F27SA Software Development 1

**COURSE DETAILS**

**Course Code:** F27SA  
**Full Course Title:** Software Development 1  
**SCQF Level:** 7  
**SCAF Credits:** 15  
**Available as Elective:** No

**DELIVERY LEVEL**

<table>
<thead>
<tr>
<th>Undergraduate:</th>
<th>Yes</th>
<th>Postgraduate Taught:</th>
<th>No</th>
<th>Postgraduate Research:</th>
<th>No</th>
</tr>
</thead>
</table>

Additional Information:
Course being delivered at the specified campus(es) and also at a by collaborative partner; Ocean University of China on BEng Robotics programme.

**COURSE AIMS**

To introduce the object-oriented paradigm and the use of an object-oriented language.

**LEARNING OUTCOMES – SUBJECT MASTERY**

- Knowledge of the object-oriented paradigm
- Awareness of the contrast with other programming paradigms
- Manipulating objects in an IDE
- Understanding and using documentation in an API
- Reading, understanding, adapting, creating, and documenting object-oriented code

**LEARNING OUTCOMES – PERSONAL ABILITIES**

- Sharing work with random partners in laboratories using version control (pair programming)
- Deriving and creating own solutions to problems (pdp)
- Competence in the use of a command-line shell (pdp)
- Reading and running code, and modifying it

**SYLLABUS**

- Objects and classes
- Class definitions: fields, constructors, methods, parameters
- Selection and iteration
- Object interaction: main method, creating and using class instances.
- Grouping objects: collection classes, iterators, arrays
- Library classes, documentation
- Testing and debugging

**COURSE RELATIONSHIPS**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Level</th>
<th>Title</th>
<th>School</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>F27SB</td>
<td>7</td>
<td>Software Development 2</td>
<td>School of Math and Comp Sci.</td>
<td>Linked</td>
</tr>
</tbody>
</table>
### LOCATION AND ASSESSMENT METHODS

<table>
<thead>
<tr>
<th>Edi</th>
<th>SBC</th>
<th>Ork</th>
<th>Dub</th>
<th>Malay</th>
<th>IDL</th>
<th>COLL</th>
<th>ALP</th>
<th>OTH</th>
<th>Method</th>
<th>Weight</th>
<th>Exam Mins</th>
<th>Type</th>
<th>Diet</th>
<th>Synoptic Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Practical</td>
<td>50</td>
<td></td>
<td>Assessment</td>
<td>Semester 1</td>
<td></td>
</tr>
<tr>
<td>Y</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Examination</td>
<td>50</td>
<td>120</td>
<td>Assessment</td>
<td>Semester 1</td>
<td></td>
</tr>
<tr>
<td>Y</td>
<td></td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Examination</td>
<td>100</td>
<td>120</td>
<td>Reassessment</td>
<td>Semester 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Examination</td>
<td>100</td>
<td>120</td>
<td>Assessment</td>
<td>Semester 1</td>
<td></td>
</tr>
</tbody>
</table>