

## **BME 1110 · Introduction to Engineering Science Applications for All**

**Course Description:** This course focuses on getting students excited about biomedical engineering and provides the foundation of application in engineering through a series of guest lectures from BIE-department faculty and graduate students.

### **Course Learning Objectives**

Students enrolled in this course will learn the following concepts and skills, to be applied and/or performed upon successful completion:

- appreciate how engineers design, develop, implement, and improve integrated systems that include people, materials, information, equipment, and energy
- understand basic engineering principles
- employ critical thinking, problem solving, and communication skills
- contribute to a sense of community through active participation
- be familiar with various aspects of Biomedical Engineering
- appreciate the impact that engineering practice has on society and the environment
- understand that engineering design is a continuously cyclic process of inspiration, analysis, and resource allocation

### **Student Learning Outcomes**

After successful completion of this course students will be able to do the following concepts and skills, to be applied and/or performed upon successful completion:

- appreciate how engineers design, develop, implement, and improve integrated systems that include people, materials, information, equipment, and energy
- understand basic engineering principles
- employ critical thinking, problem solving, and communication skills
- contribute to a sense of community through active participation
- be familiar with various aspects of Biomedical Engineering
- appreciate the impact that engineering practice has on society and the environment
- understand that engineering design is a continuously cyclic process of inspiration, analysis, and resource allocation

### **Course Outline/Schedule:**

<b>WEEK</b>	<b>TOPIC</b>
<b>1</b>	<b>GUEST LECTURE IN BIOMEDICAL ENGINEERING</b>
<b>2</b>	<b>GUEST LECTURE IN BIOMEDICAL ENGINEERING</b>
<b>3</b>	<b>GUEST LECTURE IN BIOMEDICAL ENGINEERING</b>

<b>4</b>	<b>GUEST LECTURE IN BIOMEDICAL ENGINEERING</b>
<b>5</b>	<b>GUEST LECTURE IN BIOMEDICAL ENGINEERING</b>
<b>6</b>	<b>GUEST LECTURE IN INDUSTRIAL AND SYSTEMS ENGINEERING</b>
<b>7</b>	<b>GUEST LECTURE IN INDUSTRIAL AND SYSTEMS ENGINEERING</b>
<b>8</b>	<b>GUEST LECTURE IN INDUSTRIAL AND SYSTEMS ENGINEERING</b>
<b>9</b>	<b>GUEST LECTURE IN INDUSTRIAL AND SYSTEMS ENGINEERING</b>
<b>10</b>	<b>GUEST LECTURE IN HUMAN FACTORS ENGINEERING</b>
<b>11</b>	<b>Veteran's Day; University Closed</b>
<b>12</b>	<b>GUEST LECTURE IN HUMAN FACTORS ENGINEERING</b>
<b>13</b>	<b>Thanksgiving Holiday; University Closed</b>
<b>14</b>	<b>GUEST LECTURE IN HUMAN FACTORS ENGINEERING</b>
<b>15</b>	<b>GUEST LECTURE IN HUMAN FACTORS ENGINEERING</b>