

Course Title	Computer Engineering Design				
Course Code	ECE400				
Course Type	Compulsory				
Level	Bachelor (1 st Cycle)				
Year / Semester	4 th Year / 7 th Semester				
Teacher's Name	TBA				
ECTS	6	Lectures / week	3 hours / 14 weeks	Laboratories / week	N/A
Course Purpose and Objectives	The aim of the course is to give the students the opportunity to gain hands-on experience in Computer Engineering design projects. The course will reinforce the material covered in advanced courses in Computer Engineering such as Circuits and Electronics, Digital Systems and Data Communications and Computer Networks.				
Learning Outcomes	<p>Upon successful completion of this course, students should be able to:</p> <ul style="list-style-type: none"> • Identify and describe the values of project lifecycle including System specification, requirements, design, implementation, prototyping and testing of a product. • Demonstrate project lifecycle planning. • Explain briefly the concept of a system and a subsystem, and discuss the role of people, the different disciplines involved, and the need for interdisciplinary approaches to the development of the range of computer-based systems. • Explain the importance of design decisions and tradeoffs at the systems level, including balancing costs, performance, power, dependability, and market considerations. • Apply and practice hands-on techniques on a designated engineering design project in the area of Computer interfacing, Electronics, Data Communications and Computer Networks. • Write technical laboratory reports 				
Prerequisites	ECE300, CSE300	Co-requisites	None		
Course Content	<p>Description:</p> <p>Groups of three to four students work together on a Computer Engineering design project under the mentorship of an engineer from industry or a faculty adviser.</p> <p>Throughout the duration of the course, students must conduct the requirement analysis and system specification, design, implementation and testing. They must also demonstrate the project, and document it along the way. Students will have brief weekly</p>				

	discussions with the mentor on progress, and also present their progress in the labs weekly for feedback from the course faculty. At the end of the course, a final presentation event will be organised, where students will present their designs and demonstrate the projects. The projects are fully documented in a final written report.						
Teaching Methodology	<p>Face-to-face</p> <p>Students in this course are expected to work on group activities, such as projects, assignments, literature reviews that may deal with the investigation and solution of a problem or with the design and/or implementation of a system. Group activities aim to motivate students to work within a group, develop critical thinking, improve their communication and decision-making skills, and promote active learning.</p>						
Bibliography	According to the topics selected.						
Assessment	<table border="1"> <tr> <td>Lab Reports</td> <td>90%</td> </tr> <tr> <td>Class Participation and Attendance</td> <td>10%</td> </tr> <tr> <td></td> <td>100%</td> </tr> </table>	Lab Reports	90%	Class Participation and Attendance	10%		100%
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Language	English						