### Subject Description Form

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>EIE3110</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject Title</td>
<td>Research Methodology</td>
</tr>
<tr>
<td>Credit Value</td>
<td>3</td>
</tr>
<tr>
<td>Level</td>
<td>3</td>
</tr>
<tr>
<td>Pre-requisite / Co-requisite / Exclusion</td>
<td>Nil</td>
</tr>
</tbody>
</table>

#### Objectives
To equip students with the technique in carrying out a small-scale research project in the electronic and information discipline.

#### Intended Subject Learning Outcomes
Upon completion of the subject, students will be able to:

- **Category A: Professional/academic knowledge and skills**
  1. Describe the main steps involved in carrying out a research project.
  2. Write a research proposal.
  3. Search and identify information useful to a research project.
  4. Pursue a small-scale research project in the electronic and information discipline.
  5. Write a research report.

- **Category B: Attributes for all-roundedness**
  6. Present ideas and findings effectively.
  7. Think critically.
  8. Learn independently.

#### Subject Synopsis/Indicative Syllabus

Choosing a topic. The hypothesis. Topic analysis. The research question.

Writing the project proposal. Feasibility of the proposed research. What is involved in preparing the proposal? How is the proposal linked to the final project report? The importance of supervision of the project, from proposal to final report.

Planning the project. The project life cycle. Advantages of a detailed project plan. Creating the project plan.

Methodology. Find out about methods. Methods and types of research.

Literature review. Purpose of a literature review. What should be reviewed? How much literature is there in your subject? Doing the literature review.

Using results. Results analysis strategy. Problems and errors in research.


#### Teaching/Learning Methodology
Lectures: Key concepts of the subject are delivered to students.

Tutorials/Discussions/Presentations: Students will be able to clarify concepts and to have a deeper understanding of the lecture material; examples are given and discussed. Students' presentations will be assessed and feedback will be given immediately.
### Assessment Methods in Alignment with Intended Subject Learning Outcomes

<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>Continuous Assessment</td>
<td></td>
<td>1 2 3 4 5 6 7 8</td>
</tr>
<tr>
<td>• Presentations and discussions</td>
<td>40%</td>
<td>✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td>• Proposal writing</td>
<td>20%</td>
<td>✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td>• Report writing</td>
<td>40%</td>
<td>✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
</tbody>
</table>

**Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:**

Presentations and discussions: These can measure the students’ understanding of the concepts taught in this subject and learnt on their own. They can also be used to evaluate students’ ability to think critically, learn independently, and communicate effectively in verbal form.

Proposal writing: The proposal is used for evaluating the ability to think critically, learn independently, and communicate effectively in written form.

Report writing: In the final report, the research background and findings will be summarized and presented. It will be used as a basis for evaluating the students’ ability to conduct research, think critically and to communicate effectively in written form.

### Student Study Effort Expected

<table>
<thead>
<tr>
<th>Class contact (time-tabled)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Lecture</td>
<td>24 Hours</td>
</tr>
<tr>
<td>• Tutorial/Laboratory/Practice Classes</td>
<td>15 hours</td>
</tr>
</tbody>
</table>

**Other student study effort:**

| Lecture: preview/review of notes; homework/assignment; preparation for test/quizzes/examination | 36 Hours  |
| Tutorial/Laboratory/Practice Classes: preview of materials, revision and/or reports writing | 30 Hours  |

**Total student study effort:** 105 Hours

### Reading List and References

**Reference Books:**


### Last Updated

June 2015

### Prepared by

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