

ENGR 4044 ADVANCED ENGINEERING THESIS 2: DETAILED INVESTIGATIONS

Credit Points 20

Coordinator Kejun Dong ([https://directory.westernsydney.edu.au/search/name/Kejun Dong/](https://directory.westernsydney.edu.au/search/name/Kejun%20Dong/))

Description In this subject, advanced students will finalise their year-long, specialist research project begun in "Engineering Thesis 1 - Preliminary Investigations" with the completion of a thesis document. To build on the work begun in semester 1 students will project manage and complete the technical aspects of their project, produce a research paper suitable for journal publication, present on their research and finalise their thesis under the supervision of academic or industry mentors as co-supervisors. Advanced students, completing their individual research project, are expected to work with minimal supervision to manage the project and are responsible for solving issues as they arise and communicating their findings at a high level. Students completing Advanced Engineering Thesis 1 and Advanced Engineering Thesis 2 associated subjects, will develop skills relevant to their future careers as engineers or as a pathway to higher degree studies.

School Eng, Design & Built Env

Discipline Engineering and Related Technologies, Not Elsewhere Classified.

Student Contribution Band HECS Band 2 20cp

Check your fees via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Level Undergraduate Level 4 subject

Pre-requisite(s) ENGR 4043

Restrictions

Students must be enrolled in 3771 Bachelor of Engineering Advanced (Honours) and have completed 220 credit points with a Grade Point Average 5.0 or above.

Learning Outcomes

After successful completion of this Subject, students will be able to:

1. Implement the outcomes from the AET1 specific to research goals
2. Execute a planned methodology to obtain reliable data/results that relate to the specific research context.
3. Evaluate research outcomes and their significance to the field of engineering.
4. Apply initiative and creativity in dealing with critical research issues.
5. Manage advanced engineering research and/or design project that incorporates relevant processes and methodologies including WHS and risk management.
6. Communicate advanced research and/or design work in an ethical and concise manner and in a range of formats reflective of scholarly and engineering professional practice.
7. Reflect on self-assessment and feedback for research and/or design project work.

Subject Content

1. Research skills
2. Research methodologies and technical presentation
3. Problem solving and communication skills
4. Project and risk management
5. Engineering ethics

Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

| Type | Length | Percent | Threshold | Individual/ Group Task | Mandatory |
|--------------|--|---------|-----------|---------------------------|-----------|
| Report | 8 pages (using the proforma supplied) | 15 | N | Individual | Y |
| Presentation | 15 minutes | 20 | N | Individual | Y |
| Thesis | 12000 words | 65 | N | Individual | Y |

Teaching Periods

Spring (2025)

Penrith (Kingswood)

On-site

Subject Contact Kejun Dong ([https://directory.westernsydney.edu.au/search/name/Kejun Dong/](https://directory.westernsydney.edu.au/search/name/Kejun%20Dong/))

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=ENGR4044_25-SPR_KW_1#subjects)

Parramatta - Victoria Rd

On-site

Subject Contact Kejun Dong ([https://directory.westernsydney.edu.au/search/name/Kejun Dong/](https://directory.westernsydney.edu.au/search/name/Kejun%20Dong/))

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=ENGR4044_25-SPR_PS_1#subjects)