

MNE4119: PROJECT (GROUP)

Effective Term

Semester A 2023/24

Part I Course Overview

Course Title

Project (Group)

Subject Code

MNE - Mechanical Engineering

Course Number

4119

Academic Unit

Mechanical Engineering (MNE)

College/School

College of Engineering (EG)

Course Duration

Two Semesters

Credit Units

0-9

Level

B1, B2, B3, B4 - Bachelor's Degree

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

Nil

Precursors

Completion of at least 45 CUs (36 CUs for Advanced Standing II students) of the Major Requirement (excluding College Requirement)

Equivalent Courses

MBE4068/MNE4068 Project (Individual)

Exclusive Courses

MBE4118/MNE4118 Project (Individual)

Part II Course Details

Abstract

This course facilitates of 3 to 5 students to work together in a specific project under the supervision of an academic staff. The course aims to strengthen the students' analytical, application and integration skills as well as the ability to work in a team context through the specification, planning and execution of a project related to the theme of the student's major. The Project involves substantial investigative or developmental work requiring the application of knowledge related to the main subject areas of the student's major. The project team will work under the supervision of a faculty staff towards the achievement of the project aim/objectives. The course requires the project team to:

- define the nature, aim, scope and importance of a selected project in a specific subject area
- search the background information and make literature enquiry relevant to the project
- develop appropriate methodology to achieve the defined project aim/objectives
- implement the methodology logically and purposefully
- document the project process, experience and results in a final year project report
- make oral presentation and defend the project outcome

Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if DEC-A1 DEC-A2 DEC-A3 app.)			
1	Define the nature, aim, scope and importance of a selected project clearly in explicit terms.		x	x	
2	Review the body of knowledge from selected literature to deepen the understanding of the theory or practice relevant to the project.			x	
3	Apply such theory or knowledge to formulate and implement the methodology for the project.			x	x
4	Communicate effectively the project process, experience and results in a professional manner, using written, oral and visual media.			x	
5	Demonstrate team-work & interpersonal skills.		x	x	

A1: Attitude

Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: Ability

Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.

A3: Accomplishments

Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

Teaching and Learning Activities (TLAs)

TLAs	Brief Description	CILO No.	Hours/week (if applicable)
1	The TLA depends on the nature of the project as specified by the supervisor. In general, the TLAs would consist of teacher-led supervision activities and student-led investigation activities related to the CILOs as set in section 2.	1, 2, 3, 4, 5	

Assessment Tasks / Activities (ATs)

ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1 Continuous Assessment: 100%	1, 2, 3, 4, 5	100	

Continuous Assessment (%)

100

Examination (%)

0

Assessment Rubrics (AR)**Assessment Task**

Intermediate Report (after one semester)

Criterion

Evidence of understanding of project significance, definition and scope. Effort towards literature review and application or use of knowledge in methodology development and implementation. Analysis and appraisal of results depending on the progress made by that time.

Excellent (A+, A, A-)

Strong evidence of understanding of project significance, definition and scope, effort towards literature review and methodology development.

Good (B+, B, B-)

Significant evidence of understanding of project significance, definition and scope, effort towards literature review and methodology development.

Fair (C+, C, C-)

Evidence shows some basic understanding of project significance, definition and scope, effort towards literature review and methodology development.

Marginal (D)

Just sufficient evidence of understanding of project significance, definition and scope, effort towards literature review and methodology development, and allow the student to continue with the project.

Failure (F)

Little evidence related to the understanding of project significance, definition and scope, effort towards literature review and methodology development. The student is advised to drop the FYP at this juncture.

Assessment Task

Final Report

Criterion

Define the nature, aim, scope and importance of a selected problem or project related to specific subject area. Evidence of searching the background information and make literature enquiry relevant to the project. Evidence of developing an appropriate project methodology to achieve the defined project aim/objectives. Evidence of implementing the methodology logically and purposefully to obtain the results and rationally discuss them before drawing conclusions.

Excellent (A+, A, A-)

Strong evidence showing a successful completion of the FYP. i.e., the outcomes of the project have fulfilled or even surpassed the project objectives.

Good (B+, B, B-)

Significant evidence showing a successful completion of the FYP. i.e., the outcomes of the project have fulfilled the project objectives.

Fair (C+, C, C-)

Evidence shows that the student is profiting from the FYP experience and project outcomes have somewhat fulfilled the project objectives.

Marginal (D)

Just sufficient evidence that demonstrates the work done in the FYP and allows the student to progress without repeating the FYP.

Failure (F)

Very little evidence to demonstrate learning has taken place via the FYP.

Assessment Task

Oral Presentation

Criterion

Make oral presentation and defense of the project endeavour and outcome.

Excellent (A+, A, A-)

Excellent presentation and response to Q&A.

Good (B+, B, B-)

Good presentation and response to Q&A.

Fair (C+, C, C-)

Fair presentation and response to Q&A.

Marginal (D)

Marginal presentation and response to Q&A.

Failure (F)

Not even reaching marginal levels

Additional Information for AR

Project selection, supervision and assessments

Final year **project selection** normally takes place in Semester B or summer term of each academic year. A list of project titles and their brief description offered by MNE's academic staff will be solicited, consolidated and published by the Course Examiner (in conjunction with the respective Major Project Coordinators) of the Final Year Projects. Students are also encouraged to propose topics of their own interest and then attempt to develop them into projects of expected standard in consultation with the chosen supervisors. A period of project consultation between all eligible students and prospective supervisors follows leading to eventual project selection. The project supervisor shall advise and guide the project student throughout the project endeavor and be involved in its final assessment. Withstanding large difference in learning and supervision approach, student is advised to maintain a project logbook and meet his/her project supervisor regularly to report and discuss project progress.

Students are required to submit a short **intermediate report** at the end of one semester of study to assess the progress made. The short intermediate progress will be in the form of a white paper of length of 2-6 pages. The intermediate report will contribute 20% of the project and rated by the project supervisor depending on the agreed plan of executing the project and milestones. An example of the final year project intermediate assessment form can be found in **Appendix 1**. The student may be asked to not to register the course for the following semester if the progress is rated unsatisfactory (i.e. marginal or failure) in the opinion of the project supervisor.

At the end of the project, each student group is required to submit the **final year project report**, and orally present and defend the work done and project outcome in the presence of the supervisor and the assessor. The project presentations shall be organized by the FYP supervisors. The supervisor of each project and another assessor will assess the project independently. The assessment weighting of the supervisor is 60% while it is 40% for the assessor. A typical example of the final year project group assessment form is found from **Appendix 2**.

In order to ensure fair assessment standard of all projects, the overall assessment result for each project will be subject to a project assessment review by the **Project Moderation Committee** led by the Course Examiner and participated by the Major Leader and/or Project Coordinator.

Finally, a **peer assessment** procedure is used to measure how effective individual student as a team player of the team. Each student will assess different members of the group objectively except himself/herself. The results will be used to distribute the final project mark among the students. Please note that this is an important process wholly owned by the project team, and the project supervisor has no right to interfere the peer assessment process. Any dispute apart from clerical error will require every member of the group to agree unanimously to repeat the peer assessment procedure. A typical example of the peer assessment form can be found from **Appendix 3**. (Note: As teamwork is an important element which has a strong bearing on the success of group-based-FYP, it is advisable to form a group which will work-well-together before approaching a professor for project selection.)

Part III Other Information

Keyword Syllabus

The course has no specific syllabus, and the conduct of project takes place as per the details mentioned in the previous section.

Reading List

Compulsory Readings

Title	
1	There are no specific compulsory readings, and the student needs to undertake literature search and other readings as per the needs of the project undertaken following the advice of the supervisor.

Additional Readings

Title	
1	Student initiative is compulsory to search the literature and study the topics associated with the project on a need basis.