MS4089 Final Year Project

[Lectures: 0 hrs; Project time: 8 hours / per week for two semesters; Prerequisites: NIL; Academic Unit: 8]

Learning Objective

The purpose of final year projects is to provide students an opportunity to apply the knowledge they have learnt, their intellectual abilities and practical skills to solving real, or close to real life engineering problems. These problems may take the form of an investigation or the development of engineering hardware, software or both. The objectives of the project are:

- To offer students an opportunity to demonstrate their competence in laboratory work.
- To provide a vehicle for integrating the knowledge gained in various subjects of the degree course.
- To allow the exercise of the undergraduates' personal qualities - viz. maturity, initiative and creative ability.
- To apply communication skills, both oral and written, to communicate results, concepts and ideas.
- To solve problems of a non-routine nature.

Learning Outcome

Throughout the project, students are expected, with guidance from their supervisors, to do things and obtain information for themselves. Literature review, which provides the students a broader perspective of the work they are engaged in, is an essential part of the project. The projects are also organized with a view to develop their ability to communicate, both verbally and in writing. The verbal skill is developed through constant meetings and discussions with supervisors and assessed via an oral presentation towards the end of the projects. The writing skill is developed through report writing. These reports form the major part of the final assessment. Throughout the FYP exercise, students are trained, when necessary, how to use hardware, software and IT effectively in order for a successful completion of the project. They also have to learn to how to optimize the outcomes under various constraints. Student progress is continuously monitored throughout the project duration. It is through these rigorous approaches and procedures that it is ensured that in end of the exercise, students are able to show competence in the following areas:

- Ability to plan and implement an investigative or developmental project given general objectives and guidelines
- In-depth skill to use some laboratory / workshop equipment to process and characterize materials
- Ability to analyze data to produce useful information and to draw conclusions by systematic deduction
- Ability to work and study independently

Nanyang Technological University,
School of Materials Science & Engineering
• Ability to communicate results, concepts, analyses and ideas in written and oral form