# Subject Description Form

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>COMP2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject Title</td>
<td>Object-oriented Programming</td>
</tr>
<tr>
<td>Credit Value</td>
<td>3</td>
</tr>
<tr>
<td>Level</td>
<td>2</td>
</tr>
<tr>
<td>Pre-requisite / Co-requisite / Exclusion</td>
<td>Pre-requisite: COMP1011</td>
</tr>
</tbody>
</table>

## Objectives

The objectives of this subject are to:

- introduce students the basic elements of object-oriented programming;
- teach students how to program computer systems using an object-oriented programming language; and
- familiarize students the tools that streamline object-oriented development.

## Intended Learning Outcomes

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

**Professional/academic knowledge and skills**

(a) Use an object-oriented programming language to solve computer problems; and
(b) Use an object-oriented programming language to build computer systems.

**Attributes for all-roundedness**

(c) build computer systems in groups and develop group work; and
(d) cooperate with team members in problem solving.

## Subject Synopsis/Indicative Syllabus

### Topic

1. Object-based programming. Concept of objects and classes. Correspondence between software objects and real-world objects. Object life cycle.
4. Multiple inheritance/Interfaces
5. Exception handling.
7. Concurrency.
8. Use of UML to model OO projects.
**Teaching/Learning Methodology**

This subject emphasizes both the conceptual elements in computer programming and practical experiences. A high-level, object-oriented programming language, such as C++ or Java, will be used for illustration purposes.

The lectures will be used to deliver course material that will be practiced/reinforced during the tutorials/labs. Individual/Group projects will be given to give students hand-on development experience.

<table>
<thead>
<tr>
<th>Assessment Methods in Alignment with Intended Learning Outcomes</th>
<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></td>
<td></td>
<td>60%</td>
<td>a  b  c  d</td>
</tr>
<tr>
<td>Continuous Assessment</td>
<td>1. Assignments, Quizzes &amp; Projects</td>
<td>✓ ✓ ✓ ✓</td>
<td></td>
</tr>
<tr>
<td>Final Examination</td>
<td>40%</td>
<td>✓ ✓</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A pass in both the continuous assessment and final examination portions are required to pass this subject.

**Student Study Effort Expected**

Class contact:

- Lecture
  
  39 Hrs.

- Tutorial/Lab
  
  13 Hrs.

Other student study effort:

- Assignments, Quizzes, Projects, Exam
  
  68 Hrs.

Total student study effort

  120 Hrs.

**Reading List and References**

**Reference Books:**


