

## The Hong Kong University of Science and Technology

Course Title: Final Year Thesis/ Decision Analytics Final Year Project/ Industrial Engineering and Engineering Management Final Year Project

Course Code: IEDA4901/ 4920/ 4960

No. of Credits: 6

Any pre-/co-requisites: No

**Name:** Please refer to the group's supervisor

**Email:** Please refer to the group's supervisor

### Course Description

To provide students an opportunity to integrate all that they have already learned, and will learn in their final year, into their first large-scale engineering project.

### Duration and Credits:

The final year project lasts for two semesters. A total of six credits is assigned, three to each semester (a grade for the whole project will be given after its completion).

While it is possible to begin the project work when the project is formally registered, it is advisable to start the project in the summer (winter) session before that. Obviously, if a student starts too late, it will be very difficult for him/her to produce a result which comes up to the expected standard, from which the student himself/herself would most benefit, and which would most impress a potential employer!

The principle in judging when a student should start his/her final year project is that the project should be done in his/her last two semesters of study. In this way, he/she will have had enough knowledge to do the project (not too early) and will not delay his/her graduation purely due to the late start of the project (not too late). Any students can start their projects this summer, as long as they feel that they can graduate next summer (with some evidence, for example, after finishing this semester's courses and possible summer courses they only have 40 or less credits left).

### Assessments:

Peer review for each group in Fall and Spring terms for Final Year Projects

Please allocate total 100 points to each of the team members, including yourself, according to their contribution to the project.

For example, A: 35%, B: 20%, C:30%, D:15%

You may also add some comments to explain why you make the allocation above.

Your input will be put as strict confidential.

The deadline of the peer review in Fall is: **30 Nov 2024 - the last day of Fall term class**

The deadline of the peer review in Spring is: **10 May 2025 – the last day of Spring term class**

### Roles of Team member / Panel member / Project coordinator

- Panel members will recommend [*Numerical*] panel grade for teams

Guideline: Grade (Mean)

A+	A	A-	B+	B	B-	C+	C	C-	D	E, F
96	88	80	72	64	56	48	40	32	16	0

- FYP coordinator will determine team [*Letter*] grade for project supervisors (by combining ratings from project supervisors and panel members)
- Project supervisors assign (different) individual grade to each team member

**Required Texts and Materials**

Nil

**[Optional] Additional Resources**

Nil

## Schedule of Events

Events	Tentative dates for project to be started in Fall 2024-25
1. Project information to students	Mid-April
2. Formation of teams and discussion with perspective project supervisors	All the time between (1) and (3)
3. Project Selection due	May 2, 2024
4. Announcement of team-project matching result	Mid May
5. Project Plan due	Sept 10
6. Progress Report + Peer Review due	Nov 30 (last day of fall term class)
7. Draft for the Final Report due	April 11
8. Final Report due	April 30 11am
9. Presentation with FYP Video	Early-May
10. Peer Review II + FYP Video link submission	Before May 10 (last day of spring term class)

All the reports should be submitted to the project supervisor(s) on time. Students are strongly encouraged to give a copy of their draft reports and presentation outlines/materials to the communication tutor well before the due dates for comments, suggestions, advice and help.

### III. OBE GRADING SCHEME FOR FYP

#### An Overview

FYP Learning Outcomes
1. ability to define an engineering problem and articulate its significance to a business/society
2. ability to prepare a clear project proposal identifying the problem statement, the key issue, potential methods or approaches that can solve the issues, and mechanisms to integrate the solutions of these components in an optimal way
3. ability to model the problem to facilitate the analysis
4. ability to run experiments or collect data to estimate accurate parameters for the problem models
5. ability to solve models using IE/OR tools, and to analyse the results
6. ability to product physical or abstract prototype model solutions to problems
7. ability to work in a cross functional team
8. ability to communicate effectively with various parties including with team members, supervisors and possibly industry partners
9. ability to report the findings of the project

#### Rubrics of FYP Assessment

FYP outcomes	Excellent [3.4 – 4.3]	Good [2.4 – 3.3]	Acceptable [1.4 – 2.3]	Unsatisfactory [0 – 1.3]
1 (define a problem)[10%]	Able to clearly identify and define the problem with realistic concerns	Able to clearly identify and define the problem with simplified concerns	Able to clearly identify and define the problem under the ideal case	Unable to clearly define the problem
2 (proposal, by advisor) [10%]	The proposal includes all desired information concretely	The proposal includes all desired information, but some are vague	The proposal may miss some desired information	No submission on time
3 (model) [10%]	The model reflects the real problem accurately	The model reflects the real problem with simplification	The model is valid theoretically	The model is wrong or inappropriate
4 (estimate data) [10%]	The parameters are collected/estimated realistically	Parameters are collected/estimated under simplified assumptions	Parameters are collected/estimated theoretically	Parameters are arbitrarily collected/estimated
5 (problem solving) [10%]	Problem is solved correctly with creative approach	Problem is solved correctly with standard approach	Problem is solved in compromised way	The solution approach is wrong
6 (prototype) [10%]	The prototype works for most real cases within the defined scope	The prototype works for common real cases within the scope	The prototype works for reasonable special cases	The prototype is wrong/inappropriate
7 (team work) [10%]	The member has a clear duty and contributes substantially	The member has a clear duty and contributes enough	The member makes ad hoc contribution	The member makes no contribution to the team
8 (communication) [15%]	Communicate actively in the FYP process ( <b>by advisor</b> ), Presentation and Q/A clear ( <b>by panel</b> )	Communicate regularly in the FYP process ( <b>by advisor</b> ), Presentation and Q/A can be followed ( <b>by panel</b> )	Communicate at the minimum level in the FYP process ( <b>by advisor</b> ), Presentation and Q/A understandable ( <b>by panel</b> )	Communicate poorly in the FYP process ( <b>by advisor</b> ), Presentation and Q/A not clear ( <b>by panel</b> )
9 (report and video) [15%]	Well organized, tables/figures properly used, no obvious grammar mistakes	Having the basic structure, tables/figures properly used, only minor grammar mistakes	Poor organization but still readable, with some grammar mistakes	Not readable, many grammar mistakes

Remark:

1. Each outcome will be separately assessed by the FYP advisor and the panel, unless otherwise specified.

2. Some outcomes may not be applicable for some special cases, which can be determined by the FYP advisor. In case of that, the weight(s) of the inapplicable outcomes will be evenly distributed to other outcomes.