## DEPARTMENT OF BIOMEDICAL ENGINEERING
### 2010 – 2012 Technical Area/Track 2
#### Cellular and Biomolecular Engineering

### Legend
- **M** – Major Sequence
- **S** – Supporting Course
- **T** – Technical Area
- **C** – Core Curriculum
- **B** – Basic Sequence
- **PRE-REQ** – Engineering Foundations of BME
- **CO-REQ** – Signals & Systems Analysis in BME
- **Vis/PA** – Visual & Performing Arts
- **CH** – Check course schedule
- **E** – Masterworks of Literature
- **RHE** – Issues and Policies in American Government

### Technical Electives
- **Technical Elective**
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### Rules for Technical Electives
- **Six credit hours can be any combination of the following. Choose two:**
- **Any BME Tech Elective (3 hours)**
- **Any Upper-division Engr (3 hrs)**
- **Any Upper-division Comp Sci (3 hours)**
- **Any Upper-division Physics (3 hours)**
- **Any Upper-division Math (3 hours)**

**The remaining three credit hours must be in Biomedical Engineering. Choose one:**
- **BME 344**
  - Biomechanics
- **BME 354**
  - Molecular Sensors and Nano-devices for BME Application
- **BME 379**
  - Tissue Engineering

### Additional Requirements
- **Any upper-division Engr (3 hrs)**
- **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)**
- **Graduate Course (3 hrs)**

### Permission from Instructor
### DEPARTMENT OF BIOMEDICAL ENGINEERING

#### 2010 - 2012

**General Curriculum**

<table>
<thead>
<tr>
<th>Fall 1</th>
<th>Spring 2</th>
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<tbody>
<tr>
<td>BME 102L B</td>
<td>BME 303 B</td>
</tr>
<tr>
<td>Principles of Biomedical Engineering</td>
<td>Introduction to Programming</td>
</tr>
<tr>
<td>CH 302 B</td>
<td>CH 204 B</td>
</tr>
<tr>
<td>Principles of Chemistry II</td>
<td>Introduction to Chemical Practice</td>
</tr>
<tr>
<td>BIO 311C B</td>
<td>M 408C B</td>
</tr>
<tr>
<td>Introductory Biology I</td>
<td>Differential and Integral Calculus</td>
</tr>
</tbody>
</table>

**B CH 328M or 320M**

- Organic Chemistry I
- CH 302
- CH 204

**B PHY 303K**

- Engineering Physics I
- PHY 103B
- PHY 303K

**B PHY 303L**

- Engineering Physics I Lab
- PHY 103B
- PHY 303K

**B PHY 103N**

- Engineering Physics II
- PHY 103M
- PHY 303B

**M 408D B**

- Sequences, Series, Multivariable Calculus
- PHY 303K

**B BIO 20(5/6)L**

- Introduction to Embedded Systems
- EE 312 or EE 319K

**B CH 369 or 339K**

- Physical Chemistry and Thermodynamics
- CH 302

**B M 314**

- Engineering Foundations of BME
- EE 312 or EE 319K

<table>
<thead>
<tr>
<th>Fall 2</th>
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<tbody>
<tr>
<td>BME 113L B</td>
<td>BME 333T B</td>
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<tr>
<td>Introduction to Numerical Methods</td>
<td>Technical Communication</td>
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<tr>
<td>PHY 303K B</td>
<td>M 408C B</td>
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<tr>
<td>EE 312 or EE 319K</td>
<td>BME 113L B</td>
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**B CH 328M or 320M**

- Organic Chemistry I Lab
- CH 328M

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<tr>
<th>Fall 3</th>
<th>Spring 4</th>
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<tbody>
<tr>
<td>BME 321 M</td>
<td>BME 348 M</td>
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<tr>
<td>Measurement and Instrumentation Lab</td>
<td>Signals &amp; System Analysis in BME</td>
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<tr>
<td>BME 113L</td>
<td>BME 343 M</td>
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<tr>
<td>BME 311</td>
<td>BME 353 M</td>
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**B CH 365R M**

- Engineering Physiology I
- CH 365R

**B CH 353M or 353**

- Transport Phenomena in Living Systems
- CH 353M

**BME 251 M**

- Biomedical Image, Signal and Transport Process
- M 427K

<table>
<thead>
<tr>
<th>Fall 4</th>
<th>Spring 5</th>
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<tbody>
<tr>
<td>BME 370 M</td>
<td>BME 371 M</td>
</tr>
<tr>
<td>Principles of Engineering Design</td>
<td>Biomedical Engineering Project</td>
</tr>
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**Legend**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>B</td>
<td>Basic Sequence</td>
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<td>S</td>
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**Claim Credit:**

- ACT 26+
- SAT Writing 600+

**Revised:** 6/11/2012; SCD