

Course Syllabus

Second Semester – 2013/2014

General Information

Course name	Course code	Credits	Contact hours
Biomedical Mechanical Equipment 2	BMTS365	2 lecture+1 lab	2 lecture+2 lab

Instructors/ Coordinators

	Instructor	Coordinator
Name	Mr. Ahmed Alassaf	Dr. Santanaraj Balakrishnan
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Text Book

Title	Handbook of Biomedical Instrumentation
Author/Year	R. S. Khandpur / 2003

Supplemental materials

Recommended Textbooks and Reference Material	
Title	Biomedical Instrumentation and Measurements
Author/Year	Cromwell <i>et. al.</i> / 2010
Electronic Materials (e.g. Web Sites, Social Media, Blackboard, etc.)	
Web sites	http://apps.gehealthcare.com/servlet/ClientServlet
	http://www.myvmc.com/devices/
	http://pro.sony.com/bbbsc/ssr/cat-medicalproducts/resource.manuals

Specific Course Information

a. Brief description of the content of the course (Catalog Description)
This course focus on studying the mechanical instruments including the study of function and installation of mechanical instruments such as equipment for artificial respiration system, anesthesia, artificial kidney, foot and Upper-limb prosthetics and orthotics, normal and pathological function, some electro-mechanical equipment (Infusion pumps).
b. Prerequisites (P) or Co-requisites (C)
(P) Biomedical Mechanical Equipment 1 - BMTS353
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 Mechanical Medical Instruments in the course outlining their functions, uses and principle of working. (a)
- Provide hands on experience of the instruments and their operations and keep updated about the new trends and techniques thereof. (h)
- Participate in technical groups to perform the installation, application and basic maintenance of the equipment. (e)
- Read and interpret the operator and service manuals and use it in installation, maintenance and troubleshooting. (g)

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
Sterilization and Types of Sterilization	1.5	6
Autoclave, Hot Air Oven, EtO Gas Sterilizer	1.5	6
Infusion Pump Intra-Aortic Balloon Pump	1	4
Ventilator (Critical Care)	2	8
Anesthesia Apparatus.	2	8
Spirometer	2	8
Heart Lung Machine	2	8
Infant Incubator	1	4
Dialysis Machine	2	8