# Subject Description Form

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>ENG1003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject Title</td>
<td>Freshman Seminar for Engineering</td>
</tr>
<tr>
<td>Credit Value</td>
<td>3</td>
</tr>
<tr>
<td>Level</td>
<td>1</td>
</tr>
<tr>
<td>Pre-requisite / Co-requisite/ Exclusion</td>
<td>Nil</td>
</tr>
</tbody>
</table>

## Objectives
The objectives of this subject are to:

1. Introduce students to the engineering broad discipline and enthuse them about their major study
2. Cultivate students’ creativity and problem-solving ability, and global outlook
3. Introduce students to the concept of entrepreneurship
4. Engage the students in desirable forms of learning at university that emphasizes self-regulation, autonomous learning and deep understanding

## Intended Learning Outcomes
Upon completion of the subject, students will:

1. Be able to demonstrate an understanding and an enthusiasm about the engineering broad discipline and their major study
2. Develop their problem-solving ability and global outlook
3. Be able to demonstrate an understanding of entrepreneurship
4. Be able to search for information, formulate a project plan, and manage a project with initiative
5. Be able to demonstrate an understanding of academic integrity.

## Subject Synopsis/Indicative Syllabus

**Syllabus:**

1. **Online Tutorial on Academic Integrity (2 hours*)**
   Students will be required to complete successfully an Online Tutorial on Academic Integrity on or before week 5 of the first semester. The students will understand the importance of academic integrity by completing the Online Tutorial.

2. **Renowned Speaker Seminars (8 hours*)**
   The Renowned Speaker Seminar will be given by a renowned speaker to introduce to students the engineering broad discipline and to enthuse them about their major study. The seminars will also cultivate students’ global outlook.

3. **Departmental Seminar (12 hours*)**
   The Departmental Seminar will be delivered by senior academic staff and/or reputable professionals in the engineering broad discipline to arouse students’ interests in engineering and to cultivate their understanding of and sense of belonging to the discipline and the engineering profession.

4. **Freshman Project (42 hours*)**
   There will be practical workshops, presentation and demonstration sessions for the Freshman Project. The freshman project aims at developing students’ creativity, problem-solving skills, and teamwork abilities through practical and hands-on tasks at a level commensurate with their first-year engineering backgrounds. Students will work in small groups under the guidance of teachers/instructors to design and implement an engineering solution to some given problems.

5. **Entrepreneurship Project (42 hours*)**
   The entrepreneurship project is designed to develop students’ appreciation
and understanding about entrepreneurship and the commercialization process by attending lectures, workshops and tutorials. In the course of the Entrepreneurship Project, students will identify technology opportunities and learn the skills of preparing a simple business plan.

(Note: hours indicate total student workload)

### Teaching/Learning Methodology

**Online Tutorial on Academic Integrity**
The Online Tutorial on Academic Integrity is developed by the University to help the students understand the importance of academic integrity. By going through the Online Tutorial, students will be aware of the importance of upholding academic integrity during University study. They will also learn good practices by which to stay clear of dishonest behaviors and academic plagiarism.

**Seminars**
The renowned speaker seminars and departmental seminars are designed to arouse students’ interest about engineering. The delivery mode will be interactive and engaging. Students will be motivated to make preparation by searching for information and doing background reading. They will be encouraged to raise questions and discuss with the presenters. Assessment tasks (quizzes) will be designed to measure students’ learning outcomes as well as to encourage participation and interaction.

**Freshman Project**
For the Freshman Project, students will work collaboratively with their group members to design and implement an engineering solution to a given problem under the guidance of instructors. There will be close staff-students and students-students interaction. Students will be given opportunities to develop creativity, problem-solving skills and teamwork abilities. Assessment tasks will consist of demonstration, presentation, reports, and reflective essay writings. These are designed to evaluate individual student’s performance and achievement as well as to encourage active participation.

**Entrepreneurship Project**
There will be lectures, workshops, and tutorials. A general overview of the concepts required to conduct the project will be provided to students through lectures. They will then work in small groups in a workshop to appreciate the essential elements in the development of a business plan and subsequently to produce a simple business plan and to present it to fellow classmates. Assessment will focus towards students’ understanding about entrepreneurship, innovation and creativity.

### Assessment Methods in Alignment with Intended Learning Outcomes

Students’ performance in this subject will be assessed by using a letter-grading system in accordance with the University’s convention from grade F (failure) to A+. The relative weights of the different assessment components are as follows:

<table>
<thead>
<tr>
<th>Specific assessment methods/tasks</th>
<th>% weighting</th>
<th>Intended subject learning outcomes to be assessed (Please tick as appropriate)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Online Tutorial on Academic Integrity</strong></td>
<td>0%</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td><strong>Seminars</strong></td>
<td>20%</td>
<td>✔</td>
</tr>
<tr>
<td>Quizzes</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Freshman Project</strong></td>
<td>40%</td>
<td>✔ ✔</td>
</tr>
<tr>
<td>Project demonstration, presentation, report and reflective essay writing</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Entrepreneurship Project</strong></td>
<td>40%</td>
<td>✔ ✔</td>
</tr>
<tr>
<td>Business plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100%</td>
<td></td>
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</tbody>
</table>
Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:

Quizzes (online or paper-based) can measure the students’ understanding about the engineering discipline. Through reflective essays, students can reflect on their appreciation and understanding about the engineering discipline. Through project demonstration, presentation and project reports, students can demonstrate their creativity, problem-solving skills and team-work abilities. They can also demonstrate their ability to search for information, formulate a project plan, and manage a project with initiative. Through business plan, students can demonstrate their understanding about entrepreneurship.

Pass Conditions

In order to pass this subject, students must obtain a Grade D or above for total marks comprising the Seminars, Freshman Project and Entrepreneurship Project as described here AND pass the Online Tutorial on Academic Integrity on or before week 5 of semester 1 as described in the previous section.

<table>
<thead>
<tr>
<th>Student Study Effort Expected</th>
<th>Class contact:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Introduction and pre-seminar meeting</td>
<td>3 hours</td>
</tr>
<tr>
<td></td>
<td>Freshman project: 3 hours per week for 5 weeks</td>
<td>15 hours</td>
</tr>
<tr>
<td></td>
<td>Entrepreneurship project: 3 hours per week for 5 weeks</td>
<td>15 hours</td>
</tr>
<tr>
<td></td>
<td>Renowned Speaker Seminar and Departmental Seminars</td>
<td>6 hours</td>
</tr>
</tbody>
</table>

Other student study effort:

- 69 hours (for Online Tutorial on Academic Integrity; background information search, project work, preparing and doing quizzes after seminars, meeting and discussion, preparation for presentation and demonstration, and report writing.)

Total student study effort 105 Hours

Reading List and References


Last Updated August 2014

Prepared by Faculty of Engineering