



### Sample Brief Course Description

<b>Course title</b>	Medical Robotics Design
<b>Course code</b>	BME 330
<b>College</b>	Engineering
<b>Department / Program</b>	Biomedical Engineering
<b>Year/ Level</b>	4/8
<b>Course Type</b>	<p><b>A.</b></p> <p><input type="checkbox"/> University</p> <p><input type="checkbox"/> College</p> <p><input checked="" type="checkbox"/> Department</p> <p><input type="checkbox"/> Others</p> <p><b>b.</b></p> <p><input checked="" type="checkbox"/> Required</p> <p><input type="checkbox"/> Elective</p>
<b>Credited Hours</b>	3
<b>Contact Hours</b>	(LT:2, LB: 2, TR: 0)
<b>Pre-requisites (if any)</b>	ECE 345
<b>Co-requisites (if any)</b>	---
<b>Course description</b>	Topics include fundamental of Robotics, Grippers, introduction to medical robotics, Localization and Tracking, control modes Robot Programming language, Rehabilitation and Medical Robotics Design.
<b>Course Main Objectives</b>	<ol style="list-style-type: none"><li>1. Provide knowledge on the application of robotics in the field of health care.</li><li>2. Overview of the sensor requirements for localization and tracking in medical applications.</li></ol>



	3. Understand the design aspects of medical robots.
<b>Learning Outcomes</b>	<b>Knowledge and Understanding:</b> <ol style="list-style-type: none"><li>1. Describe the types of medical robots and the concepts of navigation and motion replication.</li><li>2. Discuss about the sensors used for localization and tracking.</li><li>3. Summarize the applications of surgical robotics.</li></ol>
	<b>Skills:---</b> <ol style="list-style-type: none"><li>1. Analyze the concept of Artificial Intelligence in Robots, Various Types of Robots Programming and Applications.</li><li>2. Outline the concepts in Rehabilitation of limbs and brain machine interface.</li><li>3. Analyze the design characteristics, methodology and technological choices for medical robots.</li></ol>
	<b>Values:---</b> <ol style="list-style-type: none"><li>1. Communicate effectively on a team.</li></ol>