*
Additional Resources	vakalar

MATERIAL SHARING	
Documents	Course slides
Assignments	Cases
Exams	

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-terms	1	50
Quizzes		
Assignment	2	50

Total		**100**
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		40
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		60
Total		**100**

COURSE CATEGORY	Expertise/Field Courses

DERSİN PROGRAM ÇIKTILARINA KATKISI							
No	Program Öğrenme Çıktıları	Katkı Düzeyi				
		1	2	3	4	5
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.					X
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.				X	
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.				X	
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.		X			
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.	X				
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.		X			
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.	X				
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data access, modification and processing for data kept in enterprise		X			

	database systems.					
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance.	X				
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.	X				

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	15	3	45
Hours for off-the-classroom study (Pre-study, practice)	15	4	60
Mid-terms	1	10	10
Quiz			0
Homework	2	10	20
Final examination	1	10	10
Total Work Load			145
Total Work Load / 25 (h)			5,80
ECTS Credit of the Course			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
Object Oriented Programming	ACM 321	4,5	3+0+0	3	6

Prerequisites	ACM 222

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	IS&T (Required), MIS (Required)
Course Coordinator	Asst. Prof. Dr. Gökhan Şahin
Instructors	Asst. Prof. Dr. Gökhan Şahin, Prof. Dr. Avadis Hacınlıyan
Assistants	All research assistants in the department
Goals	Object oriented programming, (OOP) is organized around "objects" rather than "actions" and data rather than logic. Students will be exposed to the concepts, fundamental syntax, and the thought processes behind object-oriented programming and given the tools and basic knowledge about object-oriented programming techniques in languages such as Java. Labwork and Project development will be stressed.
Content	A detailed description of object program development: Introduction of object oriented programming concepts. Approaches to modular program design. Basic concepts of objects: Objects, classes, hierarchy between classes, inheritance and abstract classes, function and operator overloading, virtual functions, virtual base classes and polymorphism, single and multiple inheritance and object hierarchies, object-oriented program development, applications of Java.

Learning Outcomes	Program Learning Outcomes	Teaching Methods	Assessment Methods
IT graduates use up to date object-oriented software development tools, to design software development designs for a specific purpose.	5	3,4	A,B,C,D
Develops appropriate software for the user’s needs.	2	1,2,3,4	A,B,C
Has the knowledge and skill to offer the software that has been developed by effectively using graphical effects in different hardware settings to the end user.	2,4,5	3,4	A,B,C
IT graduates use up to date structured programming software development tools, to design software development designs for a specific purpose.	4,5	1,2,4	A,C
Uses inheritance (is-a) composition (has-a) and polymorphism concepts to develop object oriented Java applications. Uses threads and methods effectively for modular software design.	5	1,2,3,4	A,B,C
Uses arrays, error catching, input/output, reading from and writing to files effectively.	2,4,5	1,3	A,B,C
Can undertake a project problem to offer an integrated solution	2,4,5,10	2,4	B,C,D

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 4: Lab Work
Assessment Methods:	A: Testing, B: Laboratory C: Homework D: Project

COURSE CONTENT

Week	Topics	Study Materials
1	Introduction to programming and logistical issues in Object Oriented Programming) OOP.	ACM 111
2	Introduction to Java programming concepts; the operating system; tools for programming; input and output.	ACM 222
3	Introduction to Classes and Objects	
4	Control Statements	ACM 222
5	Methods	ACM 222
6	Arrays	ACM 222
7	MIDTERM EXAMINATION	
8	OOP-Inheritance	
9	Recursion	Inheritance
10	Classes and Objects: Event-driven programming	
11	OOP- Polymorphism	
12	Files and Streams	
13	Information encapsulation and Project Work	
14	REVIEW AND MIDTERM II	

RECOMMENDED SOURCES

Textbook	John Lewis , William Loftus, Java Software Solutions: Foundations of Program Design Pearson (7th Edition)
Additional Resources	P. J. Deitel and H. M. Deitel, Java How to Program, 9th edition. Pearson Education. http://docs.oracle.com/javase/tutorial/ http://www.java.com/en/download/manual.jsp.

MATERIAL SHARING

Documents	Presentations and Laboratory Sheets from Lewis Loftus
Assignments	Homework Sheets
Exams	Old exam questions are furnished

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-terms	2	50
Quizzes	4	10
Assignment and Labwork	10	10
Project and Presentation	1	30
Total		100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		40
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		60
Total		100

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM						
No	Program Learning Outcomes	Contribution				
		1	2	3	4	5
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.		X			
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.				X	
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.					X
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.				x	

5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.		x
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.	x	
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.	x	
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data access, modification and processing for data kept in enterprise database systems.	x	
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance.		x
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.		x

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	15	3	45
Hours for off-the-classroom study (Pre-study, practice)	15	3	45
Mid-terms	2	2	4
Quizzes	4	1	4
Homework	10	2	20
Final examination	2 (Including reparation)	2	4
Total Work Load			138

Total Work Load / 25 (h)	5.52
ECTS Credit of the Course	6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
Concepts of Programming Languages	ACM 331	7	3+0+0	3	6

Prerequisites	ACM 222

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	IS&T (Elective)
Course Coordinator	Prof. Dr. Avadis Hacınlıyan
Instructors	Prof. Dr. Avadis Hacınlıyan
Assistants	Res. Asst. A.Cihan Keleş, Res. Asst. Engin Kandıran
Goals	This course aims to cover the theoretical background of programming languages that provides students with a wide-range-in-depth discussion of programming languages concepts. The course gives students a solid foundation of understanding the theory of programming languages. The course examines the most common languages and compare them alternately.
Content	The course will cover the following topics: Principles of design and implementation of programming languages. Meaningful properties in languages, Backus Naur Syntax and structuring, compilers, interpreters, data and control structures, procedural, functional and logical programming, modular programming, examples from object oriented programming languages.

Learning Outcomes	**Program Learning Outcomes**	**Teaching Methods**	**Assessment Methods**
Information Systems graduates know how to distinguish between different types of programming languages such as imperative, object oriented, functional, and logic programming languages	6	1,4	A,B,C
Information Systems graduates know to recognizemeaningful properties in languages, Backus	6,9,8	1,2,3,4	A,B,C

Naur Syntax and structuring			
Knows how to use compilers, interpreters, data and control structures	6	1,2,3,4	A,B,C
Knows about the kinds of programming languages and their development and structure.	6	1	A
Can explain the conceptual basis of object-oriented programming languages and practice examples of them.	9,6,3	1,2,3,4	A,B,C,D
Can write reports about applications of the programming languages and discuss semantic and syntax analysis processes of compilation of the programs.	6	1,2,3,4	A,B,C
Can develop minor programs with using different types of programming languages.	9,8	1,2,3,4	A,B,C

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 4: Lab Work
Assessment Methods:	A: Testing, B: Laboratory C: Homework D: Project

COURSE CONTENT

Week	Topics	Study Materials
1	Introduction to programming languages. Principles of design and implementation of programming languages	Chapter 1-2
2	Meaningful properties in languages, Backus Naur Syntax and structuring	Chapter 3-4
3	Compilers, interpreters, checking types and scopes	Chapter 5
4	Data types and control structures	Chapter 6
5	Expressions and assigments statements	Chapter 7-8
6	MIDTERM EXAMINATION	
7	Subprograms and their implementation	Chapter 9-10
8	Symbolic Programming	Chapter 10
9	List oriented programming languages and artificial intelligence	
10	Abstract data types, procedural and logical programming	Chapter 11
11	Examples of object-oriented programming	Chapter 12
12	Concurrency, modular programming	Chapter 13
13	Exceptions handling and event handling	Chapter 14
14	Functional programming languages	Chapter 15

15	REVIEW AND MIDTERM EXAMINATION

RECOMMENDED SOURCES	
Textbook	Concepts of Programming Languages. International Edition 10th Edition by Roberto Sebesta (2008), ISBN: 9780321509680
Additional Resources	Papers, slides and lecturer notes

MATERIAL SHARING	
Documents	Presentations and Laboratory Sheets, REDUCE and LISP documentations
Assignments	Homework Sheets
Exams	Old exam questions are furnished

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-terms	2	66
Quizzes	4	16
Assignment and Labwork	10	18
Total		100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		40
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		60
Total		100

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM							
No	Program Learning Outcomes	Contribution					
		1	2	3	4	5	
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user						

	interface. (ACM 112,262)			
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media. (ACM365, 368,473)			
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics (ACM 221,222).		X	
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.(ACM 311,322)		X	
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage(ACM 321).		x	
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system (ACM 369, 370).			X
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.(ACM 211, 364)	X		
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data acess, modification and processing for data kept in enterprise database systems (ACM 221,364).	X		
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance. (ACM 361, 362, 363, 463, 464)			
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises (ACM 365, 368, 412).			

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	16	3	48
Hours for off-the-classroom study (Pre-study, practice)	16	3	48
Mid-terms	2	2	4
Quizzes	4	1	4
Homework	10	3	30
Final examination	2 (Including reparation)	2	4
Total Work Load			138
Total Work Load / 25 (h)			5.52
ECTS Credit of the Course			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
Networking I	ACM361	5	3+0	3	4

Prerequisites	None

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	IS&T (Compulsory), MIS (Compulsory)
Course Coordinator	Asst. Prof. Gökhan Sahin

Instructors	Asst. Prof. Gokhan Sahin
Assistants	
Goals	prepares students for two different Cisco certification exams. After completing the first two courses (Networking for Home and Small Businesses and Working at a Small-to-Medium Business or ISP), a student has the option to take the CCENT™ (Cisco Certified Entry Network Technician) exam. CCENT certifies the practical skills required for entry-level IT positions. In addition, this certification demonstrates a student's aptitude and competence to work in an environment that features Cisco networking devices and software. CCENT certification is an optional first step toward earning the Cisco CCNA industry-standard certification for networking careers. After completing all four CCNA Discovery courses, students will be prepared to take the CCNA certification exam.
Content	*Networking for Home and Small Businesses *Working at a Small-to-Medium Business or ISP *Introducing Routing and Switching in the Enterprise *Designing and Supporting Computer Networks

Learning Outcomes	**Program Learning Outcomes**	**Teaching Methods**	**Assessment Methods**
Networking for Home and Small Businesses	6,9	1,2,3,5	A,C,D
Working at a Small-to-Medium Business or ISP	6,9	1,2,3,5	A,C,D
Introducing Routing and Switching in the Enterprise	6,9	1,2,3,5	A,C,D
Designing and Supporting Computer Networks	6,9	1,2,3,5	A,C,D

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 4: Simulation, 5: Case Study
Assessment Methods:	A: Testing, B: Presentation, C: Homework, D: Project, E: Laboratory

COURSE CONTENT		
Week	**Topics**	**Study Materials**
1	Networks Supporting the Way We Live	
2	Communicating over the Network	data network symbols by creating a simple logical topology.
3	Application Layer Functionality and Protocols + Quiz	Configure DNS and HTTP services, and then study the packets that result when a web page is requested by typing a URL
4	OSI Transport Layer+ Quiz	"Look inside" packets to see how DNS and HTTP use port numbers.

5	OSI Network Layer+ Quiz	The replacement of a switch with a router breaks one large broadcast domain into two more manageable ones.
6	Addressing the Network - IPv4+ Quiz	Visualize unicasts, broadcasts, and multicasts
7	Data Link Layer + quiz	Accessing the Media, Media Access Control Addressing and Framing Data
8	OSI Physical Layer + quiz	Communication Signals,Physical Signaling and Encoding Representing Bits
9	Ethernet	Build large collision domains to view the effects of collisions on data transmission and network operation.
10	Planning and Cabling Networks	Examine the configuration on the routers. • View the router configuration. • Note the active ports. • Connect the devices. • Use the proper media type between devices. • Verify connectivity
11	Configuring and Testing Your Network	Configure common settings on a Cisco Router and Cisco Switch. • Configure Cisco router global configuration settings. • Configure Cisco router password access. • Configure Cisco router interfaces. • Save the router configuration file. • Configure a Cisco switch.
12	Monitoring and Documenting of Networks	Use PT to configure common settings on a Cisco router and Cisco switch. • Configure Cisco router global configuration settings
13	Basic Cisco Device Configuration	Create a small network that requires connecting network devices and configuring host computers for basic network connectivity.
14	Configure Host Computers for IP Networking	Create a small network that requires connecting network devices and configuring host computers for basic network connectivity. SubnetA and SubnetB are subnets that are currently needed. SubnetC, SubnetD, SubnetE, and SubnetF are anticipated subnets, not yet connected to the network. • Design the logical lab topology. • Configure the physical lab topology. • Configure the logical LAN topology. • Verify LAN connectivity.

RECOMMENDED SOURCES	
Textbook	Cisco academy : http://cisco.netacad.net/

Additional Resources	http://cisco.netacad.net/, PPAcket tracer, Wireshark

MATERIAL SHARING	
Documents	http://cisco.netacad.net/, PPAcket tracer, Wireshark
Assignments	
Exams	

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-terms	0	
Application	10	50
Assignment	10	50
Total		100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		40
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		60
Total		100

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM							
No	Program Learning Outcomes	Contribution					
		1	2	3	4	5	
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.	x					
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.	x					
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.	x					
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.	x					
5	Information Systems graduates have the knowledge and the skills to design and develop	x					

	computer applications, based on user specificed requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.					
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.			x		
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.	x				
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data acess, modification and processing for data kept in enterprise database systems.					
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance.					x
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.					
11	Information Systems graduates, within his/her job responsibilities can communicate the necessary information both written and orally in Turkish, English and another foreign language, respecting the values the societal institutions and establishments, of which he/she has acquired in the program.					

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	15	3	45
Hours for off-the-classroom study (Pre-study, practice)	15	3	45
Mid-terms	0	0	0
Homework	5	1	5
Final examination	4	2	8

Application	5	1	5
Makeup Final	1	2	2
Total Work Load			110
Total Work Load / 25 (h)			4.4
ECTS Credit of the Course			4

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
Networking II	ACM 362	6	3+0	3	6

Prerequisites	ACM 361

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	IS&T (Elective), MIS (Elective)
Course Coordinator	
Instructors	Assis.Prof. Gokhan Sahin
Assistants	
Goals	This course describes the architecture, components, and operation of routers, and explains the principles of routing and routing protocols. Students analyze, configure, verify, and troubleshoot the primary routing protocols RIPv1, RIPv2, EIGRP, and OSPF. By the end of this course, students will be able to recognize and correct common routing issues and problems. Each chapter walks the student through a basic procedural lab, and then presents basic configuration, implementation, and troubleshooting labs. Packet Tracer (PT) activities reinforce new concepts, and allow students to model and analyze routing processes that may be difficult to visualize or understand.
Content	working with routing protocols static and dynamic routing basics dynamic routing configuration

Learning Outcomes	**Program Learning Outcomes**	**Teaching Methods**	**Assessment Methods**
Routing Protocols	6,9	1,2,3,5	A,C,D

Static and Dynamic Routing Basics	6,9	1,2,3,5	A,C,D
Dynamic routing configuration	6,9	1,2,3,5	A,C,D
Designing and Supporting Computer Networks	6,9	1,2,3,5	A,C,D

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 4: Simulation, 5: Case Study
Assessment Methods:	A: Testing, B: Presentation, C: Homework, D: Project, E: Laboratory

COURSE CONTENT

Week	Topics	Study Materials
1	Introduction to Routing and Packet Forwarding	CCNA Discovery Course Notes
2	Static Routes	CCNA Discovery Course Notes
3	Introduction to Dynamic Routing	CCNA Discovery Course Notes
4	Distance Vector Routing Protocol	CCNA Discovery Course Notes
5	RIPv1	CCNA Discovery Course Notes
6	Classless Routing Protocols, VLSM and CIDR	CCNA Discovery Course Notes
7	RIPv2	CCNA Discovery Course Notes
8	Routing Table: A Closer Look	CCNA Discovery Course Notes
9	EIGRP	CCNA Discovery Course Notes
10	Link-State Routing Protocols	CCNA Discovery Course Notes
11	OSPF	CCNA Discovery Course Notes

12	Routing Lab	CCNA Discovery Course Notes
13	Routing Lab	CCNA Discovery Course Notes
14	Routing Lab	CCNA Discovery Course Notes

RECOMMENDED SOURCES	
Textbook	Cisco academy : http://cisco.netacad.net/
Additional Resources	http://cisco.netacad.net/, PPAcket tracer, Wireshark

MATERIAL SHARING	
Documents	http://cisco.netacad.net/, PPAcket tracer, Wireshark
Assignments	
Exams	

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-terms	0	
Quizzes	11	50
Assignment	11	50
Total		100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		40
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		60
Total		100

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM

No	Program Learning Outcomes	Contribution				
		1	2	3	4	5
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.	x				
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.	x				
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.	x				
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.	x				
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.	x				
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.			x		
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.	x				
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data acess, modification and processing for data kept in enterprise database systems.					
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance.					x

10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.						
11	Information Systems graduates, within his/her job responsibilities can communicate the necessary information both written and orally in Turkish, English and another foreign language, respecting the values the societal institutions and establishments, of which he/she has acquired in the program.						

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION

Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	15	3	45
Hours for off-the-classroom study (Pre-study, practice)	15	4	60
Mid-terms	0	0	0
Homework	11	11	4
Final examination	8	3	24
Application	5	1	5
Makeup Final	2	10	20
Total Work Load			154
Total Work Load / 25 (h)			6,16
ECTS Credit of the Course			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
Wireless Networks and Mobile Technologies	ACM 363	5	3+0	3	6

Prerequisites	None

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	IS&T (Elective), MIS (Elective)
Course Coordinator	Asst. Prof. Aziz TÜTER
Instructors	Inst. Bülent ARSLAN
Assistants	
Goals	To provide information about wireless networks, satellite communications, used components, using the forms of the effective and current practices.
Content	Principles of operation of wireless networks, physical properties, TCP / IP communication protocol, currently used methods of wireless networking technologies and the establishment of wireless networks.

Learning Outcomes	**Program Learning Outcomes**	**Teaching Methods**	**Assessment Methods**
Provides informations about the working principles of wireless networks.	6,9	1,2,3	A,B,D
Describes the physical characteristics of the back of the wireless communication.	6,9	1,2,3	A,B,D
Provides information about the structure and operation of TCP / IP (Transmission Control Protocol) protocol.	6,9	1,2,3	A,B,D
Explains wireless networking technologies that are available today.	6,9	1,2,3	A,B,D
Practice on a wireless network installation.	6,9	1,2,3,5	A,B,D

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 4: Simulation, 5: Case Study
Assessment Methods:	A: Testing, B: Presentation, C: Homework, D: Project, E: Laboratory

COURSE CONTENT		
Week	**Topics**	**Study Materials**
1	History and overview of satellite technologies	
2	Satelilte Types	

3	System elements on satellite technology	
4	Communications satellites and network management	
5	Communication protocols and signal carriers Applications	
6	The history of wireless networks and technologies	
7	Wireless networks, system components, antennas and operating principles	
8	Midterm	
9	TCP / IP and OSI protocols and models	
10	Examples of wireless networking, and organizational methods	
11	Examples of wireless networking, and organizational methods	
12	Determination of field project	
13	To establish project groups and business segments	
14	Supply and distribution of field work equipment	
15	Project Controls / Final	

RECOMMENDED SOURCES	
Textbook	Lecture notes, presentations, and videos.
Additional Resources	Designing a Wireless Network

MATERIAL SHARING
Documents
Assignments
Exams

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-terms	1	50
Project	2	50
Total		100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		60
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		40
Total		100

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM

No	Program Learning Outcomes	Contribution				
		1	2	3	4	5
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.					
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.	x				
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.					
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.	x				
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.					
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.			x		
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.					
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data acess, modification and processing for data kept in enterprise database systems.					
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance.					x
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.					

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	15	3	45
Hours for off-the-classroom study (Pre-study, practice)	15	3	45
Mid-terms	1	9	9
Project	1	30	30
Final examination	1	10	10
Total Work Load			139
Total Work Load / 25 (h)			5,56
ECTS Credit of the Course			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
DATABASE MANAGEMENT SYSTEMS	ACM 364	6	3+0	3	6

Prerequisites	ACM 212

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	IS&T (Elective), MIS (Elective)
Course Coordinator	Asst. Prof. Dr. Aşkın Demirağ
Instructors	Asst. Prof. Dr. Aşkın Demirağ
Assistants	-
Goals	SQL, manage the database objects, normalization process, data processing, manage the database transactions, using operator to classify data, summarize the results of a query, classify and group

	the data , revision of view of data, query of multiple tables, using sub-queries, union of multiple queries, management of database users, management of database security.
Content	This course covers the following topics: SQL, managing database objects, the normalization process, manipulating data, managing database transactions, using operators to categorize data, summarizing data results from a query, sorting and grouping data, restructuring the appearance of data, joining tables in queries, using sub-queries, combining multiple queries into one, managing database users, managing database security.

Learning Outcomes	**Program Learning Outcomes**	**Teaching Methods**	**Assessment Methods**
Knows about SQL commands.	7,8	1,2,3,4	A,C
Knows about creating database.	7,8	1,2,3,4	A,E
Learns about database management.	7,8	1,4	A,E
Learns about backup, restore and recovery.	7,8	1, 4	A,E
Learns about performance and security settings.	7,8	1, 4	A,C,E

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 4: Lab Work
Assessment Methods:	A: Testing, B: Presentation C: Homework D: Project E: Laboratory

COURSE CONTENT		
Week	**Topics**	**Study Materials**
1	Exploring the database architecture	
2	Creating databases	
3	Managing instances	
4	Configuring network environment	
5	Managing database storage structures	
6	Administering user security	
7	Create and manage tables.	
8	MIDTERM	
9	Managing data currency and undo data	

10	Database auditing and maintenance
11	Performance management
12	Backup concepts
13	Recovery concepts
14	Moving data
15	FINAL

RECOMMENDED SOURCES	
Textbook	DATABASE PROCESSING, David M.Kroenke, David J.Auer, Pearson Education, 12.Edition
Additional Resources	ORACLE Database 11G: Administration Workshop I

MATERIAL SHARING	
Documents	Sample files and documents from www.ogrencisistemi.org web site.
Assignments	
Exams	

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-term	1	70
Project	1	20
Homework	1	10
Total		100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		40
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		60
Total		100

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM							
No	Program Learning Outcomes	Contribution					
		1	2	3	4	5	
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.			X			
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.		X				
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.	X					
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.				x		
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.		x				
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.	x					
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.					x	
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data acess, modification and processing for data kept in enterprise database systems.					x	
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance.		x				
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based		x				

applications for n-tier client/server configurations, how to deploy them in enterprises.

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	15	3	45
Hours for off-the-classroom study (Pre-study, practice)	15	3	45
Mid-term	1	9	9
Project	1	9	9
Homework	3	6	18
Final examination	1	9	9
Total Work Load			135
Total Work Load / 25 (h)			5.4
ECTS Credit of the Course			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
Advanced Web Design	ACM 365	3,5	3+0	3	6

Prerequisites	ACM 262

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	IS&T (Compulsory), MIS (Compulsory)

Course Coordinator	Assist. Prof. Manu Dube
Instructors	Assist. Prof. Manu Dube
Assistants	-
Goals	To teach the students how to design dynamic webpages using popular web design software and scripting languages.
Content	Designing webpages with popular web design software, using scripting languages to dynamically modify webpages, web site management.

Learning Outcomes	Program Learning Outcomes	Teaching Methods	Assessment Methods
Using popular web design software - Dreamweaver	1-2	1-2	A,C
Scripting Languages - Javascript	1-2	1-2	A,C
Advanced scripting language usage - JQuery	1-2	1-2	A,C

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 9: Simulation, 12: Case Study
Assessment Methods:	A: Testing, C: Homework

COURSE CONTENT

Week	Topics	Study Materials
1	Javascript gramar	
2	Data types, variables, arrays	
3	Adding logic and control to webpages	
4	Adding logic and control to webpages	
5	Working with words, numbers and dates	
6	Using javascript by examples	first 5 weeks
7	Midterm	
8	Dynamically modifying webpages with JQuery	
9	Dynamically modifying webpages with JQuery	

10	Dynamically modifying webpages with JQuery	
11	Dreamweaver basics and interface	
12	Dreamweaver with HTML	
13	Dreamweaver with CSS	11th week
14	Dreamweaver with Javascript	11th week

RECOMMENDED SOURCES	
Textbook	MacFarland, David Sawyer, Javascript Missing Manual
Additional Resources	MacFarland, David Sawyer, Dreamweaver 5.5 Missing Manual

MATERIAL SHARING	
Documents	www.silentblade.com
Assignments	From the website
Exams	

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-terms	1	50
Quizzes	5	25
Homeworks	5	25
	Total	**100**
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		60
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		40
	Total	**100**

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM		
No	Program Learning Outcomes	Contribution

		1	2	3	4	5
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.					x
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.					x
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.				x	
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.				x	
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.				x	
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.			x		
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.			x		
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data access, modification and processing for data kept in enterprise database systems.			x		
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance.			x		
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.			x		

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	15	3	45
Hours for off-the-classroom study (Pre-study, practice)	15	3	45
Mid-terms	1	3	3
Homeworks	5	2	10
Quiz	5	4	20
Problem Session	10	1	10
Final examination	1	10	10
Total Work Load			143
Total Work Load / 25 (h)			5,72
ECTS Credit of the Course			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
E-Business	ACM 366	6,8	3 + 0	3	6

Prerequisites	

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programmes)
Course Type	MIS(Compulsory), IS&T(Elective)
Course Coordinator	
Instructors	Asst. Prof. Uğur T. Kaplancalı, Asst. Prof. Arzu Baloğlu
Assistants	
Goals	Covers the principles, process, purpose, and strategies for an e-business. Provides a broad introduction to e-business technologies,
Content	E-business plan, strategy development, electronic payment systems,

	marketing and consumer behavior in internet are the main topics.

Learning Outcomes	Program Learning Outcomes	Teaching Methods	Assessment Methods
Apply the knowledge of different e-business and e-commerce concepts	2	1,2,3	A
Comparing the business models in e-commerce	2	1,12	A,C
Have an understanding of main technologies behind electronic systems and how they interact	1,3,4	1,2,3	A,C
Connecting the e-commerce activity with electronic payment systems	1,7	1,2,3	A,C
Appreciate the ethical and human side of e-business	10	1,2,3	A
Applying tools to integrate supply chain management and e-business	2,4	1,3	A,C
Analyzing the methods and practices used in e-commerce security	1,9	1,2,3	A
Understing of new and emerging e-business Technologies.	5,6,8	1,3,12	A,C

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 4: Simulation, 5: Case Study
Assessment Methods:	A: Testing, B:Presentation, C: Homework, D: Project, E: Laboratory

COURSE CONTENT		
Week	**Topics**	**Study Materials**
1	INTRODUCTION, HISTORY OF E-COMMERCE	
2	STRATEGIES AND BUSINESS MODELS FOR E-COMMERCE	
3	E-BUSİNESS RETAİL AND SERVICES SECTOR	
4	E-BUSINESS MARKETING CONCEPTS	
5	CONSUMER BEHAVIOR IN E-BUSINESS	
6	E-BUSINESS MARKET RESEARCH	
7	MIDTERM EXAM	
8	E-BUSİNESS ETHİCAL AND SOCİAL SIDE	
9	E-BUSINESS PAYMENT SYSTEMS	
10	E-BUSINESS SECURITY	
11	MOBILE COMMERCE	

12	B2B E-BUSINESS	
13	SOCIAL MEDIA & E-BUSINESS	
14	E-BUSINESS ACTIVITY IN TURKEY	
15	Final	

RECOMMENDED SOURCES	
Textbook	E-COMMERCE: BUSINESS, TECHNOLOGY, SOCIETY, (2009), K. C. Laudon, C. G. Traver, 5th ed., *Pearson*
Additional Resources	http://www.businessinsider.com/sai, http://www.ecommercetimes.com/

MATERIAL SHARING	
Documents	
Assignments	Class projects (start-up business) from previous semesters
Exams	

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-terms	1	50
Quizzes	-	0
Class Project	1	50
Total		**100**
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		40
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		60
Total		**100**

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM						
No	Program Learning Outcomes	Contribution				
		1	2	3	4	5

1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.		X			
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.					X
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.				X	
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.				X	
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.				X	
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.					X
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.			X		
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data access, modification and processing for data kept in enterprise database systems.			X		
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance.			X		
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.				X	

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION

Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	15	3	45
Hours for off-the-classroom study (Pre-study, practice)	15	3	45
Mid-terms	1	2	2
Study for midterm exam	1	8	8
Class Project	1	30	30
Final examination (study)	1	15	15
Total Work Load			145
Total Work Load / 25 (h)			5.8
ECTS Credit of the Course			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
Web Programming	ACM 368	6,8	3+0	3	6

Prerequisites	ACM 262

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	IS&T (Compulsory), MIS (Elective)
Course Coordinator	Assist. Prof. Gökhan Şahin
Instructors	Assist. Prof. Gökhan Şahin
Assistants	-
Goals	To teach the students how to design dynamic webpages using databases.
Content	Designing dynamic webpages, using databases in web design, web site management

Learning Outcomes	Program Learning Outcomes	Teaching Methods	Assessment Methods
Dynamic Web Pages - PHP	1-2-3-4	1-2-12	A,C

Databases – MySQL	7-10	1-2-12	A,C

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 9: Simulation, 12: Case Study
Assessment Methods:	A: Testing, C: Homework

COURSE CONTENT

Week	Topics	Study Materials
1	Introduction to PHP	
2	Data types, variables, arrays	
3	Adding control and logic to webpages	
4	Adding control and logic to webpages	
5	Strings, numbers and date	
6	Designing PHP pages with examples	First 5 weeks
7	Midterm	
8	PHP form design	
9	PHP forms and form validation, regex	
10	Introduction to SQL	
11	Designing dynamic webpages with MySQL and PHP	
12	Designing dynamic webpages with MySQL and PHP	
13	Designing dynamic webpages - Examples	First 12 weeks
14	Designing dynamic webpages - Examples	First 12 weeks

RECOMMENDED SOURCES

Textbook	Ullman, Larry. Visual Quick Pro Guide, PHP 6 and MySQL 5
Additional Resources	

MATERIAL SHARING	
Documents	www.silentblade.com
Assignments	From the website
Exams	

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-terms	1	30
Quizzes	5	30
Project	1	40
Total		**100**
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		50
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		50
Total		**100**

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM							
No	Program Learning Outcomes	Contribution					
		1	2	3	4	5	
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.						x
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.						x
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.						x
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.						x

5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.	x	
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.	x	
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.		x
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data access, modification and processing for data kept in enterprise database systems.		x
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance.	x	
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.		x
11	Information Systems graduates, within his/her job responsibilities can communicate the necessary information both written and orally in Turkish, English and another foreign language, respecting the values the societal institutions and establishments, of which he/she has acquired in the program.		

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	15	3	45
Hours for off-the-classroom study (Pre-study, practice)	15	3	45

Mid-terms	1	3	3
Quiz	5	2	10
Project	1	30	30
Final examination	1	10	10
Total Work Load			143
Total Work Load / 25 (h)			5,72
ECTS Credit of the Course			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
Operating Systems I	ACM 369	5	3+0+0	3	6

Prerequisites	None

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	IS&T (Required), MIS (Elective)
Course Coordinator	Prof. Dr. Avadis Hacınlıyan
Instructors	Prof. Dr. Avadis Hacınlıyan, Yrd. Doç. Dr. Gökhan Şahin
Assistants	Res. Asst. Engin Kandıran
Goals	This course will emphasize the Linux system, the GNU application software and introduce installation, use and maintenance of open source operating systems and software applications.
Content	History of Unix, The open source movement and Linux, Linux Distributions, Installation of Linux, Basic Unix Commands, File management, process management, Linux Software including Graphical User Interfaces, Text Processing, Office Applications, Mail and Internet Clients, Software Development and Networking. Syetem management, Basic networking concepts that are used in today's corporate environments. Security, Shell programming, System generation. Prerequisite: Computer literacy and an introductory programming course

Learning Outcomes	Program Learning Outcomes	Teaching Methods	Assessment Methods
Information Systems graduates know the logic of computer operating systems, the basic set of system commands	6	1,4	A,B,C
Information Systems graduates know how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.	6	1,2,3,4	A,B,C
Can install, configure and maintain different Linux distributions.	6,2	1,4	B,C,D
Knows the possibilities, installation and use of open source software.	6,2	1,2,3,4	A,B,C
Knows shell scripting, kernel configuration and compilation, system generation (SYSGEN).	3,6,2	1,4	A,B
Knows TCP/IP computer networking and system security.	9,6,3	1,2,3,4	A,B,C
Can control file systems and processes.	6,8,9	1,2,3,4	A,B,C

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 4: Lab Work
Assessment Methods:	A: Testing, B: Laboratory C: Homework D: Project

COURSE CONTENT		
Week	**Topics**	**Study Materials**
1	History of Operating Systems, The GNU Project, The Linux System.	ACM 111
2	Introduction to Linux. Bootable Linux Distributions. Native Installation of Linux to a hard drive.	
3	Maintenance of a Linux System. Hardware configuration. Issues related to EFI and Secure boot.	
4	File System Interface and Implementation.	ACM 111
5	Review of Linux commands and programming in C using gcc	ACM 222
6	Shell Scripting.	ACM 221
7	MIDTERM EXAMINATION	
8	Processes: Commands that manipulate processes. Threads.	ACM 111
9	Software Installation, Linux Applications	
10	Kernel Compilation, Kernel Modules. Compiled kernel installation, Bootloaders.	

11	TCP/IP Networking. Network Structures,
12	Protection and Security
13	Virtualization and Cloud Computing.
14	REVIEW AND MIDTERM EXAMINATION

RECOMMENDED SOURCES	
Textbook	C. Negus "Linux Bible 2010 Edition"
Additional Resources	T. Parker "Slackware Linux Unleashed" M. Welsh "Linux Installation and Programming Guide" M. Mitchell, J. Oldham, M. Samuel, "Advanced Linux Programming" B. W. Kernighan and D. M. Ritchie, "The C Programming Language" J. Archer Harris: Schaum's Outline of Operating Systems Published by Mc Graw Hill.

MATERIAL SHARING	
Documents	Presentations and Laboratory Sheets
Assignments	Homework Sheets
Exams	Old exam questions are furnished

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-terms	2	66
Quizzes	4	16
Assignment and Labwork	10	18
Total		100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		40
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		60
Total		100

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM							
No	Program Learning Outcomes	Contribution				
		1	2	3	4	5
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface. (ACM 112,262)					
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media. (ACM365, 368,473)	X				
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics (ACM 221,222).			X		
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.(ACM 311,322)			X		
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage(ACM 321).				x	
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system (ACM 369, 370).					X
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.(ACM 211, 364)	X				
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data acess, modification and processing for data kept in enterprise database systems (ACM 221,364).					
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer				X	

	networks, how to configure them and how to maintain their performance. (ACM 361, 362, 363, 463, 464)	
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises (ACM 365, 368, 412).	x

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	16	3	48
Hours for off-the-classroom study (Pre-study, practice)	16	3	48
Mid-terms	2	2	4
Quizzes	4	1	4
Homework	10	3	30
Final examination	2 (Including reparation)	2	4
Total Work Load			138
Total Work Load / 25 (h)			5.52
ECTS Credit of the Course			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
Scripting Languages	ACM 373	7	3+0	3	6

Prerequisites	-

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	IS&T (Compulsory), MIS (Elective)
Course Coordinator	
Instructors	Asst. Prof. Dr. Gökhan Şahin
Assistants	Staff
Goals	To introduce students to high-level, general-purpose, interpreted programming languages and applications.
Content	Overview of scripting languages. Study of Python language in depth. Discussion of supported libraries. Applications to system administration, graphics output, network communications, GUI design, and other fields, at the instructor's discretion.

Learning Outcomes	Program Learning Outcomes	Teaching Methods	Assessment Methods
Write, debug, and run a program given a problem description.	2,4,6	Lecture, practice	Homework, testing
Install and use extra software libraries as needed by the task.	2,4,6	Lecture, practice	Homework, testing
Perform system administration tasks with scripts.	2,4,6	Lecture, practice	Homework, testing
Produce graphical output from given data.	2,4,6	Lecture, practice	Homework, testing
Do research about scripting languages and assess their relative merits.	2,4,6	Lecture, research project	Project presentation
Complete a programming project.	2,4,6	Lecture, research project	Project presentation

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 4: Simulation, 5: Case Study
Assessment Methods:	A: Testing, B: Presentation, C: Homework, D: Project, E: Laboratory

COURSE CONTENT		
Week	**Topics**	**Study Materials**
1	Introduction and overview. Scripting languages. The Python language.	
2	Installing Python. Interactive use. Simple scripts.	
3	Variables, lists, dictionaries.	
4	Decisions, loops.	
5	Functions.	

6	Object-oriented programming.
7	Plotting data.
8	Regular expressions and text processing.
9	Parsing web pages
10	System administration
11	Process management
12	GUI design with Tkinter
13	GUI design with Tkinter
14	Class presentations
15	Final

RECOMMENDED SOURCES	
Textbook	Mark Lutz, Learning Python, O'Reilly Publishing.
Additional Resources	Online reference material at python.org

MATERIAL SHARING
Documents
Assignments
Exams

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Homework assignment	10	70
Project presentation	1	30
Total		100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		40
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		60
Total		100

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM							
No	Program Learning Outcomes	Contribution				
		1	2	3	4	5
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.			x		
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.					
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.					x
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.					x
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.					x
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.			x		
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.		x			
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data acess, modification and processing for data kept in enterprise database systems.				x	
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance.					
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.				x	
11	Information Systems graduates, within his/her job responsibilities can communicate the necessary information both written and orally in Turkish, English and another foreign language, respecting the values the societal institutions and establishments, of which he/she has acquired in the program.					

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	15	3	45
Hours for off-the-classroom study (Pre-study, practice)	15	3	45
Homework	10	4	40
Preparation of class presentation	1	20	20
			0
Total Work Load			150
Total Work Load / 25 (h)			6,00
ECTS Credit of the Course			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
Internship in MIS	ACM 394	6	0+6+0	3	6

Prerequisites	Third Year Standing

Language of Instruction	English 
Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	IS&T (Required), MIS (Required)
Course Coordinator	Yrd. Doç. Dr. Aziz Tüter
Instructors	Yrd. Doç. Dr. Aziz Tüter
Assistants	All research assistants in the department
Goals	The purpose of internship is to enhance academic studies of

	students with field experience. It is an opportunity for students to clarify their career interests.
Content	This course is designed to establish a strong base for the student, and the major concern is to cover the topics that are not fully discussed in the regular courses, and acquaint students to the practical aspects of the theoretical education. The students must complete a 40 day internship period in Information Technology or Enterprise Management companies.(OR 20 days + 20 days in different institutions.)

Learning Outcomes	Program Learning Outcomes	Teaching Methods	Assessment Methods
Can assess practical implications of theoretical knowledge acquired at the university or not studied in courses.	1,2,3,4,5,6,7,8,9,10	2,5	A,B,D
Can acquire new knowledge/ability during internship period that is not given at the university	1,2,3,4,5,6,7,8,9,10	2,5	A,B,D
Can reach area-specific information sources by using various databases	1,2,3,4,5,6,7,8,9,10	2,5	A,B,D
Knows how to prepare and present scientific reports	1,2,3,4,5,6,7,8,9,10	1,2,3,4	A,C,D
Can produce alternatives individually or collectively for tackling and solving problems	1,2,3,4,5,6,7,8,9,10	3,4	A,B,D
Can define the inter-departmental relationship at the organization/institution of internship	1,2,3,4,5,6,7,8,9,10	3,4	A,B,D
Develops capability of oral and written expression.	1,2,3,4,5,6,7,8,9,10	1,2	A,B,C,D
Develops capability to collaborate with the sector.	1,2,3,4,5,6,7,8,9,10	2,3,4	D

Teaching Methods:	1:Question-Answer, 2: Discussion, 3: Application 4: Case Study 5:Literature search
Assessment Methods:	A: Written report, B: Oral Presentation C: Use of Scientific English. D: Project

COURSE CONTENT		
Week	**Topics**	**Study Materials**
1	Orientation	
2	Understanding the institution where internship will take place	
3	Obtain professional experience	

4	Obtain professional experience
5	Obtain professional experience
6	Obtain professional experience
7	Obtain professional experience
8	Prepare final report and internship logbook

RECOMMENDED SOURCES	
Textbook	Depends on the topic chosen
Additional Resources	Depends on the topic chosen

MATERIAL SHARING	
Documents	Depends on the topic chosen
Assignments	Depends on the topic chosen
Exams	Former theses

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Attendance	1	20
Contribution	1	20
Report	1	60
Total		100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		60
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		40
Total		100

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM		
No	Program Learning Outcomes	Contribution

	Contribution depends on the topic selected, so that no assessment is made.	1	2	3	4	5
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.					
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.					
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.					
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.					
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.					
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.					
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.					
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data access, modification and processing for data kept in enterprise database systems.					
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance.					
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.					

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION

Activities	Quantity	Duration (Hour)	Total Workload (Hour)

Course Duration (Including the exam week: 16x Total course hours)	120
Hours for off-the-classroom study (Pre-study, practice)	10
Mid-terms	
Homework	
Project	30
Final examination	
Total Work Load	150
Total Work Load / 25 (h)	6
ECTS Credit of the Course	6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
Ethical & Human Side of IT	ACM 411	7	3 + 0	3	6

Prerequisites	None

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	IS&T (Compulsory), MIS (Compulsory)
Course Coordinator	
Instructors	Asst. Prof. Uğur T. Kaplancalı
Assistants	
Goals	To use IT for the benefit of organizations and the welfare of the society through a accountable mentality and make students honor the ethics and moral values within the internet and other digital platforms.
Content	This course covers principles of ethics and moral values, the effects of IT on employee and employer relations, internet crime, privacy issues, digital piracy, freedom of expression in internet, and human side of software development

Learning Outcomes	**Program Learning Outcomes**	**Teaching Methods**	**Assessment Methods**
Students have an understanding of philosophical	9,10	1,2,3	A

background of ethics			
Determining the current and major problems of information society.	9,10	1,3,12	A,B
Analyzing many drawbacks of the computing techology from different points of view	1,5,9	1,2,3	A,B
Distinguishing the various ethical issues faced by IT professionals.	5,7,10	1,3	A
Understanding basics of the macro level copyright issues, piracy and crime in the internet.	1,2	1,3,12	A
Evaluating ethical side of the legal tools and practice of law in digital environments.	2,6,10	1,2	A

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 4: Simulation, 5: Case Study
Assessment Methods:	A: Testing, B:Presentation, C: Homework, D: Project, E: Laboratory

COURSE CONTENT

Week	Topics	Study Materials
1	ETHİCS BASIC CONCEPTS & FUNDAMENTALS	
2	IT PROFESSIONALS ETHİCS	
3	PRIVACY & IT	
4	NETWORK & CYBER CRIME	
5	FREEDOM OF EXPRESSION IN DIGITAL ENVIRONMENTS	
6	CYBER FORENSICS & SECURITY	
7	ETHICS OF SOFTWARE DEVELOPMENT	
8	ETHICS IN VIRTUAL WORLDS	
9	E-GOVERNMENT & FAIR COMPETITION	
10	IT VS. EMPLOYEE AND EMPLOYER RELATIONS	
11	INTELLECTUAL PROPERTY IN INTERNET	
12	ETHICS OF GAMING AND VIRTUAL GOODS	
13	ETHICS OF SOCIAL MEDIA	
14	ETHICS OF IT IN TURKEY	
15	FINAL EXAM	

RECOMMENDED SOURCES

Textbook	ETHICS IN INFORMATION TECHNOLOGY, (2007), 2nd ed., George Reynolds, *Thomson – Course Technology*.
Additional Resources	ACM CODE OF ETHICS

MATERIAL SHARING	
Documents	
Assignments	Reflection Paper Examples

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Class Presentation	1	40
Assignment (Reflection Paper)	2	60
Total		**100**
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		50
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		50
Total		**100**

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM							
No	Program Learning Outcomes	Contribution					
		1	2	3	4	5	
1	Program graduate has the skills and the knowledge to design models for scientific analyses, as required by companies.		**X**				
2	Program graduate has the skills and the knowledge to identify strategies for companies for their information requirements and IT investments.			**X**			
3	Program graduate has the skills and the knowledge to design and implements IT strategies and systems that would align with the companies' business strategies.				**X**		
4	Program graduate has the skills and the knowledge to develop and			**X**			

	implement strategies that would be applied to the company's new distribution channels, and if necessary be able to manage thre related IT projects.					
5	Program graduate has the skills and the knowledge to manage projects involving IT systems within any industry.				**X**	
6	Program graduate has the skills and the knowledge to design, tu use and to implement IT systems that would analyze customer data and discover valuable knowledge, which would be acted upon as a competitive advantage.				**X**	
7	Program graduate has the skills and the knowledge to develop and implement IT systems that would analyze both internal and external data to resolve issues, based on scientific and applied methods.			**X**		
8	Program graduate has the skills and the knowledge for implementation of ERP software, which requires requirements analysis, business process reengineering, and project team management.	**X**				
9	Program graduate has the ability to anticipate the effects IT systems on users, inform the stakeholders regarding the security and privacy measures and needs, and develop required solutions to address such needs.					**X**
10	Program graduate honors the IT Professional ethics while developing solutions to IT requirements of businesses, has the knowledge of legal regulations and abides with law.					**X**

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION

Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	15	3	45
Hours for off-the-classroom study (Pre-study, practice)	15	3	45
Class Presentation preparation	1	6	6
Class Presentation	1	1	1
Homework (Reflection Paper)	2	14	28
Final Exam study	1	15	15
Final Exam	1	3	3
Total Work Load			143

Total Work Load / 25 (h)			5.72
ECTS Credit of the Course			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
Network Programming	ACM 412	6	3+0	3	4

Prerequisites	ACM 321

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	IS&T (Compulsory)
Course Coordinator	Asst. Prof. Gokhan Sahin
Instructors	Asst. Prof. Gokhan Sahin
Assistants	
Goals	Producing enterprise level dynamic web pages.
Content	Network Fundamentals, Hardware & Software, Introduction to the programming in the Network environment, Java Platform, object & classes, inheritance, fundamental programming structures in Java, Java Applets, drawing & painting, review and exercises, mouse and keyboard events in Java, Java Scripts, Functions in Java Scripts and arrays and review and exercises, animations, files and videos. The course is computer laboratory oriented and students will be assigned individual projects.

Learning Outcomes	Program Learning Outcomes	Teaching Methods	Assessment Methods
Producing dynamic web apps.	1,2,3,4,6,9	Discussion/ Simulation/ Case Study	Testing
Producing java based software that runs on both os and thenetwork.	1,2,3,4,6,9	Discussion/ Simulation/ Case Study	Testing

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 4: Simulation, 5: Case Study
Assessment Methods:	A: Testing, B:Presentation, C: Homework, D: Project, E: Laboratory

COURSE CONTENT		
Week	**Topics**	**Study Materials**
1		Eclipse.

	Java syntax	
2	Servlets & JSP: Overview and Setup	**Apache Tomcat**
3	Servlet Basics	The basic structure of servlets
4	Handling the Client Request: Form Data	form data
5	Handling the Client Request: HTTP Request Headers	HTTP request headers
6	Generating the Server Response: HTTP Status Codes	HTTP response
7	Generating the Server Response: HTTP Response Headers	HTTP response
8	Handling Cookies	Cookies
9	Session Tracking	Sessions
10	Midterm	Midterm
11	Introduction to JSP.	
12	Invoking Java Code with JSP Scripting Elements	Static vs. dynamic text
13	Controlling the Structure of Generated Servlets: The JSP page Directive, Including Files and Applets,JavaBeans	Beans
14	Midterm	
15	Final sınavı	

RECOMMENDED SOURCES	
Textbook	Marty Hall, Larry Brown ,Core Servlets and Javaserver Pages: Core Technologies, Vol. 1 (2nd Edition)
Additional Resources	Marty Hall ,Larry Brown ,Core Web Programming (2nd Edition)

MATERIAL SHARING	
Documents	PPT Slides, Source code
Assignments	Textbook
Exams	2

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-terms	2	80
Quizzes	4	10
Assignment	8	10

Total	100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE	40
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE	60
Total	100

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM

No	Program Learning Outcomes	Contribution					
		1	2	3	4	5	
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.			x			
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.	x					
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.				x		
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.				x		
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.				x		
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.	x					
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.	x					
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data acess, modification and processing for data kept in enterprise database systems.		x				
9	Information Systems graduates have the knowledge about computer networks, and have			x			

	the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance.					
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.					x

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	15	3	45
Hours for off-the-classroom study (Pre-study, practice)	15	3	45
Mid-terms	2	2	4
Homework	4	1	4
Final examination	4	1	4
Total Work Load	5	1	5
Total Work Load / 25 (h)	2	2	4
ECTS Credit of the Course			111
			4.44
			4

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
Object-Oriented Software Development	ACM 413	5,7	(3 + 0 + 0)	3	6

Prerequisites	ACM 222

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)

Course Type	IS&T (Compulsory), MIS (Compulsory)
Course Coordinator	Assistant Prof. Dr. Gökhan Şahin
Instructors	Assistant Prof. Dr. Gökhan Şahin, Assistant Prof. Dr. Aziz Tüter
Assistants	Res. Assts. Ali Cihan Keleş, Nur Gülcan
Goals	This subject introduces the student to the object-oriented programming paradigm, and to the basic concepts of the discipline called "Bottom-up software development". Object-oriented programming in an approach to writing software which is based around the idea of building specific data structures to represent the parts of the problem (and/or the parts of the solution), and then defining how those data structures inter-relate and interact. Software development is the study and practice of a collection of concepts, techniques and tools which enable programmers to design and build, and maintain large software systems in a reliable and cost effective way.
Content	Revision of Object Oriented Concepts: Abstraction and Encapsulation, Typing and Inheritance, Polymorphism and Overloading, Genericity and Persistence, Overview of OOP in C++, The Software Development Process, Software Characteristics and Metrics, Object Oriented Design, Templates, libraries, Software Validation, Verification, Debugging, and Testing, Software Maintenance. Enterprise Applications.

Learning Outcomes	Teaching Methods	Assessment Methods
1 Understand the fundamental principles underlying Object-Oriented software design in C++ and C#.	1,2,3	A,C
2 Employ formal methods to produce effective software designs as solutions to specific tasks.	1,2,3	A,C
3 Develop structured sets of simple user-defined classes using Object-Oriented principles to achieve overall programming goals.	1,2,3	A,C
4 Develop error identification and testing strategies for code development.	1,2,3	A,C
5 Plan and write assignments, within the specified parameters and to a professional standard..	1,2,3	A,C

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion
Assessment Methods:	A: Testing, C: Homework

COURSE CONTENT

Week	Topics	Study Materials
1	Topic 1: Abstraction and Encapsulation Topic 2: Typing and Inheritance	Lecture notes
2	Topic 3: Polymorphism and Overloading Topic 4: Genericity and Persistence	Lecture notes
3	Topic 5: Revision of C Fundamentals Topic 6: Overview of C++ Non-OO Features	Lecture notes
4	Topic 7: C++ Classes	Lecture notes

	Topic 8: C++ Functions	
5	Topic 9: C++ Inheritance Topic 10: C++ Polymorphism	Lecture notes
6	Topic 11: Revision of OO Concepts Topic 12: Revision of C++	Lecture notes
7	MIDTERM	Lecture notes
8	Topic 13: The Software Development Process Topic 14: Software Characteristics and Metrics	Lecture notes
9	Topic 15: Object-oriented Design I Topic 16: Object-oriented Design II	Lecture notes
10	Topic 17: The UML Notation Topic 18: Design Patterns	Lecture notes
11	Topic 19: C++ Operator Overloading Topic 20: C++ Templates	Lecture notes
12	Topic 21: C++ Exceptions Topic 22: The C++ Standard Library	Lecture notes
13	Topic 23: A Case Study (The C++ iostream Classes) Topic 24: Software Validation, Verification, Debugging, and Testing	Lecture notes
14	Topic 25: Software Maintenance and Re-engineering Topic 26: Revision	Lecture notes
15	Review and Midterm	

RECOMMENDED SOURCES	
Textbook	Lippman, S. & Lajoie, J., *"C++ Primer, 3rd Edition"*, Addison Wesley, 1998. Stroustrup, B., *"The C++ Programming Language, 3rd Ed."*, Addison Wesley, 1997. Fowler, M. (with Kendall Scott), *"UML Distilled"*, 2nd Ed., Addison Wesley, 2000.
Additional Resources	

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-terms	1	60
Quizzes	1	20
Homework	1	20
	Total	100

CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE	60
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE	40
Total	100

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM						
No	Program Learning Outcomes	Contribution				
		1	2	3	4	5
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.	X				
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.		X			
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.					X
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.					X
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.					X
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.				X	
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.			X		
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data acess, modification and processing for data kept in enterprise database systems.			X		
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them	x				

	and how to maintain their performance.	
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.	x

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	16	4	64
Hours for off-the-classroom study (Pre-study, practice)	16	3	48
Mid-terms	1	10	10
Quiz	1	8	8
Homework	1	10	10
Final examination	1	10	10
Total Work Load			150
Total Work Load / 25 (h)			6
ECTS Credit of the Course			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
Virtualization and Introductory Cloud Computing	ACM 414	8	(3 + 0 + 0)	3	6

Prerequisites	None

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	IS&T (Compulsory), MIS (Elective)
Course Coordinator	Prof. Dr. Avadis Hacınlıyan

Instructors	Prof. Dr. Avadis Hacınlıyan
Assistants	Res. Assts. Engin Kandıran, Ali Cihan Keleş
Goals	The course aims to give the students introductory information about current practices in virtualization and cloud computing. Virtualized operating systems, their installation and implementation will be explained, Computing models, techniques and architectures will be introduced. The course will provide students practical knowledge on designing and implementing virtual and cloud based software systems and major providers of such systems in the market today. Their use in enterprise level information management will be introduced.
Content	Introduction to virtual operating systems, their study, installation, advantages and problems, guest operating system installation, Introduction to cloud computing, enterprise cloud computing, cloud technologies, Virtualization technologies and multi user software, Cloud development, Data storage in clouds, software development for clouds, Software architecture, Commercial applications of cloud software, work flow and work processes, research on and solutions in commercial applications, The economics of Cloud Computing.

Learning Outcomes	**Teaching Methods**	**Assessment Methods**
1 Understanding and installing virtual operating systems.	1,2,3,4	A,B, C
2 Understanding the principles and applications of virtualization and cloud computing in enterprise information systems.	1,2,3	A,C
3 Being able to develop simple applications. programming goals.	1,2,3,4	A,B,C
4 Understanding service oriented architecture. and web services.	1,2,3	A,C
5 Understanding distributed storage and security issues in virtualization and cloud computing.	1,2,3	A,C

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion 4. Lab Work
Assessment Methods:	A: Testing, B. Laboratory C: Homework

COURSE CONTENT		
Week	**Topics**	**Study Materials**
1	Review of Data Structures and Introduction to Operating Systems. Concepts and Tools:	ACM 111
2	Introduction to virtualization and Cloud Computing,	ACM 111
3	History of commercial applications of virtualization and cloud computing.	ACM 111
4	Virtualization Technologies and Multi Client Software. Reentrancy.	ACM 111
5	Installation of a virtual operating system.	
6	Application Development in the cloud.	ACM 222

7	MIDTERM EXAMINATION.	
8	Data Storage In the Cloud	ACM 221
9	Application Development Platforms.	
10	Software Architecture	ACM 111
11	Commercial and Enterprise Application Software	ACM 111
12	Work flow and Work Processes	ACM 111
13	Networking and internet applications	ACM 111
14	Economics of Virtualization and Cloud Computing	
15	REVIEW AND MIDTERM EXAMINATION	

RECOMMENDED SOURCES	
Textbook	Enterprise Cloud Computing, by Gautam Shroff, Cambridge University Press, 2010
Additional Resources	Handbook of Cloud Computing, Borko Furht · Armando Escalante Editors Springer (2010); Ivanka Menken, Cloud Computing Virtualization Specialist Complete Certification Kit: Study Guide Book and Online Course Emereo Pty Ltd; 2 edition (August 26, 2010)

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-terms	1	60
Quizzes	1	20
Homework	1	20
Total		100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		60
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		40
Total		100

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM		
No	Program Learning Outcomes	Contribution 1 2 3 4 5

1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.	X		
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.		X	
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.			X
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.			X
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.			X
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.		X	
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.		X	
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data acess, modification and processing for data kept in enterprise database systems.		X	
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance.	x		
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.	x		

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	16	4	64
Hours for off-the-classroom study (Pre-study, practice)	16	3	48
Mid-terms	2	5	10
Quiz	4	1	4
Homework	10	3	30
Final examination	2	2 (Includes Reparation)	4
Total Work Load			156
Total Work Load / 25 (h)			6.24
ECTS Credit of the Course			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
Project Management	ACM 421	7	3 + 0	3	6

Prerequisites	-

Language of Instruction	English
Course Level	Bachelor's Degree
Course Type	IS&T (Compulsory), MIS (Compulsory)
Course Coordinator	Assc. Prof. Dr. Uğur Kaplancalı
Instructors	Assc. Prof. Dr. Uğur Kaplancalı
Assistants	
Goals	To learn the Project Management methodology as standardized by PMI- Project Management Institute .
Content	The stages of PMMI's project management methodology, 9different knowledge areas, planning, scheduling of projects, understanding the requirements of IT projects, analyze firm requirements and develop project plans including the necessary

	constraints, know the modern rapid development cycles, understand CMMI, use a project manahement software such as MS Project, develop a detailed project plan for an imaginary IT project.

Learning Outcomes	Program Learning Outcomes	Teaching Methods	Assessment Methods
6) List the properties of projects, specifically the IT projects.	2,3	1,2,3	A,C
7) List the nine knowledge areas in project management.	2,3	1,2,3	A,C
8) Explain the purpose of each knowledge area.	2,3,4	1,2,3	A,C
9) Know the preparation, planning and analysis requirements of each knowledge area.	2,3,4	1,2,3	A,C
10) Know the modern methods used in IT projects.	4,5,6,7,10	1,2,3	A,C
11) Be able to use a project management software.	4,5,6,10	1,2,3	A,C

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 4: Simulation, 5: Case Study
Assessment Methods:	A: Testing, B:Presentation, C: Homework, D: Project, E: Laboratory

COURSE CONTENT		
Week	**Topics**	**Study Materials**
1	Introduction to Project Management (PM)	
2	The PM and Information Technology Context, SDL stages and main roles,	
3	The PM Process Groups: A Case Study, Proposal, Requirements analysis, Feasibilty analysis	
4	Project Integration Management, Scope, time and cost constraints	
5	Project Scope Management, change management	
6	Project Time Management, Gant and Pert Chart technics	
7	Mid-term	
8	Project Cost Management	
9	Project Quality Management, Implementation Methods, JAD teams	
10	Project Human Resource Management, Motivation and handling conflict during Projects	
11	Project Communications Management	
12	Project Risk Management, PMP	

13	Project Procurement Management	
14	Presentations	
15	Final	

RECOMMENDED SOURCES	
Textbook	Required: Schwalbe, Kathy (2007), **Information Technology Project Management**, Fifth Edition, Course Technology, Cengage Learning
Additional Resources	

MATERIAL SHARING	
Documents	
Assignments	
Exams	

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-terms	1	50
Quizzes	2	20
Assignment	1	30
Total		**100**
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		40
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		60
Total		**100**

COURSE CATEGORY	Expertise/Field Courses

DERSİN PROGRAM ÇIKTILARINA KATKISI						
No	Program Öğrenme Çıktıları	Katkı Düzeyi				
		1	2	3	4	5

1	MIS graduate, has the knowledge to model data, analyze data using statistical methods, to use various query and report generation softare, to generate SQL to query data and analze the results.					X
2	MIS graduate, knows how to identify the firms' IT needs, define them and design using modern tehcnologies.				X	
3	MIS graduate is qualified to design and develop solutions for company's IT requirements, using extant modelling methods and technologies.				X	
4	MIS graduate is qualified to design and implement pilot projects for end users which would enable them to conribute to IT solutions desgined for the company.		X			
5	MIS graduate has the necessary communication and social skills to assume responsibility by herself/himself or to work as an effective team player.	X				
6	MIS graduate is qualified to follow the most recent developments in IT and management issues, and learn to apply the new methods and technologies.		X			
7	MIS graduate is qualified to communicate orally and in written with a second foreign language, in addition to Turkish amd English, with his/her colleagues, and is able to produce presentations, reports as his/her job requires and can explain new technologies to others.	X				
8	MIS graduate is qualified to act as an entrepreneur that would develop and implement strategies and business models in Internet ve mobile platforms.		X			
9	MIS graduate is qualified to foresee the effects of IT systems and organizations and users, to take precautions for security and privacy, inform the necessary partners, and if possible develop the necessary solutions.	X				
10	MIS graduate, while developing IT solutions for organizations, obeys by the ethical rules of their profession, knows the legislation about the IT matters.	X				

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)

Course Duration (Including the exam week: 16x Total course hours)	15	3	45
Hours for off-the-classroom study (Pre-study, practice)	15	3	45
Mid-terms	1	10	15
Quiz			0
Homework	2	10	20
Final examination	1	10	15
Total Work Load			140
Total Work Load / 25 (h)			5,60
ECTS Credit of the Course			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
Programming Mobile Devices	ACM 431	5,7	3+0	3	6

Prerequisites	

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	IS&T (Compulsory), MIS (Elective)
Course Coordinator	Asst.Prof Gokhan Sahin
Instructors	Asst.Prof Gokhan Sahin
Assistants	
Goals	Producing Mobile phone applications.
Content	Objective c, MVC, Xcode, Foundation

Learning Outcomes	Program Learning Outcomes	Teaching Methods	Assessment Methods
Producing Mobile phone applications.	1,2,3,4	Discussion/ Simulation/ Case Study	Testing

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 4: Simulation, 5: Case Study
Assessment Methods:	A: Testing, B:Presentation, C: Homework, D: Project, E: Laboratory

COURSE CONTENT		
Week	**Topics**	**Study Materials**
1	Overview of iOS,	.
2	MVC, Objective-C	
3	Xcode	
4	Foundation, Attributed Strings	
5	Views and Gestures	
6	View Controller Lifecycle	
7	Collection View, Layout, Autorotation	
8	Storyboarding, Navigation, Scrolling	
9	Table View	
10	Midterm	
11	Blocks, Multithreading, Categories	
12	Persistence	
13	Documents and Core Data	
14	Midterm	
15	Final	

RECOMMENDED SOURCES	
Textbook	**Erica Sadun,** The iPhone Developer's Cookbook:
Additional Resources	http://www.stanford.edu/class/cs193p/cgi-bin/drupal/

MATERIAL SHARING	
Documents	PPT Slides, Source code
Assignments	Textbook
Exams	2

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-terms	2	80
Quizzes	1	10

Assignment	1	10
Total		100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		40
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		60
Total		100

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM							
No	Program Learning Outcomes	Contribution					
		1	2	3	4	5	
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.			x			
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.	x					
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.				x		
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.				x		
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.				x		
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.	x					
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.	x					
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data acess, modification and processing for data kept in enterprise database systems.		x				

9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance.			x			
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.					x	

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	15	3	45
Hours for off-the-classroom study (Pre-study, practice)	15	4	60
Mid-terms	2	10	20
Homework	4	1	4
Final examination	8	3	24
Total Work Load	5	1	5
Total Work Load / 25 (h)	2	10	20
ECTS Credit of the Course			154
			6.16
			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
Enterprise Information Systems	ACM 432	8	3 + 0	3	6

Prerequisites	ACM 312

Language of Instruction	English

Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	MIS (Compulsory), IS&T (Elective)
Course Coordinator	
Instructors	Çağla Şeneler, Asım Kazancıgil
Assistants	
Goals	Understand and know the modern Enterprise Information Systems.
Content	Understand the components of Enterprise Information Systems, the implementation issues, the need to integrate legacy systems and other modern information systems with ERP, the underlying architectural platforms, ERP project management issues and the need for business process reengineering.

Learning Outcomes	Program Learning Outcomes	Teaching Methods	Assessment Methods
1)Understand the components of an ERP system.	2,3	1,2,3	A,C
2)Know the implementation stages and processes of an ERP system.	2,3	1,2,3	A,C
3) Understand the process of integratilng legacy systems and other current IT systems with an ERP system.	2,3,8	1,2,3,12	A,C
4) Understand the infrastructure of ERP systems.	2,3,8	1,2,3	A,C
5)Understand the project management and BPR-business process reengineering processes of ERP implementations.	2,3,8	1,2,3	A,C

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 4: Simulation, 5: Case Study
Assessment Methods:	A: Testing, B:Presentation, C: Homework, D: Project, E: Laboratory

COURSE CONTENT		
Week	**Topics**	**Study Materials**
1	Introduction to course	

2	Introduction to Enterprise Systems for Management	
3	Systems Integration	
4	Enterprise Systems Architecture	
5	**Development Life Cycle**	
6	Implementation Strategies	
7	Midterm	
8	Software and Vendor Selection	
9	Operations and Postimplementation	
10	Program & Project Management	
11	**Organizational Change and Business Process Re-Engineering**	
12	Global, Ethics and Security Management	
13	Supply Chain Management	
14	Customer Relationship Management	
15	Final	

RECOMMENDED SOURCES	
Textbook	*"Enterprise Systems for Management", 2/E*, by Motiwalla / Thompson.
Additional Resources	Vakalar

MATERIAL SHARING	
Documents	Course slides
Assignments	Cases
Exams	

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-terms	1	40
Assignment	2	60
Total		**100**
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		40

CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		60
Total		**100**

COURSE CATEGORY	Expertise/Field Courses

DERSİN PROGRAM ÇIKTILARINA KATKISI						
No	Program Öğrenme Çıktıları	Katkı Düzeyi				
		1	2	3	4	5
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.					X
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.				X	
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.				X	
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.		X			
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.	X				
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.		X			
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.	X				
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data access, modification and processing for data kept in enterprise database systems.		X			
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their	X				

	performance.					
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.	X				

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	15	3	45
Hours for off-the-classroom study (Pre-study, practice)	15	3	45
Mid-terms	1	15	15
Quiz			0
Homework	2	10	20
Final examination	1	15	15
Total Work Load			160
Total Work Load / 25 (h)			6,40
ECTS Credit of the Course			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
DECISION SUPPORT SYSTEMS	ACM 462	7	3+0	3	6

Prerequisites	-

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programmes)
Course Type	IS&T (Elective)
Course Coordinator	Asst. Prof. Dr. Aşkın Demirağ
Instructors	Asst. Prof. Dr. Aşkın Demirağ

Assistants	-
Goals	Rational decision-making and appropriate information support, decision support systems (DSS) components, data, information, databases, database management systems, knowledge bases, data warehouses, the rule / model databases, expert systems, mechanisms and factors of uncertainty, system dynamics and simulation , group DSS, executive information systems, user interface components, recognition and DSS design, implementation and evaluation.
Content	This course covers the following topics: Rational decision making and appropriate data support, components of Decision Support Systems (DSS): data, information, databases, database management systems, knowledgebase, data warehouses, Rulebase/ModelBase. Expert systems mechanism and certainty factors, system dynamics and simulation, group DSS, executive information systems, user-interface components. Designing, implementation and evaluation of DSS.

Learning Outcomes	Program Learning Outcomes	Teaching Methods	Assessment Methods
Has a knowledge of the concept of decision support and decision-making.	7,8	1,2,3	A,B,C
Learn the components of the decision support system.	7,8	1,2,3	A,B,C
Knows about database management systems and data warehouses.	7,8	1,2,3	A,C
Knows about management information systems and simulation.	7,8	1,2,3	A,C
Learn how to design a decision support system.	7,8	1,2,3	A,C

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 4: Lab Work
Assessment Methods:	A: Testing, B: Presentation C: Homework D: Project E: Laboratory

COURSE CONTENT		
Week	**Topics**	**Study Materials**
1	Decision concepts and decision making.	
2	Components of the decision support systems.	
3	Database management systems.	
4	Data warehouses.	

5	Expert systems.
6	Rules/model bases.
7	Uncertainty factors
8	MIDTERM
9	System dynamics and simulation.
10	Group decision support systems.
11	Management information systems.
12	Design a decision support system.
13	Implementation of a decision support system.
14	Presentations
15	FİNAL

RECOMMENDED SOURCES	
Textbook	DECISION SUPPORT SYSTEMS AND INTELLIGENT SYSTEMS, Efraim TURBAN, Jay E. ARANSON, , Pearson Education, 9. Edition
Additional Resources	DATABASE SYSTEMS, Thomas CONNOLLY-Carolyn BEGG, Pearson Education, 4. Edition

MATERIAL SHARING
Documents
Assignments
Exams

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-term	1	70
Project	1	20
Homework	1	10
Total		100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		40
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL		60

GRADE		
	Total	100

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM

No	Program Learning Outcomes	Contribution				
		1	2	3	4	5
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.			X		
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.		X			
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.	X				
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.				x	
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.		x			
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.	x				
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.					x
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data acess,					x

	modification and processing for data kept in enterprise database systems.		
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance.	x	
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.	x	

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	15	3	45
Hours for off-the-classroom study (Pre-study, practice)	15	3	45
Mid-term	1	9	9
Project	1	9	9
Homework	3	6	18
Presentation	1	3	3
Final examination	1	9	9
Total Work Load			138
Total Work Load / 25 (h)			5.52
ECTS Credit of the Course			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
Virtual Reality Technologies	ACM 468	8	3+0	3	6

Prerequisites	-

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	IS&T (Elective), MIS (Elective)
Course Coordinator	Assist. Prof. Barbaros Bostan
Instructors	Assist. Prof. Barbaros Bostan
Assistants	-
Goals	To teach the students fundamentals of virtual reality systems and computer games, to teach the students the basics of 3D programming.
Content	Virtual reality, computer games, virtual reality hardware, computer game genres, player elements and psychology, story and character development, gameplay experience, level design, interface design, artificial intelligence, 3D programming with VRML.

Learning Outcomes	Program Learning Outcomes	Teaching Methods	Assessment Methods
Virtual Reality Technologies	1-2-10	1-2	A,C
3D Programming - VRML	1-2-3	1-2-12	A,C
Computer Games	1-2	1-2	A,C

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 9: Simulation, 12: Case Study
Assessment Methods:	A: Testing, C: Homework

COURSE CONTENT		
Week	**Topics**	**Study Materials**
1	History of virtual reality and computer games / Introduction to VRML	

2	Virtual reality hardware / VRML shapes and geometry	
3	Computer game genres / VRML shapes and geometry	
4	Player elements and psychology / VRML animations	
5	Story and character development / VRML sensors	
6	Designing virtual worlds with VRML examples	First 5 weeks
7	Midterm	
8	Gameplay experience / VRML textures	
9	Level design / VRML lighting	
10	Interface design / VRML prototypes	
11	Artificial intelligence / VRML navigation and sound	
12	Experiencing the virtual world by playing commercial computer games	
13	Experiencing the virtual world by playing commercial computer games	
14	Virtual world design - VRML	First 13 weeks

RECOMMENDED SOURCES	
Textbook	Novak, Jeannie. Game Development Essentials VRML specifications on the Internet
Additional Resources	

MATERIAL SHARING	
Documents	www.silentblade.com
Assignments	From the website
Exams	

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-terms	1	20
Quizzes	5	20
Project	1	60
	Total	**100**

CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		50
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		50
	Total	**100**

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM

No	Program Learning Outcomes	Contribution				
		1	2	3	4	5
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.				x	
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.				x	
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.				x	
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.			x		
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specified requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.			x		
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.			x		
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.			x		
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data access, modification and processing for data kept in enterprise database systems.			x		
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance.			x		

10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.	x

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	15	3	45
Hours for off-the-classroom study (Pre-study, practice)	15	3	45
Mid-terms	1	3	3
Quiz	5	2	10
Project	1	35	35
Final examination	1	5	5
Total Work Load			143
Total Work Load / 25 (h)			5,72
ECTS Credit of the Course			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
Knowledge Management	ACM 471	7	3 + 0	3	6

Prerequisites	None

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	IS&T (Elective), MIS (Elective)

Course Coordinator	
Instructors	Assis.Prof. Uğur Kaplancalı
Assistants	
Goals	To gain a broad perspective in knowledge management in general and introduce many knowledge management related software and hardware systems utilized in diferent sectors
Content	Definition of knowledge, types and structure of knowledge, Fundamentals of knowledge management, knowledge management tools, organizational and social capital, knowledge management systems and its various application, concepts of learning organization.

Learning Outcomes	**Program Learning Outcomes**	**Teaching Methods**	**Assessment Methods**
Distinguish theories about knowledge and its usage	6	1,3	A,B,C
Relate company culture and and knowledge management.	1,2,3	1,3,12	A,D
Conduct knowledge based strategic planning for new business development.	4,8	1,3,4,12	B,D
Evaluate knowledge management technologies, their relevance and usability based on business functions.	1,3,6,7	1,3,12	A,B,D
Determine the IT needs of knowledge management systems to be used for future enterprising.	2,4,6,7,8	3,4	A,B,D

Teaching Methods:	1: Lecture, 3: Discussion, 4: Brain Storming, 12: Case Study
Assessment Methods:	A: Testing, B: Presentation, C: Homework, D: Project

COURSE CONTENT		
Week	**Topics**	**Study Materials**
1	INTRODUCTION & NATURE OF KNOWLEDGE	Textbook
2	STRATEGIC MANAGEMENT PERSPECTIVE	Textbook
3	FUNDAMENTALS OF KNOWLEDGE MANAGEMENT	Textbook
4	KNOWLEDGE MANAGEMENT & IT TOOLS	Textbook
5	KNOWLEDGE MANAGEMENT SYSTEMS	Textbook
6	KNOWLEDGE MANAGEMENT & HUMAN RESOURCE	Textbook
7	CLASS PROJECT (Part I)- PRESENTATIONS	

8	ORGANIZATION, CULTURE AND KNOWLEDGE MANAGEMENT	Textbook
9	IMPLEMENTING KNOWLEDGE MANAGEMENT	Textbook
10	KNOWLEDGE MANAGEMENT & DECISION MAKING	Textbook
11	SOCIAL SIDE OF KNOWLEDGE MANAGEMENT	Textbook
12	INTELLECTUAL CAPITAL & KNOWLEDGE MANAGEMENT	Textbook
13	LEARNING ORGANIZATION	Textbook
14	CLASS PROJECT (Part II)- PRESENTATIONS	
15	FİNAL EXAM	

RECOMMENDED SOURCES	
Textbook	Jashapara, Ashok (2011), Knowledge Management: An Integrated Approach, 2nd Edition, Prentice Hall-Financial Times, Pearson, England.
Additional Resources	Course website, KM World (website)

MATERIAL SHARING	
Documents	Journal articles.

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Class Project	1	80
Midterm Exam	-	0
Homework	2	20
Total		100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		50
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		50
Total		100

COURSE'S CONTRIBUTION TO PROGRAM		
No	Program Learning Outcomes	Contribution

		1	2	3	4	5
1	Program graduate has the skills and the knowledge to design models for scientific analyses, as required by companies			X		
2	Program graduate has the skills and the knowledge to identify strategies for companies for their information requirements and IT investments.	X				
3	Program graduate has the skills and the knowledge to design and implements IT strategies and systems that would align with the companies' business strategies.	X				
4	Program graduate has the skills and the knowledge to develop and implement strategies that would be applied to the company's new distribution channels, and if necessary be able to manage thre related IT projects.				X	
5	Program graduate has the skills and the knowledge to manage projects involving IT systems within any industry while using a second foreign language in communicating with his/her peers.			X		
6	Program graduate has the skills and the knowledge to design, tu use and to implement IT systems that would analyze customer data and discover valuable knowledge, which would be acted upon as a competitive advantage.					X
7	Program graduate has the skills and the knowledge to develop and implement IT systems that would analyze both internal and external data to resolve issues, based on scientific and applied methods				X	
8	Program graduate has the skills develop strategy and business models as an enterpriser in mobile and internet platforms,				X	
9	Program graduate has the ability to anticipate the effects IT systems on users, inform the stakeholders regarding the security and privacy measures and needs, and develop required solutions to address such needs					
10	Program graduate honors the IT Professional ethics while developing solutions to IT requirements of businesses, has the knowledge of legal regulations and abides with law.					

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 15x Total course	15	3	45

hours)			
Hours for off-the-classroom study (Pre-study, practice)	15	3	45
Class Project	1	18	18
Homeworks	2	5	10
Pre-study for presentations	1	12	12
Final Exam study	1	15	15
Total Work Load			146
Total Work Load / 25 (h)			5.84
ECTS Credit of the Course			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
3-D DESIGN & GAME PROGRAMMING	ACM 472	7	3+0	3	6

Prerequisites	None

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	IS&T (Elective), MIS (Elective)
Course Coordinator	Asst. Prof. Barbaros Bostan
Instructors	Asst. Prof. Barbaros Bostan,Asst.Prof Gokhan Sahin
Assistants	
Goals	Game Programming Technology, has become crucial to the development of computer and web environment. Game programming basics and techniques are explained, the participants will develop gaming programs.
Content	Game Programming, Game Programming mathematics, graphics, transformations, animation, game programming, sound, input and output hardware and the algorithms used in game programming.

Learning Outcomes	**Program Learning Outcomes**	**Teaching Methods**	**Assessment Methods**
1) To grasp the basics of game programming	3,4,5	1,2,14,16	A,C,D

2) Make of 2D and 3D modeling	3,4,5	1,2,14,16	A,C,D

Teaching Methods:	1: Lecture, 2: Question-Answer, 14: Self Study, 16: Project Based Learning
Assessment Methods:	A: Testing, B: Presentation, C: Homework, D: Project, E: Laboratory

COURSE CONTENT

Week	Topics	Study Materials
1	Introduction to Game Programming	
2	3D Mathematics	
3	3D Modelling	
4	Character Modelling	
5	Sound Programming	
6	Using Graphics	
7	Input Hardware	
8	Structure of Games	
9	2D and 3D Transformations	
10	Midterm	
11	Game Engines	
12	Output Hardware	
13	Game Programming Lab	
14	Game Programming Lab	

RECOMMENDED SOURCES

Textbook	Beginning C++ Game Programming,Michael Dawson, Thomson Course Technology, 2004.
Additional Resources	1. Game Design: Theory and Practice (2nd Edition), Richard Rouse, 2005, Wordware Publishing, Inc., ISBN-13: 978-1556229121. 2. Unity for Absolute Beginners, Sue Blackman, 2014, Apress, ISBN13: 978-1-4302-6779-9. 3. By Will Goldstone Unity 3.x Game Development Essentials (Community Experience Distilled) (2nd Edition) , Will Goldstone, 2009. 4.Beginning 3D Game Development with Unity 4: All-in-one, multi-platform game development, Sue Blackman, 2013, Apress, ISBN-13: 978-1430248996.

MATERIAL SHARING
Documents
Assignments
Exams

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-terms	1	50
Quizzes	2	25
Assignment	2	25
	Total	100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		40
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		60
	Total	100

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM							
No	Program Learning Outcomes	Contribution					
		1	2	3	4	5	
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.				X		
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.				x		
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.					X	
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.					x	
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy					X	

	their usage.					
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.		x			
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.	x				
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data acess, modification and processing for data kept in enterprise database systems.	x				
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance.	x				
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.		x			
11	Information Systems graduates, within his/her job responsibilities can communicate the necessary information both written and orally in Turkish, English and another foreign language, respecting the values the societal institutions and establishments, of which he/she has acquired in the program.		x			

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION

Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	15	3	45
Hours for off-the-classroom study (Pre-study, practice)	15	4	60
Mid-terms	1	3	3
Quiz	2	2	4
Homework	2	3	6
Final examination	1	3	3

Application	1	30	30
Total Work Load			151
Total Work Load / 25 (h)			6,05
ECTS Credit of the Course			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
INFORMATION SYSTEMS SECURITY	ACM 474	8	3+0+0	3	6

Prerequisites	None

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)
Course Type	IS&T (Compulsory), MIS (Compulsory)
Course Coordinator	Prof. Dr. Avadis Hacınlıyan
Instructors	Prof. Dr. Avadis Hacınlıyan, Asst. Prof. Dr. Gökhan Şahin
Assistants	
Goals	This course will introduce cryptography theories, algorithms, and systems. It will also consider necessary approaches and techniques to build protection mechanisms in order to secure computer networks, security related details of popular operating systems, threat analysis, and countermeasures against the threats.
Content	Cryptography protocols, authentication protocols, e-commerce security protocols: design, implementation and analysis, OSI security, models and architectures for network security, email security, email security, IP security, Ipv6, web security, virtual private networks, firewalls, content filtering, denial of service attacks, wireless network security, network security policies, intrusion detection, misuse detection methods, anomaly detection methods, windows and linux security

Learning Outcomes	**Program Learning Outcomes**	**Teaching Methods**	**Assessment Methods**
Information Systems graduates know the basic components of operating systems and networks.	3,6,9	1,3,4	A,B,C

Information Systems graduates know what the basic OS security threats are.	2,3,6,9	1,2,3,4	A,B,C
Information Systems graduates know what the basic security threats in networks are.	3,6,9	1,3,4	A,B,C
Knows security protocols and their implementation.	2,6,9	1,3,4	A,B,C
Knows how to take countermeasures against security threats.	3,6,9	1,3,4	A,B,C,D
Knows and implements cryptographic measures.	3,9,6	1,2,3,4	A,B,C,D
Knows and implements authentication measures	3,9	1,2,3,4	A,B,C,D

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 4: Lab Work
Assessment Methods:	A: Testing, B: Laboratory C: Homework D: Project

COURSE CONTENT

Week	Topics	Study Materials
1	Cryptography protocols, Encryption &Decryption Algorithm	ACM 221
2	Lab: İntroduction to PGP software -- Send and receive encrypted e-mails	ACM 361
3	Authentication protocols	ACM 369
4	E-Commerce security protocols: design, implementation and analysis,	ACM 366
5	OSI security, models and architectures for network security,	ACM 361,369
6	E-mail security	ACM 111
7	MIDTERM EXAMINATION	
8	IP security, Ipv6	ACM 111
9	Web security, virtual private networks, firewalls, content filtering, denial of service attacks,	ACM 369
10	Wireless network security, Wireless Topology, Risks and Protections	ACM 363
11	Network security policies, intrusion detection, misuse detection methods,	ACM 361
12	Ip spoofing	ACM 361
13	Windows security	ACM 370
14	Linux Security	ACM 369

15 REVIEW AND MIDTERM EXAMINATION

RECOMMENDED SOURCES	
Textbook	Guide to Operating Systems Security, Michael Palmer, Publisher: Thomson, 2003 (2004 2nd ed), ISBN 13: 9780619160401©2004, ISBN 10: 0619160403; Cryptography and Network Security Fourth Ed., William Stallings,© 2006 | Pearson Prentice Hall |ISBN: 0131873184
Additional Resources	Maximum Linux Security (2nd Edition), John Ray, Sams, 2 Pap/Cdr edition, 2001, ISBN10: 0672321343, ISBN13: 9780672321344 Hacking Exposed Windows Server 2003, Joel Scambray & Stuart McClure, McGrawHill Osborne Media, 2006, ISBN10: 0072230614, ISBN13: 9780072230611

MATERIAL SHARING	
Documents	Presentations and Laboratory Sheets
Assignments	Homework Sheets
Exams	Old exam questions are furnished

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-terms	2	66
Quizzes	4	16
Assignment and Labwork	10	18
Total		100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		40
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		60
Total		100

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM	
No Program Learning Outcomes	Contribution

		1	2	3	4	5
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface. (ACM 112,262)					
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media. (ACM365, 368,473)			x		
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics (ACM 221,222).					X
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.(ACM 311,322)				X	
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage(ACM 321).	X				
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system (ACM 369, 370).					X
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of software, including queries, reports and business applications.(ACM 211, 364)		X			
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data acess, modification and processing for data kept in enterprise database systems (ACM 221,364).					
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance. (ACM 361, 362, 363, 463, 464)					X
10	Information Systems graduates have the knowledge and the skills to				x	

design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises (ACM 365, 368, 412).

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	16	3	48
Hours for off-the-classroom study (Pre-study, practice)	16	3	48
Mid-terms	2	2	4
Quizzes	4	1	4
Homework	10	3	30
Final examination	2 (Including reparation)	2	4
Total Work Load			138
Total Work Load / 25 (h)			5.52
ECTS Credit of the Course			6

COURSE INFORMATON					
Course Title	*Code*	*Semester*	*L+P Hour*	*Credits*	*ECTS*
DATA MINING	ACM 476	8	3+0	3	6

Prerequisites	-

Language of Instruction	English
Course Level	Bachelor's Degree (First Cycle Programs)

Course Type	IS&T (Elective), MIS (Elective)
Course Coordinator	Asst. Prof. Dr. Manu Dube
Instructors	Asst. Prof. Dr. Manu Dube
Assistants	-
Goals	Fundamentals of data mining, data, information and knowledge, knowledge discovery in databases, the traditional statistical methods, neural networks, decision trees, Bayesian theorem, association rules, data warehouses, business applications, and advanced techniques to know and understand.
Content	The course provides an overview of leading data mining methods and applications. The topics covered include: data, information and knowledge, knowledge discovery in databases, traditional statistics, artificial neural networks, decision trees, Bayesian learning, association rules, data warehousing, commercial tools, feature selection and advanced techniques.

Learning Outcomes	**Program Learning Outcomes**	**Teaching Methods**	**Assessment Methods**
Have a good knowledge about the concept of data mining.	7,8	1,2,3	A,B,C
What is data mining models and techniques to learn.	7,8	1,2,3	A,B,C
Implements descriptive statistical techniques on statistical a package program.	7,8	1,4	A,E
Knows about forecast models.	7,8	1,4	A,E
Knows about classication analysis.	7,8	1,4	A,E
Knows about association rules.	7,8	1,4	A,E
Have a good knowledge about web mining.	7,8	1, 4	A,C,E

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Discussion, 4: Lab Work
Assessment Methods:	A: Testing, B: Presentation C: Homework D: Project E: Laboratory

COURSE CONTENT		
Week	**Topics**	**Study Materials**
1	Data mining concepts	

2	Data mining models and techniques
3	Data warehouses and OLAP
4	Data warehouses and OLAP
5	Descriptive statistical techniques
6	Decision trees
7	Forecast models
8	MIDTERM
9	Database segmentation
10	Link Analysis
11	Associations rules
12	Web mining
13	Presentations
14	Presentations
15	FİNAL

RECOMMENDED SOURCES	
Textbook	DATA MINING Concepts and Techniques, Jiawei HAN- Micheline KAMBER, Morgan Kaufman Pub.,2001
Additional Resources	DATABASE SYSTEMS, Thomas CONNOLLY-Carolyn BEGG, Pearson Education, 4. Edition

MATERIAL SHARING
Documents
Assignments
Exams

ASSESSMENT		
IN-TERM STUDIES	**NUMBER**	**PERCENTAGE**
Mid-term	1	70
Project	1	20
Homework	1	10

	Total	100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE		40
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE		60
	Total	100

COURSE CATEGORY	Expertise/Field Courses

COURSE'S CONTRIBUTION TO PROGRAM						
No	Program Learning Outcomes	Contribution				
		1	2	3	4	5
1	Information Systems graduates have the knowledge and the skills to design and develop the complete systems for multi-media visual user interface.			X		
2	Information Systems graduates have advanced the knowledge and skills to design, develop and install the application systems for multi-media.		X			
3	Information Systems graduates have the knowledge and the skills to design, develop and apply algorithms and data structures to solve the basic problems of information processing, within the framework of discrete mathematics.	X				
4	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern structured development tools and install them on various hardware platforms and deploy their usage.				x	
5	Information Systems graduates have the knowledge and the skills to design and develop computer applications, based on user specificed requirements, using modern object-oriented development tools and install them on various hardware platforms and deploy their usage.		x			
6	Information Systems graduates know the logic of computer operating systems, the basic set of system commands, how to control access to system resources by users of different departments and how to monitor the running of jobs in the system.	x				
7	Information Systems graduates have the knowledge and the skills to design and develop data models serving different requirements, database applications that would access and process data using various types of					x

	software, including queries, reports and business applications.		
8	Information Systems graduates have the knowledge and the skills to design and develop business applications that would provide data acess, modification and processing for data kept in enterprise database systems.		x
9	Information Systems graduates have the knowledge about computer networks, and have the skills to design, develop and monitor computer networks, how to configure them and how to maintain their performance.	x	
10	Information Systems graduates have the knowledge and the skills to design and develop visual user interfaces for the web, web-based applications for n-tier client/server configurations, how to deploy them in enterprises.	x	

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Including the exam week: 16x Total course hours)	15	3	45
Hours for off-the-classroom study (Pre-study, practice)	15	3	45
Mid-term	1	9	9
Project	1	9	9
Homework	3	6	18
Presentation	1	3	3
Final examination	1	9	9
Total Work Load			138
Total Work Load / 25 (h)			5.52
ECTS Credit of the Course			6