UG Thesis / PG Project

Faculty of Engineering   **Electrical Engineering and Telecommunication**

Doing Thesis Project

Dr. Aron Michael

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Information about thesis/project

- Thesis/Project coordinator:

    Dr. Aron Michael
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- Supervisor, assessor

- Staff in EE&T School Office

- Postgraduate Coordinator

    Dr. Jayashri Ravishankar
    jayashri.ravishankare@unsw.edu.au

- Use Moodle for thesis/project handling

- Important document: Course Outline

Honours Thesis in UNSW3+

- Run across <u>3 terms</u>: Thesis A (ELEC4951), Thesis B (ELEC4952), and Thesis C (ELEC4953), each course is 4 UOC. Thesis A, B, and C must be taken sequentially without any term break unless prior approval from Director of Academic Studies or Thesis Co-ordinator.

- However, after successful completion of Thesis A with good performance (D or HD) plus supervisor approval, students may be allowed to enrol in both Thesis B and C in the next term. This 2-term option may also be granted, at school discretion, to some students whose circumstances do not fit the default 3-term model, but only after they complete Thesis A satisfactorily.

- By default, Thesis A is pre-requisite for Thesis B and Thesis B is pre-requisite for Thesis C. For those students approved to do Thesis B and C together in one term, Thesis B will be the co-requisite for Thesis C.

- Students will be allowed to start Thesis in any of the 3 terms. Once enrolled, they shall take Thesis A, B, and C consecutively without any term break unless given prior approval.
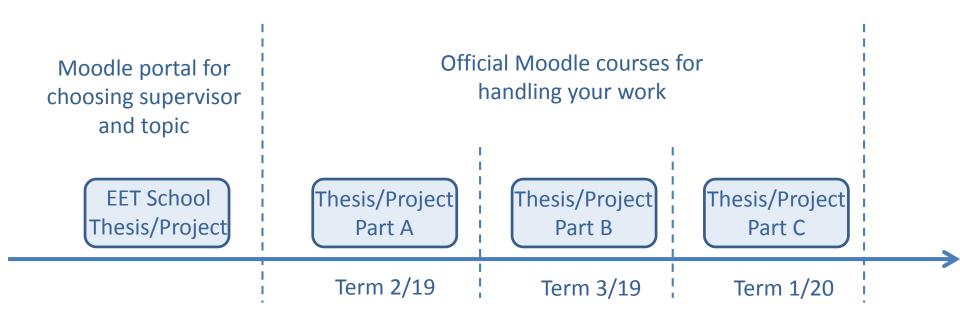
Honours Thesis in UNSW3+

- With the default 3-term thesis, if students fail to satisfactorily complete any of the Thesis courses at any given term, they will be allowed to re-enrol into the course in the following term.

- If approved to take the 2-term option and if students fail to satisfactorily complete Thesis B and C in one term, their enrolment will be reverted back to the 3-term option and they will be allowed to enrol only in Thesis B in the following term.

- If students are taking Thesis A (ELEC4120) in S2/18 and satisfactorily complete it, the above changes won't apply. They will enrol into Thesis B (ELEC4121) similar to the current structure which will run in T1/19 and extend into week 3 of T2/19. However, if students are taking Thesis A in S2/18 but then fail the course, the above changes will apply.

- BE/ME projects will follow a similar structure with 3 courses: Project A (ELEC9451), Project B (ELEC9452) and Project C (ELEC9453). Again, the default is 3-term but also available is the conditional 2-term option.

Moodle for administration

Moodle portal for choosing supervisor and topic

Official Moodle courses for handling your work

EET School Thesis/Project

Thesis/Project Part A

Thesis/Project Part B

Thesis/Project Part C

Term 2/19

Term 3/19

Term 1/20

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Thesis and Project Course Codes

Course	Course Code
UG Thesis A (BE, BE-ME 4th yr)	4951
UG Thesis B (BE, BE-ME 4th yr)	4952
UG Thesis B (BE, BE-ME 4th yr)	4953
PG Project A (ME 8621, BE-ME 5th yr)	9451
PG Project B (ME 8621, BE-ME 5th yr)	9452
PG Project C (ME 8621, BE-ME 5th yr)	9453
PG Project A (MEngSc 8338)	9771
PG Project B (MEngSc 8338)	9772

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How to find a supervisor and select topic

1. Go to: https://moodle.telt.unsw.edu.au/course/view.php?id=20890 enroll yourself as student; enrolment key is EETTPstudent

2. Log into Moodle course 'EET School Thesis/Project'

3. View research profiles of prospective supervisors and topics in 'Research Topics' section.

4. Contact supervisor to negotiate and must get written permission to sign up on a topic before you can proceed to next step.

5. In Moodle 'Registration' icon:
   - click 'Select Supervisor', find the supervisor and click action box to become a member
   - click 'Register Topic', 'Add Entry' and enter your details and topic title.

6. Enroll in appropriate thesis/project course code on myUNSW

Supervisor and topic – 8338 stream

- Supervisor and topic will be coordinated by

  – Postgraduate Coordinator

  Dr. Jayashri Ravishankar
  jayashri.ravishankar@unsw.edu.au

  – Encouraged to look for supervisor and topic at first instant

  – Second year of program, WAM > 65, group project (2-3)

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Thesis / Project

- Three parts (A ,B and C) to complete over 3 terms of program.

- Under guidance of supervisor, work on an approved topic.

- Most important piece of work undertaken by student; attempt to solve a challenging practical design or to conduct research.

- Opportunity for students to develop and demonstrate their use of sound engineering methods and process.

- Typical activities: theoretical work; modeling & simulation; design, construction and testing of circuits & systems; development of software & embedded systems, etc.

- No distinction between good and mediocre projects, between individual and group work.

- Note: students doing work in a group must still submit individually written reports.

Thesis / Project

- **Part A:**
  - 4 UOC
  - Prerequisite:

    BE degree: 120 units of credit and ELEC3117

    ME/MEngSc degree: second year of program, WAM > 65,

    group project (2-3).

- **Part B:**
  - 4 UOC
  - Prerequisite:

    Part A completed in immediate preceding session

Thesis / Project

- Part C:
  - 4 UOC
  - Prerequisite:

    Part B completed in immediate preceding session

- Part B+C:
  - 8 UOC
  - Prerequisite:
    - Part A completed in immediate preceding session
    - Attain at least Distinction in Part A
    - Supervisor support
    - Satisfactory progress report submitted in week 3 term 2

BE Honour Policy

WAM calculation

- Part A&B&C are level 4 courses
- Part A+B+C = 18 UOC, level 4
  - Part A =   3.15 UOC (17.5%)
  - Part B =   1.8 UOC (10%)
  - Part C = 13.05UOC (72.5%)
- Total thesis weighting = 14.6% of whole

	Old BE program prior to 2015		New BE (hon) program from 2015	
	WAM	Thesis	WAM	Thesis
Honour class 1	75	65	80	65
Honour class 2/1	70	60	75	65
Honour class 2/2	65	55	65	65

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Part A

- involves detailed literature search and reviews of background on chosen topic

- expect some preliminary work completed, e.g. learn new software, system design, modeling, simulations

- planning activities that will be required for Part B and C

Part A: assessment

- For 4951, 9451:
  - individually written preliminary report (wk 10, 53% weighting)
  - oral presentation (wk 8-9, 47% weighting)
  - chair 1 seminar and sit in 5 others (wk 8-9, 0% weighting)
- For 9771:
  - Report: satisfactory/unsatisfactory marked by supervisor only

- overall marking breakdowns through report and seminar*:
  - 50% gathering, understanding and prioritising relevant technical background about project, literature review, problem statement
  - 40% on project deliverables (detailed proposed solution or design, work plan with specific tasks for realizing this solution, and which tasks completed to date) and their quality (degree of challenges involved, level of intellectual contribution)
  - 10% on presentation

Part A: assessment Criteria

PART A		
Interim report (53%)	**Literature review and background work**	**50%**
	Thesis plan	**20%**
	Preparation (preliminary) work	**20%**
	Document presentation	**10%**
Seminar (47%)	**Subject matter**	**30%**
	Quality	**15%**
	Preliminary work	**25%**
	Presentation	**15%**
	Question handling	**10%**

Part B

- typically involves completed preliminary work – all required training and skilled must be acquired such as software, tool, and equipment design, construction of prototype, circuit testing, doing experiments, analysis of measurement results.

- Demonstrating preliminary (initial) results based on preliminary work.

- Proposed approach or methodology and modified planning for activities for the rest part of the thesis (half part B and part C). Progress report is to be submitted on Thursday of Week 5. For (B+C) option, the report is submitted on Thursday of Week 3.

- Detailed thesis structure

- Demonstrating progress towards main task which should be supported by a weekly one-page long progress report and meeting with supervisor

Part B: assessment

- For 4952, 9452:
    - individually written progress report (wk 5, 50% weighting)
    - Participation effort (wk 10, 50% weighting)

- overall marking breakdowns through progress report:
    - 60% preliminary work
    - 15% reflection
    - 15% project planning
    - 10% on presentation

- For 9772:
    - Thesis report   90% weighting
    - Participation effort   10% weighting

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Part B: assessment

- Participation effort based on weekly submission of a long page work progress report, and weekly meetings with supervisor.

Part B: assessment Criteria

PART B		
Progress report (50%)	**Preliminary work completed** • **Preliminary result (60%)** • **Reflection (15%)** • **Plan (15%)**	**90%**
	Document presentation	**10%**
Participation Mark (50%)	**Initiative and engagement** • **Engagement** • **Ownership**	**40%**
	Sustained activity • **Regular meeting** • **Attendance of labs**	**30%**
	Diligence and competence • **Meticulous** • **Professionalism** • **Serious effort**	**30%**

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Part C

- typically involves detailed design, construction of prototype, circuit testing, doing experiments, analysis of measurement results.

- some topics may involve only theoretical development, modeling or simulation.

- an individually written report must be submitted by Thursday of the last week (i.e. week 10).

- Open Day Presentation: poster, demonstrate/exhibit thesis work, verbal defence (Friday of week 9)

Part C: assessment

- For 4953, 9453:
    - Thesis report   85% weighting
    - Open Day presentation 15% weighting

Part B+C: assessment

- For 4952/53, 9452/53:
  - Progress report   50% weighting (4952/9452)
  - Participation effort   50% weighting (4952/9452)

  - Thesis report   85% weighting (4953/9453)
  - Open Day presentation 15% weighting (4953/9453)

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Thesis project assessment - summary

Stage	Assessment components	4951/4952/4953	9451/9452/9453	9771/9772	Markers' weightings	
					Sup.	Ass.
PART A	Report (prelim.)	57% (10%)	57%(10%)	Satifactory/ Unsatisfactory	50%	50%
	Seminar	43%(7.5%)	43%(7.5%)	not required	50%	50%
PART B	Report (Progress)	50%(5%)	50%(5%)	90%	100%	0%
	Participation	50%(5%)	50%(5%)	10%	100%	0%
PART C	Report (Final)	85%(62.5%)	85%(62.5%)		50%	50%
	Poster	15% (10%)	15%(10%)		50%	50%

Schedule

- Sign up for topics: open NOW until end of week1

- Part A:
  - Weekly meetings: with supervisor
  - Risk Assessment: at start of work, e.g. week 4-5
  - Oral presentation: week 8/9 (T2/20)
  - Seminar attendance: chair 1, attend 5 others
  - Written preliminary report: Thursday of week 10 (T2/20)
- Part B:
  - Weekly meetings: with supervisor
  - Written progress report: Thursday of week 5 (T3/20)
  - Participation effort: week 5-10 (T3/20)

Schedule

- Part C:
    - Final report: Thursday of week 10 (T1/20)
    - Poster: Friday of week 9 (T1/20)

Written Report

- Information available on Moodle: how to write report, what the requirements are, what to write, etc
  - Format: paper format (size, layout, margins, numbering), text format (fonts, size, line spacing, etc), title page format
  - Writing style: audience, wording, length, referencing
  - Content and structure: problem definition, theory and considerations on how to solve problem, solution method, results (measurements, simulations), analysis of results and discussion, conclusions
  - Other requirements: summary sheet, pointers

Notes

- **Plagiarism** = academic misconduct
  - unacknowledged use of other people's work
  - very strict rules that impose severe penalties, eg. failure
  - information to help you avoid plagiarism:
    - https://student.unsw.edu.au/plagiarism

- **Late submission**:
  - Report – 5 marks off for every day late until mark decrease to 50. Zero if report not turned in within 6 weeks
  - Presentation – zero mark is awarded

- **Marking**:
  - by thesis supervisor and assessor, equal weighting. Assessor is assigned by School.
  - marking done independently by each marker, without collusion or knowledge of the other mark

FAQ

- How long is thesis report ?
- How thesis is assessed ?
- Materials (parts & components only; no hardware or software) needed for thesis project:
  - Allowed budget: $100
  - Technical staff to make purchase orders for you
  - Research group may spend above this limit

Important things to do now

- Choose topic/supervisor
- Sign up asap