IEDA Final Year Project / Thesis (2022-23)

Course Codes:
IEDA 4901 Final Year Thesis
IEDA 4920 Decision Analytics Final Year Project
IEDA 4960 Industrial Engineering and Engineering Management Final Year Project

Objective:
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).

Schedule of Events:

Events	Tentative dates for project to be started in Fall 2022-23
Project Plan due	Sept 9 2022 (Fri)
Progress report due + Peer review	Dec. 2 2022 (Fri)
Draft for the Final Report due	April 7 2023 (Fri)
Final Report due	May 2 2023, 11am (Tue)
Presentation + Peer review	TBC. Early May 2023

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.

OBE Grading Scheme for FYP:

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 (**by advisor**), Presentation and Q/A clear (**by panel**)	Communicate regularly in the FYP process (**by advisor**), Presentation and Q/A can be followed (**by panel**)	Communicate at the minimum level in the FYP process (**by advisor**), Presentation and Q/A understandable (**by panel**)	Communicate poorly in the FYP process (**by advisor**), Presentation and Q/A not clear (**by panel**)
9 (report and poster) [**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.