Subject Description Form

Subject Code	ISE2123
Subject Title	Design and Manufacturing Group Project
Credit Value	6 Academic Credits
Level	3
Exclusion	IC2123
Objectives	While the specific objectives of individual projects may vary from one project to another, students are expected to develop the following generic skills through the learning experience of working on an individual project under the guidance of a supervisor: 1. Skills to obtain the required information to formulate a problem, and to devise and implement strategies in order to produce a solution; 2. Skills to apply knowledge and procedures (principles, techniques, and methods) and to understand their limitations in problem identification, data analysis, and formulation of logical observations and/or solutions; 3. Skills to work effectively as an individual using one's initiative and within constraints; 4. Skills to prepare, present, and defend a project report effectively.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: a) Communicate, cooperate, and collaborate as a team member, as well as identify individual efforts of group members. *(Objective 3 and Syllabus 1-3). Category B;* b) Obtain information in formulating a problem, including gaining the required skills necessary in data collection, as a means of devising and implementing strategies during problem-solving. *(Objective 1-2 and Syllabus 1-3). Category A;* c) Apply knowledge and procedures, and understand their limitations. *(Objective 2 and Syllabus 1-3). Category A; and* d) Prepare, present, and defend a clear, coherent, and concise report. *(Objective 4 and Syllabus 1-3). Category A.*

Subject Synopsis/ Indicative Syllabus	All projects assigned will be of "real" work basis proposed by supervisors. These projects are always having a real problem of interest to the clients which requires students to meet the expected demand. Students are required

	to work through the various project stages and study various aspects related to the students' field of study with guidance of supervisors. Typical project contents are: 1. Study on Product / Process Design and Improvement 2. Study on Warehousing, Inventory Management and Supply Chain Management 3. Study on Production Operations and Process Students should note that the scope of the assignment will depend on the nature of the project proposed by supervisors. It is likely that not all activities listed above are to be undertaken in a project.
Learning Methodology	Throughout the duration of the project, the supervisor provides guidance and monitors the progress of the projects. The project-based learning approach is recommended for adoption. It is a systematic teaching method engaging students to learn the essential knowledge and life-enhancing skills through extended and student-influenced inquiry process, which are structured around complex and real problems. 1. The project is a detailed study of various aspects related to the students' field of study. Normally, students work in groups of three to four members. They have to apply all the knowledge learned through group projects or by self-learning. 2. Throughout the project duration, project supervisors are expected to discuss with their students through meetings, which can be arranged based on mutually convenient schedules. The supervisors shall provide guidance and monitor the progress of the projects.

Assessment Methods in Alignment with Intended Learning Outcomes

Assessment Methods	Weighting (%)	Intended Learning Outcomes Assessed			
		a	b	c	d
1. Project Progress	20	✓	✓	✓	
2. Oral Presentation	30	✓	✓	✓	✓
3. Written Report	50	✓	✓	✓	✓
Total	100				

Students shall be assessed individually to reflect the student's performance.

Project Progress is to assess students' insight, communication and execution of a project during the project period.

Oral Presentation allows students to demonstrate their ability in presenting their project clearly and logically including the project objectives, their approach to solve the problem and the deliverable of their project.

Written Report is to facilitate students to review and sum up the activities and processes of the project holistically. Assessment of the report will focus on the adequacy of the technical content, clarity and fluency of the presentation, discussion, and recommendation.

The second and the third components are jointly assessed by two co-examiners and the project supervisor.

Student Study Effort Required

Class Contact	
▪ Briefing Session	2 Hrs.
▪ Oral Presentation	1 Hr.
▪ Meetings (with project team, supervisor or any project stakeholders) for total 13 sessions	39 Hrs.
Other Study Effort	
▪ Literature Review/Fieldwork/Experiment	135 Hrs.
▪ Analysis/Written Report	60 Hrs.
Total Study Effort	**237 Hrs.**

Reading List and References

1) Blaxter, L, et al, How to Research, 2nd edn, Open University Press, England, 2001

2) Bryman, A, Research Methods and Organization Studies, Unwin Hyman, Boston, 1989

3) Murray, R, How to Write a Thesis, 2nd edn, Open University Press,

	England, 2006 4) Slade, C., et al., Form and Style: Research Papers, Reports, Thesis, 9th edn, Houghton Mifflin, Boston, 1994