COURSE PROFILE

Course Name	Code	Semester	Term	Theory+PS+Lab (hour/week)	Local Credits	ECTS
Information Storage and Management	IT492	Spring	8	3 + 0 + 0	3	6

Prerequisites	None

Course Language	English
Course Type	Departmental Elective
Course Lecturer	Assist. Prof. Dr. Cüneyt Sevgi
Course Assistant	
Course Objectives	The objective of this course is to introduce students with essential concepts in information storage and management technologies.
Course Learning Outcomes	After successfully completing the course, the student is expected to: • Evaluate storage architectures and key data center elements in classic, virtualized and cloud environments • Explain physical and logical components of a storage infrastructure including storage subsystems, RAID and intelligent storage systems • Describe storage networking technologies such as FC-SAN, IP-SAN, FCoE, NAS and object-based, and unified storage • Understand and articulate business continuity solutions – backup and replications, along with archive for managing fixed content Explain key characteristics, services, deployment models, and infrastructure components for a cloud computing
Course Content	The course will cover topics in architectures, features, and benefits of intelligent storage systems; storage networking technologies such as FC-SAN, IP-SAN, NAS, object-based and unified storage; business continuity solutions such as backup and replication; the increasingly critical area of information security and management, and the emerging field of cloud computing. Describe information security requirements and solutions, and identify parameters for managing and monitoring storage infrastructure in classic, virtualized and cloud environments.

COURSE CONTENT

Week	Subjects	Related
1	Introduction to Information Storage	
2	Data Center Environment	
3	Data Protection RAID	
4	Intelligent Storage System	
5	Fibre Channel Storage Area Network (FC SAN)	
6	IP SAN and FCoE	
7	Network-Attached Storage (NAS)	
8	Object-based and Unified storage	
9	Introduction to Business Continuity	
10	Local Replication	
11	Remote Replication	
12	Cloud Computing	
13	Securing the Storage Infrastructure	
14	Managing the Storage Infrastructure	

Course Textbook	Information Storage and Management Storing, Managing, and Protecting Digital Information in Classic, Virtualized, and Cloud Environments 2nd Edition Edited by Somasundaram Gnanasundaram Alok Shrivastava, EMC Education Services Wiley Publishing, 2012
Recommended References	

Semester Requirements	Number	Percentage of Grade
Attendance/Participation		
Laboratory		
Application		
Special Course Internship (Work Placement)		
Quizzes/Studio Critics	3	7,5
Homework Assignments	3	7,5
Presentation		
Project		
Seminar/Workshop		
Midterms/Oral Exams	2	50
Final/Resit Exam	1	35
Total		100

PERCENTAGE OF SEMESTER WORK		65
PERCENTAGE OF FINAL WORK		35
Total		100

Course Category	Core Courses	
	Major Area Courses	X
	Supportive Courses	
	Media and Management Skills Courses	
	Transferable Skill Courses	

COURSE'S CONTRIBUTION TO PROGRAM

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

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

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION

Activities	Number	Duration (Hours)	Total Workload
Course Hours (Including Exams)	14	3	42
Tutorials			
Laboratory			
Application			
Special Course Internship (Work Placement)			
Field Work			
Study Hours Out of Class	14	3	42
Presentations / Seminar			
Project			
Preparatory reading	14	3	42
Homework Assignments	3	6	18
Quizzes	3	1	3
Midterm Exams	2	3	6
Final / Resit Exam	1	3	3
		Total Workload	156

COURSE CATEGORY

ISCED GENERAL AREA CODES	GENERAL AREAS	ISCED BASIC AREA CODES	BASIC EDUCATIONAL AREAS	
1	Education	14	Teacher Training and Educational Sciences	
2	Humanities and Art	21	Art	
2	Humanities and Art	22	Humanities	
3	Social Sciences, Management and Law	31	Social and Behavioural Sciences	
3	Social Sciences, Management and Law	32	Journalism and Informatics	
3	Social Sciences, Management and Law	38	Law	
4	Science	42	Life Sciences	
4	Science	44	Natural Sciences	
4	Science	46	Mathematics and Statistics	15
4	Science	48	Computer	50
5	Engineering, Manufacturing and Civil	52	Engineering	35
5	Engineering, Manufacturing and Civil	54	Manufacturing and Processing	
5	Engineering, Manufacturing and Civil	58	Architecture and Structure	
6	Agriculture	62	Agriculture, Forestry, Livestock, Fishery	
6	Agriculture	64	Veterinary	
7	Medicine and Welfare	72	Medical	
7	Medicine and Welfare	76	Social Services	
8	Service	81	Personal Services	
8	Service	84	Transport Services	
8	Service	85	Environment Protection	
8	Service	86	Security Services	