Ministry of Higher Education
Majmaah University
College of Applied Medical Sciences
Medical Equipment Technology Department

Course Syllabus

Second Semester – 2013/2014

General Information

Course name	Course code	Credits	Contact hours
Introduction to Telemedicine	BMTS595	2 lecture+1 lab	2 lecture+2 lab

Instructors/ Coordinators

	Instructor	Coordinator
Name	Dr. Khemais Saada	Dr. Khemais Saada
Email	k.saada@mu.edu.sa	k.saada@mu.edu.sa
Ext	2820	2820

Text Book

Title	Telemedicine Technologies: Information Technologies in Medicine and Tele-health
Author/Year	Bernard Fong ; A.C.M. Fong ; C.K. Li / 2010

Supplemental materials

Recommended Textbooks and Reference Material	
Title	Essentials of Telemedicine and Tele-Care
Author/Year	A. C. Norris / 2001
Electronic Materials (eg. Web Sites, Social Media, Blackboard, etc.)	
Web sites	http://en.wikipedia.org/wiki/Telemedicine

Specific Course Information

a. Brief description of the content of the course (Catalog Description)

Introduction, motivation, and overview; clinical applications; data dimensionality, acquisition, and conversion; transmission methods (wired, wireless); networking; compression; measurement of quality and accuracy; reception and display considerations; data archiving and retrieval; store-and- forward vs. interactive; privacy and security issues; potential benefits of telemedicine, challenges in telemedicine, global telemedicine activities, Tele medicine results ,commercial hardware and software; standards (including DICOM); economic issues; user-interface considerations; picture archiving and communication systems (PACS).

b. Prerequisites (P) or Co-requisites (C)

None

c. Course type (Mandatory or Elective)

Elective

Specific Goals

a. Specific outcomes of instruction
By the end of this course, the student should be able to: - Identify different telemedicine subsystems (b). - Select the adequate technologies to Process medical information (b) - Interpret the communication networks errors (c) - Design safe and private medical information Network. (d) - Analyze, and solve wireless telemedicine system problems. (f) - Recognize the legal and ethical Issues in telemedicine. (j)
b. Student outcomes addressed by the course

a	b	c	d	e	f	g	h	i	j	k
	✓	✓	✓		✓				✓	

Brief list of topics to be covered

Topics	No of Weeks	Contact hours
Introduction	1	4
Communication Networks and services	2	8
Wireless Technology in Patient Monitoring	2	8
Technologies in Medical Information Processing	2	8
Wireless Telemedicine system Deployment	2	8
Technologies for Safeguarding Medical Data and Privacy	2	8
Information Technology in Alternative Medicine	1	4
Caring for the Community	1	4
Legal and Ethical Issues in Telemedicine	1	4
Future Trends in Healthcare Technology	1	4