EEU44E02 Electronic and Electrical Engineering Project [15 credits]

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Module organisation
Term: Semester 2. Project Duration: 12 weeks.

Module description, aims and contribution to programme
Senior Sophister students in the Electronic Engineering (C) and Electronic and Computer Engineering (CD) streams are required to carry out an individual engineering project. Each student is assigned a project topic and a supervisor. The supervisor acts as the project advisor.

Learning outcomes
On successful completion of project work, the students will be able to:
1. derive, apply and adapt solutions from the discipline specific knowledge gained in lectures and coursework, to address a real world engineering problem;
2. undertake a project involving independent enquiry and investigation of a practical engineering problem, application or topic;
3. identify, formulate, analyse, and solve an engineering problem
4. formulate a project outline, including the project goals and schedule to achieve the aims of the project
5. design a system, component or process to meet a specified engineering goal;
6. analyse and interpret results from experiments conducted during the module in order to modify, improve or explain the functionality of the system, component or process being created;
7. communicate effectively in technical and scientific writing, and present scientific/technical ideas concisely to a technical audience that may not be expert in the specific domain of the project;
8. manage workflow and task scheduling within the constraints of the resources available to meet specific design goals and deadlines;
9. work in a team as required, particularly with technical staff members and peers to achieve the project goals;
10. use industry standard hardware and/or software tools and codes of practice for all aspects of design including analysis and presentation;
11. examine and discuss the impact of the project on society, giving consideration to ethical norms and standards.

Module content
Projects are allocated in the areas of research expertise and interest of members of the academic staff in the Department of Electronic and Electrical Engineering. Project assignments are made to students on the basis of the choice forms which should be completed and returned by the end of the first week of the first semester. The
nature and content of the project is then discussed with the supervisor in the following weeks of the first semester. Students are expected to do sufficient background reading such that a project

**Teaching strategies**

There are no formal timetabled hours associated with the project but students are expected to fully engage with their project and spend the time it takes to make reasonable progress and to keep in regular contact with their supervisors. It is recommended that students make a formal arrangement with their supervisors to meet on a weekly basis, preferably at a regular appointed time.

**Assessment**

The Senior Sophister project is assessed by means of three submissions that will be marked by both the project supervisor and an assigned second reader. The combined submissions are marked out of a total of 100 marks. Dates for the submissions will be communicated to students well in advance of deadlines. The submissions are as follows:

*Project Plan: 5 marks*

A two-page summary outlining the nature of the project, including a brief problem statement, the overall goal and objectives, (1 page) and a plan of work for its completion (including tasks, schedule, and milestones, 1 page) must be submitted at the **start of week 2 of the second semester**.

*Presentation 20 marks*

Students prepare a poster on their project. A template will be provided for this purpose. Students display an A0 sized poster outlining the aims, technical content, accomplishments to date, and remaining tasks in their projects at a special session attended by supervisors and second readers. They give a short oral presentation at their poster and are then briefly questioned on it. This is then marked in confidence by the supervisor and second reader. This session will be scheduled for **week 8 of the second semester**. The poster must be submitted electronically at the **end of week 7 of the second semester**.

*Typed Report: 75 marks*

A full typed report on the project is submitted, which should not exceed 50 pages. This report should be properly structured and typed in accordance with instructions given. The report should contain an introduction outlining in detail the aims and objectives of, as well as some background information on the project. The bulk of the report should discuss in detail the main technical work carried out by the student with appropriate results, explanations and deductions. A final conclusion section should comment on the overall outcome of the project. This is then marked by the supervisor and second reader. Two soft-bound copies of the report must be submitted by the **end of week 12 in the second semester**. An electronic copy of the thesis must also be uploaded to Blackboard (same deadline) and will be checked for plagiarism.
Plagiarism
The College’s policy on plagiarism is outlined in section H of the College Calendar. Students are required to read the regulations in full, but listed below are a few of the key points.

Plagiarism arises from:

- copying another student’s work;
- enlisting another person or persons to complete an assignment on the student’s behalf;
- quoting directly, without acknowledgement, from books, articles or other sources, either in printed, recorded or electronic format;
- paraphrasing, without acknowledgement, the writings of other authors.

It is the responsibility of the student to ensure that he/she does not commit plagiarism

Plagiarism is a serious matter whether the plagiarism is deliberate or has arisen through carelessness. Remember, the project dissertation must be your own work and written in your own words. Where material is being repeated verbatim from published, web or other sources, you should use inverted commas, italics and/or present the material in a separate paragraph, to make it clear to the reader that you are quoting directly, and you must reference the source.

Further information
https://www.tcd.ie/Engineering/undergraduate/baiyear4/