

Course Syllabus

Second Semester - 2013/2014

General Information

Course name	Course code	Credits	Contact hours
Biomedical Electronic Equipment 2	BMTS484	2 lecture+1 lab	2 lecture+2 lab

Instructors/ Coordinators

	Instructor	Coordinator
Name	Mr. Abdulrahman Alqahtani	Mr. Abdulrahman Alqahtani
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Text Book

Title	Handbook of Biomedical Instrumentation
Author/Year	Khandpur / 2013

Supplemental materials

Recommended Textbooks and Reference Material	
Title	Medical Instrumentation: application and design
Author/Year	John Webster / 2010
Electronic Materials (eg. Web Sites, Social Media, Blackboard, etc.)	
Web sites	http://coep.vlab.co.in/?sub=25&brch=78
	http://www.sfda.gov.sa/en/medicaldevices/Pages/default.aspx

Specific Course Information

a. Brief description of the content of the course (Catalog Description)
The course focuses on studying several biomedical instrument including defibrillators, cardioverters, electrosurgical unit, pacemakers... Also it covers instrument and techniques dealing with electrophysiological signals like EEG, EMG and ENG. Cardiac output.
b. Prerequisites (P) or Co-requisites (C)
(P) Biomedical Electronic Equipment 1 - BMTS471
c. Course type (Mandatory or Elective)
Mandatory

Specific Goals

a. Specific outcomes of instruction

By the end of this course, the student should be able to:

- Describe the principle operation of biomedical electronic equipment. (b)
- Operate biomedical electronic equipment and interpret their outputs. (c)
- Analyze and Solve different problem encountered during the operation of various biomedical electronic equipment. (f)
- Write a research report applying specific formatting requirements. (g)
- Perform an oral presentation for the research. (g)
- Adhere to safety rules and service manual when operating and maintaining biomedical electronic equipment. (k)

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
Cardiac outputs	1	4
Electrocardiography instrument (ECG)	2	8
Electroencephalography instrument (EEG)	2	8
Electromyography instrument (EMG)	1	4
Electroneurography instrument (ENG)	1	4
Defibrillator and Cardioverters,	2	8
Pacemaker	1	4
Electric surgical units	2	8
Physiotherapy and electrotherapy Equipment	3	12