

COURSE PROFILE

Course Name	Code	Semester	Term	Theory+PS+Lab (hour/week)	Local Credits	ECTS
Medical Informatics	IT432	Spring	8	3 + 0 + 0	3	6

Prerequisites	None
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Course Language	English
Course Type	Departmental Elective
Course Lecturer	Assist. Prof. Dr. Fatih Özyaydın
Course Assistant	Murat Kaya
Course Objectives	This course aims to introduce the concept of clinical data and how they are acquired to constitute an electronic patient record with respect to medical informatics. Basics of common biomedical instruments and their operational principles will be explained to motivate the students in generating creative ideas for novel and better clinical data processing and retrieval systems.
Course Learning Outcomes	Upon successful completion of the course, students will be able to: <ul style="list-style-type: none">• learn basic concepts related to medical informatics• generate ideas for novel and better clinical data processing and retrieval systems
Course Content	Basics of medical informatics. Health Information Systems in Clinical Settings. Issues with The Electronic Medical Record. Systems in Public Health. Measuring Quality and Outcomes. Computurised Medical Education.

COURSE CONTENT

Week	Subjects	Related
1	What is Medical Informatics?	
2	A Brief History of Medical Informatics	
3	Health Information Systems in Clinical Settings	
4	Issues with The Electronic Medical Record	
5	Svstems in Public Health	
6	Healthcare Delivery System	
7	Systems for Health Finance & Health Insurance	
8	Midterm	
9	Issues in Telemedicine	
10	Systems for Clinical Decision Making	
11	Measuring Quality and Outcomes	
12	Computurised Medical Education	
13	Projects Day	
14	Final Exam	

Course Textbook	Shortliffe et al., BIOMEDICAL INFORMATICS, Computer Applications in Health Care and Biomedicine, (Third Edition), Springer-Verlag, 2006. [This is the textbook and getting a copy is strongly recommended.]
Recommended References	O'Carroll et al, PUBLIC HEALTH INFORMATICS AND INFORMATION SYSTEMS, Health Informatics Series, Springer 2003. [This is the second textbook, it is not required, but strongly recommended for those whose project might involve some "public health" aspect.]

Semester Requirements	Number	Percentage of Grade
Attendance/Participation		
Laboratory		
Application		
Special Course Internship (Work Placement)		
Quizzes/Studio Critics		
Homework Assignments		
Presentation		20
Project		30
Seminar/Workshop		20
Midterms/Oral Exams		10
Final/Resit Exam		20
Total		100

PERCENTAGE OF SEMESTER WORK		80
PERCENTAGE OF FINAL WORK		20
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					

*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	2	28
Presentations / Seminar			
Project			
Preparatory reading	14	2	28
Homework Assignments	14	3	42
Quizzes	4	2	8
Midterm Exams	1	2	2
Final / Resit Exam	1	2	2
		Total Workload	152

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	30
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	30
4	Science	48	Computer	20
5	Engineering, Manufacturing and Civil	52	Engineering	20
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	