ENGR 7014 MASTER PROJECT 1

Credit Points 10

Legacy Code 300597

Coordinator Pan Hu (https://directory.westernsydney.edu.au/search/name/Pan Hu/)

Description This unit is a problem based project unit. Students are expected to conduct self studies under supervision by academic staff. Students will identify research topics in consultation with supervisors, carry out literature survey in one of the fields of engineering, construction, information technology or data science. Students will be required to define research objectives and scope, establish research methodology and prepare a research plan.

School Eng, Design & Built Env

Discipline Engineering and Related Technologies, Not Elsewhere Classified.

Student Contribution Band HECS Band 2 10cp

Level Postgraduate Coursework Level 7 subject

Equivalent Subjects LGYA 5830 - Master of Engineering Specialist Reading LGYA 4574 - Built Environment Project LGYA 4576 - Built Environment Research Project

Restrictions

Students must be enrolled in a postgraduate program. Please note: Students enrolled in 3693 Master of Engineering must select the campus offering, not the online mode.

Assumed Knowledge

(1) Knowledge in one of the fields in engineering, construction, information technology, data science or a related discipline;
(2) Knowledge in research methodology; and
(3) Skills in literature review.

Learning Outcomes

On successful completion of this subject, students should be able to:

1. Critically analyse literature in relevant area to identify potential research problems.
2. Identify and propose research questions and hypothesis based on literature review.
3. Justify the research proposal in relation to its significance in literature and its anticipated impact.
4. Develop a plan and methodology to conduct research on an identified question/issue/problem.
5. Present ideas, concepts, arguments/prototypes and conclusions in a professional report.

Subject Content

Questioning. Develop a research question or hypothesis. The end result of the student's initial reading should be a well-defined research question. The research question will help the student to focus on the scope of their work.
Problem identification. Identify a problem in a relevant field, such as engineering, building surveying, design and construction management, at a general or fundamental, technical or regulatory or philosophical level that needs investigation. It is important that the student examine the assumptions that underlie the problem.
Literature review. Critically review and appraise current literature related to the student's study topic is an essential first step. Extensive reading and referencing the key papers and other sources is seen as a part of the problem solving process. The students must read widely and compare the opinions of the many authors in their paper.
Definition of objective. Define research objectives and scope.
Methodology. Prepare research methodology for the investigation of the research issue.
Planning. Prepare a research plan for carrying out the research.
Reporting. Produce a report and present preliminary findings.

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.

Item	Length	Percent	Threshold	Individual/ Group Task
Learning Contract	1 page	0	Y	Individual
Proposal	1,500 - 2,500 words	35	N	Individual
Report	5,000 - 7,500 words (includes calculations, graphs, tables)	65	N	Individual

Teaching Periods

Autumn
Parramatta City - Macquarie St
Day
Subject Contact Pan Hu (https://directory.westernsydney.edu.au/search/name/Pan Hu/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=ENGR7014_22-AUT_PC_D#subjects)

Spring
Parramatta City - Macquarie St
Day
Subject Contact Pan Hu (https://directory.westernsydney.edu.au/search/name/Pan Hu/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=ENGR7014_22-SPR_PC_D#subjects)