DEPARTMENT OF BIOMEDICAL ENGINEERING

2008 – 2010

Technical Area 2

Cell and Biomolecular Engineering

Legend

BME 221 M Measurement and Instrumentation Lab
BME 343 M Signals & System Analysis in BME
BME 365R M Engineering Physiology I
BME 353 M Transport Phenomena in Living Systems
BME 339 T Biochemical Engineering
CHE 350 T Chemical Engineering Materials

Fall

3

Spring

Fall

4

Spring

BME 251 M Biomedical image, Signal and Transport Process
BME 348 M Modeling of BME Systems
BME 365S M Advanced Engineering Biomaterials

BME 370 M Principles of Engineering Design
BME Sr. Elective** S BME Senior Elective
BME Tech Elective** T Technical Elective

BME 371 M Biomedical Engineering Project
BME Sr. Elective*** S BME Senior Elective
Technical Elective* T Technical Elective

BME 376 T Cell Engineering
BME 379 T Tissue Engineering

The following rules apply for technical electives:

* Six credit hours can be any combination of the following. Choose two:

Any BME Tech Elective (3 hours)
Any Upper-division Biology (3 hours)
Any Upper-division Engr (3 hrs)
Any Upper-division Comp Sci (3 hours)
Any Upper-division Math (3 hours)
Any Upper-division Physics (3 hours)

** The remaining three credit hours must be in Biomedical Engineering. Choose one:

BME 354 T Molecular Sensors and Nano-devices for BME Application
BME 376 T Cell Engineering
BME 379 T Tissue Engineering

*** Must choose two from the following:

Any upper-division Engr (3 hrs)
Not already used as a Tech Elective
Any upper-division BME (3 hrs)
Any upper-division Math (3 hrs)
Any upper-division Comp Sci (3 hrs)
Any upper-division Physics (3 hrs)
BME 377(x)

GOV 312L C Issues and Policies in American Government
His. Elect. C History Elective from Approved List
FA / Hum. C FA / Humanities from Approved List

The following courses must be in Biomedical Engineering. Choose one:

BME 113L
BME 311
BME 333T
BIO 20L
CHE 353(M)
CH 369 or 339K
M 427K

Check course schedule

Permission from Instructor
### DEPARTMENT OF BIOMEDICAL ENGINEERING

**2008 – 2010 General Curriculum**

#### Fall 1
- **BME 102** Principles of Biomedical Engineering
- **BME 303** Intro to Computing in BME
- **CH 302** Principles of Chemistry II
- **CH 204** Introduction to Chemical Practice
- **BIO 311C** Introductory Biology I
- **M 408C** Differential and Integral Calculus

#### Spring 1
- **E E 312** BME Senior Elective
- **PHY 303K** Engineering Physics I
- **PHY 303L** Engineering Physics I Lab
- **M 408D** Sequences, Series, Multivariable Calculus
- **RHE 306** Rhetoric and Composition

#### Fall 2
- **BME 314** Engineering Foundations of BME
- **CH 318M** Organic Chemistry I
- **CH 118K** Organic Chemistry I Lab
- **PHY 303L** Engineering Physics II
- **PHY 303N** Engineering Physics II Lab
- **M 427K** Advanced Calculus for Applications

#### Spring 2
- **BME 311** Introduction to Numerical Methods
- **BME 333T** Technical Communication
- **BME 335** Engineering Probability and Statistics
- **CH 353M or S** Fundamentals of Thermodynamics
- **CH 369 or 339K** Fundamentals of Biochemistry

#### Fall 3
- **BME 221** Measurement and Instrumentation Lab
- **BME 343** Signals & System Analysis in Biomedical Engineering
- **BME 365R** Engineering Physiology I
- **BME 353** Transport Phenomena in Living Systems
- **BIO 20(5/6)L** Intro to Computing in BME

#### Spring 3
- **BME 251** Biomedical Image, Signal and Transport Process
- **BME 348** Modeling of BME Systems
- **BME 365S** Engineering Physiology II
- **BME 355** Technical Elective
- **His. Elect.** History Elective from Approved List

#### Fall 4
- **BME 370** Principles of Engineering Design
- **BME 371** Biomedical Engineering Project
- **BME Sr. Elective** Technical Elective
- **Soc. Sci.** Social Science Elective from Approved List
- **GOV 310L** American Government

#### Spring 4
- **BME Sr. Elective** Technical Elective
- **GOV 312L** Issues and Policies in American Government
- **Vis/Pa** Visual & Performing Arts from Approved List

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**Legend**

- **B** – Basic Sequence
- **REQ** – Co-req or Pre-req
- **CO-REQ** – Co-requisite
- **PRE-REQ** – Pre-requisite
- **M** – Major Sequence
- **S** – Supporting Course
- **C** – Core Curriculum
- **T** – Technical Area

**Revision:** 3/22/12