

MNE4047: DIRECTED STUDIES

Effective Term

Semester A 2022/23

Part I Course Overview

Course Title

Directed Studies

Subject Code

MNE - Mechanical Engineering

Course Number

4047

Academic Unit

Mechanical Engineering (MNE)

College/School

College of Engineering (EG)

Course Duration

One Semester

Credit Units

3

Level

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

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

Nil

Precursors

Nil

Equivalent Courses

MBE4047 Directed Studies

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 enroll in this course subject to approval and only for special occasions such as for those who participate in the Co-operative Education Scheme or Student Exchange.

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.

Teaching and Learning Activities (TLAs)

TLAs	Brief Description	CILO No.	Hours/week (if applicable)
1 a. Project Track	The TLAs are flexible and depending on nature of the directed studies as specified by the supervisor and the work may be carried out without any requirement to attend regular lecture/tutorial/laboratory classes.		

2	b. Course Track	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.		
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Assessment Tasks / Activities (ATs)

ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	a. Project Track - Report and Presentation	1, 2, 3, 4	100
2	b. Course Track - To be defined by the supervisor (tests, quizzes, etc.)		

Continuous Assessment (%)

100

Examination (%)

0

Assessment Rubrics (AR)**Assessment Task**

a. Project Track: Report

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

a. Project Track: Presentation

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

b. Course Track: To be prescribed by the supervisor in the Application Form

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

Additional Information for AR

* For more details, please refer to Appendix 1

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 final year 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