### Subject Description Form

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>COMP100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject Title</td>
<td>Introduction to Information Technology</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

This subject provides students with the basic concepts of information technology and computing, as well as knowledge and practice on deploying and controlling common information technology applications. This subject is suitable for all students as a first subject in information technology, whether they intend to continue to study information technology or not. Students who intend to study information technology-related programmes are strongly recommended to take both COMP100 and COMP111.

### Intended Learning Outcomes

Upon completion of the subject, students will be able to:

- a) understand how a computer works;
- b) understand the potentials of information technologies in business and industry;
- c) use popular operating systems to carry out sequence of tasks;
- d) appreciate the power of programmed computer operation;
- e) understand the current trends in the development of popular information technologies such as the Internet and related tools;
- f) appreciate IT-related intellectual property issues and their protection.

### Alignment of Programme Outcomes:

Program Outcome 1: This subject contributes to having students practice their writing skills with project document and report writing, as well as project presentation.

Program Outcome 2: This subject contributes to developing a global outlook at various factors that affects the performance and function of a computing system.

Program Outcome 4: This subject contributes to developing student critical thinking through tutorial and lab exercises on solving problems. They will also practice more in written assignments, programming exercises, and project.

Program Outcome 7: This subject contributes to team work with group-based project for students to practice team spirit.

### Subject Synopsis / Indicative Syllabus

1. **Introduction to Computer Systems**
   - Major components of computer systems: central processing units, storage devices and media, inputs / outputs; working principle of computers; contemporary types of CPU, memory, input / output devices currently in use.

2. **System Software**
   - Functions and operations of system software; basic features and commands of MS Windows and Unix / Linux; script language and task control. Open source software like Ubuntu OS, OpenOffice, Octave.

3. **Communication, Multimedia and the Internet**
Communication and networking; Internet resources and tools; multimedia information creation and application.

4. IT Applications
Introduce typical applications of information technologies such as office automation, knowledge management, education, entertainment, digital edutainment, manufacturing, geo-informatics, bio-informatics, etc.

5. Inside IT Applications
Role of programming in IT applications, e.g. shell programs, macros in Excel, robotic control, concept of algorithm and programming, debugging.

6. IT Intellectual Property
Security, privacy and ethics with software; copyright and patent law; trade secrets and registered design.

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### Teaching/Learning Methodology

The course material will be delivered as a combination of mass lectures and small group supervised laboratory sessions. Students will get familiarized with common operating systems and environment, internet and multimedia tools. Open source software solutions like Ubuntu, OpenOffice and Octave as replacement of Windows, MS Office and Matlab will also be introduced. They will also attempt simple script, shell programs etc and appreciate exercising automatic control over the computer and applications.

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### Assessment Methods in Alignment with Intended 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>1. Assignments</td>
<td>25%</td>
<td>a b c d e f</td>
</tr>
<tr>
<td>2. Lab exercises</td>
<td>45%</td>
<td>a b c d e f</td>
</tr>
<tr>
<td>3. Project</td>
<td>30%</td>
<td>a b c d e f</td>
</tr>
<tr>
<td>4. Mid-term</td>
<td></td>
<td></td>
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<tr>
<td>5. Examination</td>
<td></td>
<td></td>
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<tr>
<td>Total</td>
<td>100%</td>
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</tbody>
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### Student Study Effort Expected

- **Class contact:**
  - Lecture: 14 Hrs.
  - Laboratory: 42 Hrs.

- **Other student study effort:**
  - Homework: 12 Hrs.
  - Project: 16 Hrs.

- **Total student study effort:** 84 Hrs.

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### Reading List and References

**Reference Books:**

