

## Course Syllabus

### First Semester – 2013/2014

#### General Information

Course name	Course code	Credits	Contact hours
Computer Applications for Medical Systems	BMTS481	2 lecture+1 lab	2 lecture+2 lab

#### Instructors/ Coordinators

	Instructor	Coordinator
Name	Mr. Vinoth Kumar	Mr. Vinoth Kumar
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#### Text Book

Title	Bio-Medical Informatics
Author/Year	Edward H. Shortiffe James. J. Cimino / 2006

#### Supplemental materials

Recommended Textbooks and Reference Material	
Title	Information Retrieval: a health and biomedical perspective
Author/Year	William R. Hersh / 2003
Electronic Materials (eg. Web Sites, Social Media, Blackboard, etc.)	
Web sites	<a href="http://www.amia.org">http://www.amia.org</a>
	<a href="http://en.wikipedia.org/wiki/Picture_archiving_and_communication_system">http://en.wikipedia.org/wiki/Picture_archiving_and_communication_system</a>

#### Specific Course Information

<b>a. Brief description of the content of the course (Catalog Description)</b>
This course focus on computer application in biomedical area starting by introduction to biomedical data including data acquisition, storage, inputs-output interface, DICOM image format and types, image compressions. It covers also; essential concepts for biomedical informatics include database application, PACS software for patient data organization, data structure for biomedical systems.
<b>b. Prerequisites (P) or Co-requisites (C)</b>
(P) Computer Programming - BMTS 366
<b>c. Course type (Mandatory or Elective)</b>
Mandatory

### Specific Goals

#### a. Specific outcomes of instruction

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

- Comprehend the basic concept of biomedical data (b).
- Analyze the importance of Biomedical Informatics (c).
- Apply PACS and DICOM in Biomedical Applications (g).
- List the applications of database management system in HIS (j).
- Describe the applications of biomedical applications to global context (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
Introduction to Biomedical concepts, Biomedical data, data acquisition, data storage	4	4
Biomedical data Input-Output Storage	3	3
DICOM image format and types	3	3
Fundamentals of Image Compressions and it's techniques	4	4
Biomedical Informatics	2	2
Biomedical Informatics - Applications	2	2
Introduction to Database concepts	2	2
Database Applications – HIS	2	2
Introduction to PACS	2	2
PACS software for patient data Organization	4	4
Data Structure for Bio medical System	2	2