CURTIN UNIVERSITY OF TECHNOLOGY

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

UNDERGRADUATE PROJECT SELECTION
THE PROJECT SELECTION PROCESS

WHY THE PROJECT

The project is one of the most important parts of your degree program for two reasons. One follows from the project’s principal objective:

To demonstrate your potential as a professional.

The second relates to your career. When you leave Curtin, how will potential employers judge you? Through an interview they will assess your personality. However, professionally all they have is your academic record - meaningless to most - and the thesis you write as part of the project. If your intentions are to progress to postgraduate studies, then again your thesis is the primary proof you have the ability to do so. Thus your thesis is the means to advance yourself.

In the semester prior to when you formally enrol, you need to:

• read widely on what you would like to do;
• speak with a member of staff about a project in that area, then firm up the details;
• make sure you have an adequate background to tackle the project, so do even more reading and investigation;
• fill in a project registration form, have it signed by your supervisor and then submit a copy to the Projects Coordinator as proof you have a project.

The last of these is quite vital. Enrolled students in a project unit who do not have a project in the first week of the semester will be automatically withdrawn.

THE FIRST STAGE: CHOOSING A PROJECT

You have three options for choosing a project:

• **Staff option**
  If you wish a project in a given area, note the staff interests on the Department’s web pages and then approach the appropriate staff member to determine a suitable project.

• **Industry option**
  The Department encourages industry projects, but be aware of the conditions that apply. See the Guide to Projects for full details, but a brief summary is as follows:

  * The project must be approved by the Projects Coordinator
  * Your project must be supervised by a qualified professional engineer or equivalent.
* You cannot use University facilities for an industry project. If you or they wish to, then a formal contract will need to be drawn up. Doing work for charitable or non-profit organisations is a grey area; speak to the Projects Coordinator on what is proposed to gain a ruling.

* Before you can start such a project, we must have a letter from the organisation allowing public disclosure of your thesis.

* You need to check with the organisation on whether their insurance policy covers you.

* You will also need to find a co-supervisor within the Department to assist you in writing the thesis.

• **Student Option**

  You can nominate your own project. You need to do two things:

  * Sketch out what you propose to do outlining what you see as the major challenges. This includes things you will need to learn and any additional skills you will have to gain.

  * From the following pages, identify a staff member who might be interested in that topic and then approach them. If they are willing to accept the project – possibly subject to modification – then fine, if not you will need to find someone else. If you cannot, then you will just have to change the project.

**WHAT TO DO OVER THE LONG BREAK**

Remember the semester is now only 12 weeks and that means you must carefully prepare for the project before the semester begins. In particular you need to:

• **Read**

  As part of your project, you will be identifying a problem then suggesting a solution to that problem. How can anyone have confidence in your solution if there is no evidence you are aware of current practice, technology and so forth? You need to search the web, haunt the library and take other actions so that you know what others have done to solve this problem and what tools and resources you need to do so.

• **Plan**

  The project’s principal objective is to demonstrate your potential as a professional. A key feature of engineering is that it is a planned activity. Boeing does not commit billions of dollars for developing a new jet on the basis it might be better; they make very sure they know well before they start. You need to do the same. You need to develop a project plan that identifies how you will spend your time. It has to be realistic in the sense you must set priorities and stick to them. If you are unsure how to plan, then visit the library and borrow a book on project management.
Given the semester is just 12 weeks, then planning is quite critical. The times you set for activities will also determine your approach. If you feel you can only allocate, say, one week to the design and development of an amplifier, then it suggests you either buy one off the shelf or simply build a very standard unit. There is nothing wrong with that; this is what engineering decision making is all about.

- **Log book**
  Integral to engineering is keeping a log book. You enter critical information – design sketches, ideas, test results and so on. So, begin by entering your plan and then your summaries of your reading. Date everything. In the professional arena, your log book can be presented as evidence in a court of law, particularly for patent priority claims, but if it is isn’t properly dated it is worthless.

**MORE INFORMATION**

You will find in the student section of the Department’s web pages a section called “Project Home”. There you will find detailed documents on how project should be conducted, assessment and how to write a thesis.

**HONOURS AND PROJECTS**

Honours does not relate to your project alone. Rather, honours is determined via a course weighted average that weights the years of your course. As it emphasises the final two years more than the first two, project has some impact. Thus in general terms a good project usually leads to honours.

**HOW WILL YOU BE ASSESSED IN THE PROJECT UNITS?**

In the first project unit, assessment is P or F, meaning you are progressing satisfactorily or not. Therefore, you need to establish with your supervisor how that will be done. Note this means you may not have finished. It does mean however, that your project plan indicated things that were to be achieved by the end of the semester, and they were indeed achieved.

The second project unit is assessed 15% on a short presentation and 85% on the thesis. Your thesis has two examiners, one of whom is your supervisor, but a third examiner may be called in if the Projects Coordinator feels that is warranted. Assessment is holistic. That is to say, you do not get marks for specific features, but for the overall characteristic of the thesis. To do well, the thesis must be well-written, well-organised and demonstrate significant engineering abilities. Simply completing what was agreed in the first instance is not enough to gain a high mark; it also requires a project with significant challenges faced and overcome. See the Guide for further information on the assessment process.