

SYE1001: INTRODUCTION OF ENGINEERING DISCIPLINES

Effective Term

Semester A 2025/26

Part I Course Overview

Course Title

Introduction of Engineering Disciplines

Subject Code

SYE - Systems Engineering

Course Number

1001

Academic Unit

Systems Engineering (SYE)

College/School

College of Engineering (EG)

Course Duration

One Semester

Credit Units

0

Level

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

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

Nil

Precursors

Nil

Equivalent Courses

Nil

Exclusive Courses

Nil

Part II Course Details

Abstract

This course aims to introduce different engineering disciplines in the College of Engineering to the first year students in the Bachelor of Engineering programme in Innovation and Enterprise Engineering. This course also showcases the significance of engineering profession, innovation, and enterprises in today's society. Students' learning in this course will be supported by invited guest lectures from different engineering departments with real world examples presented in class.

Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Understand basic nature of different engineering disciplines	30	x	x	
2	Understand importance of engineering innovation and enterprises in different disciplines	30	x	x	
3	Understand role of different engineers play in the society	30	x	x	
4	Communicate clearly	10		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.

Learning and Teaching Activities (LTAs)

LTAs	Brief Description	CILO No.	Hours/week (if applicable)	
1	Lectures	Weekly lecture sessions covering fundamentals	1, 2, 3, 4	1 hr x 6 weeks

Assessment Tasks / Activities (ATs)

ATs	CILO No.	Weighting (%)	Remarks ("- " for nil entry)	Allow Use of GenAI?	
1	In-class assignment	1, 2, 3, 4	100	-	Yes

Continuous Assessment (%)

100

Examination (%)

0

Examination Duration (Hours)

0

Minimum Continuous Assessment Passing Requirement (%)

30

Minimum Examination Passing Requirement (%)

0

Additional Information for ATs

Final grade of the course will be either pass or fail. For a student to pass the course, at least 30% of the maximum mark for the continuous assessment should be obtained.

Assessment Rubrics (AR)

Assessment Task

In-class assignement

Criterion

Ability to describe and apply the basic principles and concepts covered in the class.

Pass (P)

Student able to demonstrate such capability.

Failure (F)

Student fail to demonstrate such capability.

Additional Information for AR

Engineering, Engineers, Technology, Innovation, Enterprises.

Part III Other Information

Keyword Syllabus

Innovation, enterprise engineering, entrepreneurship, technology, society

Reading List

Compulsory Readings

Title	
1	Lecture notes and materials to be distributed on Canvas

Additional Readings

Title	
1	To be announced on Canvas