



### Sample Brief Course Description

<b>Course title</b>	Capstone Design Project (2)
<b>Course code</b>	ECE 493
<b>College</b>	Engineering
<b>Department / Program</b>	Electrical Engineering /Electronic, Communications & Renewable Energy Engineering
<b>Year/ Level</b>	5 <sup>th</sup> year / 10 <sup>th</sup> Level
<b>Course Type</b>	A. <input type="checkbox"/> University <input type="checkbox"/> College <input checked="" type="checkbox"/> Department <input type="checkbox"/> Others b. <input checked="" type="checkbox"/> Required <input type="checkbox"/> Elective
<b>Credited Hours</b>	2
<b>Contact Hours</b>	(LT:1, LB:2, TR:0)
<b>Pre-requisites (if any)</b>	ECE 492
<b>Co-requisites (if any)</b>	---
<b>Course description</b>	A two-semester course sequence that integrates various components of the curriculum in a comprehensive engineering design experience. Design of a complete project including establishment of objectives and criteria, formulation of design problem statements, preparation of engineering designs. The design may involve experimentation, realization and/or computer project. The project may be implemented using software, hardware, or a combination of both. Team design projects, where appropriate, are highly encouraged.



<p><b>Course Main Objectives</b></p>	<p>By the end of the course, the student is expected to design and develop a complete system or make an investigative analysis of a technical problem in the relevant area. Students will apply the knowledge gained in earlier courses to the design process. The student will be familiarized with the engineering design process: Definition, Synthesis, Analysis and Implementation.</p>
<p><b>Learning Outcomes</b></p>	<p><b>1. Knowledge and Understanding:</b></p> <p>1.1 Identify the project parameters and assumptions based on new developments related to the field of electrical engineering</p> <p>1.2 Recall research methodologies used in reports, presentations, and research related to electrical engineering.</p> <hr/> <p><b>2. Skills:</b></p> <p>2.2 Execute manufacturing/ simulation/ implementation plan by selecting the suitable manufacturing/ simulation/ implementation techniques.</p> <p>2.3 Design a system to meet the design criteria and constraints (such as cost, economic, resource availability, environment, sustainability, safety, manufacturability, assembly, reliability, testing and maintenance, and product life cycle considerations).</p> <p>2.4 Evaluate the failure of components, systems and process using alternative creativity solutions and use measures of performance or other criteria to rank alternatives.</p> <p>2.5 communicate and achieving the project design details orally and in writing.</p> <hr/> <p><b>3. Values:</b></p> <p>3.1 Support work teams providing leadership and creating a collaborative and inclusive environment while establishing goals to meet and planning tasks.</p> <p>3.2 Demonstrate commitment to professional and academic values and standards and ethical code of conduct as experts in the field of electrical engineering.</p>
<p><b>References</b></p>	<p><b>Required Textbooks:</b></p> <p>-</p>