

# SYE4068C: FINAL YEAR PROJECT

## New Syllabus Proposal

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### Effective Term

Semester A 2024/25

## Part I Course Overview

### Course Title

Final Year Project

### Subject Code

SYE - Systems Engineering

### Course Number

4068C

### Academic Unit

Systems Engineering (SYE)

### College/School

College of Engineering (EG)

### Course Duration

Non-standard Duration

### Other Course Duration

Normal Track: 2 semesters

Fast Track: 1 semester

Fast track is normally available to students who repeat the course and opt to continue with the same project and supervisor. This requires the approval of Project Supervisor and Programme/Major Leader.

Other Track: 1 semester and 1 summer term

This is for ASII students and for participating in an academic exchange programme and requires the approval of Project Supervisor.

### Credit Units

0-6

### Level

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

### Medium of Instruction

English

### Medium of Assessment

English

### Prerequisites

Completion of at least 45 CUs (30 CUs for Advanced Standing II students) of the Major Requirement (excluding College Requirement).

(When the project-topic selection-process is offered early, a conditional participation will be allowed to students which includes the additional CUs in progress).

### Precursors

Nil

### Equivalent Courses

ADSE4068 Final Year Project / ADSE4068C Final Year Project / ADSE4116 Capstone Project II / SYE4068 Final Year Project / SYE4116 Capstone Project II

### Exclusive Courses

Nil

## Part II Course Details

### Abstract

The aim of this course is to strengthen a student's analytical, application and integration skills as well as the ability to work independently through the specification, planning and execution of a project related to the theme of the student's programme/major.

### Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Define the nature, aim, scope and importance of a selected problem or project clearly in explicit terms.	15	x	x	x
2	Review the body of knowledge from selected literature to deepen the understanding of the theory or practice relevant to the chosen problem or project.	20	x	x	x
3	Apply such theory or knowledge to formulate and implement the methodology for the chosen problem or project.	45	x	x	x
4	Communicate effectively the project process, experience and results in a professional manner, using written, oral and visual media.	20		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	T1	Each student shall define, under the supervision of a project supervisor, the nature, aim, scope and importance of a selected problem or project related to the subject areas pertaining to his/her programme/ major.	1	N.A.
2	T2	Each student shall research and review the available body of knowledge and background information needed to achieve the desired objective.	2	N.A.
3	T3.1	Each student shall appraise and select the knowledge, theory or practice learned from literature and develop the appropriate project methodology.	3	N.A.
4	T3.2	Implement the methodology to the chosen problem or project.	3	N.A.
5	T3.3	Analyze the results obtained, draw conclusion and appraise the work done.	3	N.A.
6	T4.1	Document the project process, experience and results in the form of Final Year Project Report according to the given format.	4	N.A.
7	T4.2	Make oral presentation and defense of the project endeavor and outcome.	4	N.A.

**Assessment Tasks / Activities (ATs)**

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

**Continuous Assessment (%)**

100

**Examination (%)**

0

### **Additional Information for ATs**

Assessment Process: A two-staged Assessment Process will be adopted for the ADSE4068C Project. The Supervisor of each Project and another Assessor will independently assess the Project. The assessment weighting of the Supervisor and Assessor is 60% and 40% respectively.

The template given in Appendix 1 should be used as criteria reference in the assessment of a Project. In addition to numerical grading, the marks awarded must be summarily justified by the Assessor/Supervisor in clear statements. The Project Assessment Form is given in 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 in charge of ADSE4068C and participated by the Programme/Major Leader and/or Project Coordinator.

### **Assessment Rubrics (AR)**

#### **Assessment Task**

Project

#### **Criterion**

Based on submitted written report and oral presentation/discussion.

#### **Excellent (A+, A, A-)**

Strong evidence of original thinking; good organization, capacity to analyse and synthesize; superior grasp of subject matter; evidence of extensive knowledge base.

#### **Good (B+, B, B-)**

Good evidence of grasp of subject, some evidence of critical capacity and analytic ability; reasonable understanding of issues; good evidence of familiarity with literature.

#### **Fair (C+, C, C-)**

Adequate understanding of the subject; ability to develop solutions to simple problems; adequate evidence of familiarity with literature.

#### **Marginal (D)**

Sufficient familiarity with the subject matter; basic understanding of issues; marginal evidence of familiarity with literature.

#### **Failure (F)**

Little evidence of familiarity with the subject matter; weakness in critical and analytic skills; limited, or irrelevant use of literature.

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### **Additional Information for AR**

#### **Project Selection and Supervision:**

The ADSE4068C Project involves substantial investigative or developmental work requiring the application of knowledge related to the main subject areas of the student's programme major. Each student shall work individually, under the supervision of a project supervisor, towards the achievement of the project aim/objectives. The ADSE4068C requires and expects the students to:

- define the nature, aim, scope and importance of a selected problem or project related to specific subject areas.
- search the background information and make literature enquiry relevant to the project.
- develop the appropriate project methodology to achieve the defined project aim/objectives.
- implement the project methodology logically and purposefully.

- document the project process, experience and results in a final year project report.
- make oral presentation and defense of the project outcome.

Final year project selection normally takes place in Semester B or summer term of each academic year. A list of ADSE4068C project titles and their brief description offered by SYE' s academic staff will be solicited, consolidated and published by the Course Examiner (in conjunction with the respective Programme/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 ADSE4068C project supervisor shall advise and guide the project student throughout the project endeavor and be involved in its final assessment.

Each project student is advised to maintain a project log book and meet his/her project supervisor regularly to report and discuss project progress. The Course Examiner and/or Programme/Major Project Coordinator may ask student to submit a short intermediate report at the end of one semester/term of study to assess the progress made. The student may be asked to defer registration for the following semester if the progress is unsatisfactory in the opinion of the project supervisor.

Each project student is eligible to apply for SYE Laboratory for a small sum of money that can be used for project related consumables.

At the end of the project, each student is required to submit hard and soft copies of his/her final year project report, and orally present and defend the work done and project outcome. The project presentations shall be organized and coordinated by the ADSE4068C Course Examiner and Programme/Major Project Coordinators drawn from each participating programme.

## Part III Other Information

### Reading List

#### Compulsory Readings

Title	
1	Provided by individual FYP supervisor.

#### Additional Readings

Title	
1	Provided by individual FYP supervisor.