

MNE6047: DIRECTED STUDIES

Effective Term

Semester A 2025/26

Part I Course Overview

Course Title

Directed Studies

Subject Code

MNE - Mechanical Engineering

Course Number

6047

Academic Unit

Mechanical Engineering (MNE)

College/School

College of Engineering (EG)

Course Duration

One Semester

Credit Units

3

Level

P5, P6 - Postgraduate Degree

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

Nil

Precursors

Nil

Equivalent Courses

Nil

Exclusive Courses

Nil

Part II Course Details

Abstract

The aim of this course is to strengthen the students' creative, analytical, life-long learning, application and integration skill as well as the ability to work independently with self-motivation through studying a selected subject under the supervision

of an academic member who has the subject knowledge, without attending regular lectures & tutorial/laboratory at the University. An individual is allowed to enrol in this course subject to approval and used only for special occasions such as for those who have taken a course but did not complete all the required components.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Define the key outcome of proposed project.		x	x	
2	Explain the key aspects of the subject.			x	
3	Integrate new knowledge gained to produce required outcomes.			x	x
4	Communicate a subject area to layman effectively.			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.

Learning and Teaching Activities (LTAs)

LTAs	Brief Description	CILO No.	Hours/week (if applicable)
1 a. Project Track OR b. Course Track	<p>The LTAs are flexible and depending on the nature of the directed studies as specified by the supervisor and the work may be carried out without the requirement to attend regular lecture/tutorial/laboratory classes.</p> <p>Alternatively, typical syllabus of a course that was not already completed by the student(s) or equivalent topic(s) may be prescribed and the assessment criteria are established, adopting standards used for a regular taught course, prior to the commencement of the course.</p>	1, 2, 3, 4	

Assessment Tasks / Activities (ATs)

ATs	CILO No.	Weighting (%)	Remarks ("- for nil entry)	Allow Use of GenAI?
1 a. Project Track - Report and Presentation OR b. Course Track - To be defined by the supervisor (tests, quizzes, etc.)	1, 2, 3, 4	100	-	Yes

Continuous Assessment (%)

100

Assessment Rubrics (AR)**Assessment Task**

(Project Track Option) Report (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Evidence of good literature review to develop a methodology to accomplish the project objectives, project execution and the results obtained, analysing the results and drawing relevant conclusions along with related discussion.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

(Project Track Option) Presentation (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Summarize the critical aspects of the project undertaken, methodology adopted to accomplish the stated objective, and conclusions drawn showing key results in a concise manner through a presentation.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

(Course Track Option) To be prescribed by the supervisor in the Application Form (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

To be prescribed by the supervisor in the Application Form, by adopting standards used for a regular taught course.

Excellent

(A+, A, A-) High

Good

(B+, B, B-) Significant

Fair

(C+, C, C-) Moderate

Marginal

(D) Basic

Failure

(F) Not even reaching marginal levels

Assessment Task

(Project Track Option) Report (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Evidence of good literature review to develop a methodology to accomplish the project objectives, project execution and the results obtained, analysing the results and drawing relevant conclusions along with related discussion.

Excellent

(A+, A, A-) High

Good

(B+, B) Significant

Marginal

(B-, C+, C) Moderate

Failure

(F) Not even reaching marginal levels

Assessment Task

(Project Track Option) Presentation (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Summarize the critical aspects of the project undertaken, methodology adopted to accomplish the stated objective, and conclusions drawn showing key results in a concise manner through a presentation.

Excellent

(A+, A, A-) High

Good

(B+, B) Significant

Marginal

(B-, C+, C) Moderate

Failure

(F) Not even reaching marginal levels

Assessment Task

(Course Track Option) To be prescribed by the supervisor in the Application Form (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

To be prescribed by the supervisor in the Application Form, by adopting standards used for a regular taught course.

Excellent

(A+, A, A-) High

Good

(B+, B) Significant

Marginal

(B-, C+, C) Moderate

Failure

(F) Not even reaching marginal levels

Part III Other Information**Keyword Syllabus**

The course is flexible, and has no specific syllabus. Each student taking this course will be required to undertake an in-depth reading assignment of selected literatures or other kinds of publications dealing with some advanced level topics. The work may involve intensive literature search about a specific topics related to the management and operation of a manufacturing enterprise, or to the trade and operation analysis of an industry, or the search and applications of a particular technology most suitable for product design, manufacturing and operations as required by the company where the student is working with.

Alternatively, typical syllabus of a course that was not already completed by the student(s) or equivalent topic(s) may be prescribed.

The syllabus must be proposed by the student and the supervisor and endorsed by the course examiner. The supervisor shall not normally be the same person who supervises the student's dissertation project in order to avoid double counting of achievement.

Reading List**Compulsory Readings**

Title	
1	There are no specific compulsory readings. However, the student will be guided to follow one or more books depending on the selected topic to be investigated and the relevant methodologies that could be explored to carry out this directed studies.

Additional Readings

Title	
1	Nil