

## Master of Engineering (Electrical/ Mechanical/ Civil)

The Master of Engineering (ME) is an academic degree awarded on the basis of advanced study and project in engineering. To be admitted as a masters student, one must hold a Bachelor's degree in engineering or related science subject. The student must complete necessary coursework and perform independent project/dissertation under supervision of a qualified Advisor, and pass the engineering thesis defense.

### Requirements

- Completion of Graduate Diploma in Engineering Practice (Electrical/ Mechanical/ Civil)

PLUS

- MAE 601 Professional Engineering Practice
- Res 601 Research Method
- MAE 602 Thesis

This course guides the student, step by step, through the research process, from problem selection through writing up results. It provides all of the basics necessary to complete a research project in any discipline.

Outline. The following aspects are reflected in this course:

What is research?

Tools of research

The problem: the heart of the research process

Review of the related literature

Planning your research design

Writing the research proposal

Qualitative research

Historical research

Descriptive research

Experimental and causal - comparative designs

Statistical techniques for analyzing quantitative data

Technical details: style, format, and organization of the research report

### Masters Research Proposal

Synopsis: Research students are expected to present a written research proposal within three months after commencement. The proposal is handed in to the study leader. Assessors of this proposal are selected by the faculty for their understanding of the field and the research involved. The purpose of a research is to set out a plan for conducting the research and writing the dissertation within the available time. It should take account of the availability and guidance of the study leader. The starting point for a research proposal is the topic, which is the field of interest in which the research is to be carried

out. In introducing the topic, the proposal should clarify the field that it falls into and the specific part of that field which the research will explore. It should clarify why the topic is of interest and importance, and how the proposed research will contribute to the field of knowledge or profession. The proposal should clarify the research questions, ensuring that these are specific and answerable. It is important to show how these questions relate to the topic, and how they will advance the student's contribution. The proposal should detail the research to be carried out, and clarify the research methods, the timeframe and the reasons for selecting particular methods. Where a period of literature review or research should precede any empirical research, this should be factored in as part of the research. It is important to estimate any periods of field research and to flag their duration and cost in your research proposal.

### **MAE 601 Professional Engineering Practice**

MENG6003 Selective I: management subject (45 hrs) 3 credits

MENG6004 Selective II: management subject (45 hrs) 3 credits

### **Res 601 Research Method**

MENG6005 Quantitative Methods and Statistics (45 hrs) 3 credits

### **MAE 602 Thesis**

Engineering Project/Thesis 24 credits

Candidates need to complete a 6000-words engineering dissertation (in Myanmar or English) and a 3000-words executive portfolio (in English).

This program requires the candidates to complete a dissertation as part of the assessment for the M Eng degree. Doing a thesis means that instead of knowledge and information being presented and following a prescribed route for answering questions, candidates are thrust into an active role of managing an investigation into a topic area. This means researching and discovering things for themselves. They will have to set their own targets and parameters, pose their own central research questions and decide on the appropriate sources of information to support the research. It therefore requires the use of the higher-level cognitive skills of analysis, synthesis and evaluation. Candidates may choose an area of particular interest to them within the scope of course title. A dissertation is an individual effort and the candidate, academic tutor and the course professor will work together on constructing an approved topic (research question) and methodologies.

Engineering Dissertation Defense 9 credits

It is expected of Master's candidates to defend their thesis by means of a colloquium doctum (academic discussion). The purpose of the meeting is for the candidates to

convince a panel of experts in the field of the dissertation how well they have done in the conducting of their research study and the preparation of their dissertation

Program Total Credits 48 credits

Candidates need to complete all course assessments with the results of Grade B+ or above.