COURSE DETAILS
Course Code: F79MA
Full Course Title: Statistical Models A
SCQF Level: 9
SCAF Credits: 15
Available as Elective: No

DELIVERY LEVEL
Undergraduate: Yes
Postgraduate Taught: Yes
Postgraduate Research: No

Additional Information:

COURSE AIMS
In this module students will

- develop an understanding of the different methodologies of statistical inference
- develop skills in practical, computer-based estimation and inference
- develop report writing and presentation skill
- develop independent research skills

LEARNING OUTCOMES – SUBJECT MASTERY
After studying this module, students should be able to:

Understand the three main approaches to statistical inference and the relations between them, and to apply appropriate statistical methodology in a practical application.

LEARNING OUTCOMES – PERSONAL ABILITIES
At the end of the module, students should be able to:

- Demonstrate the ability to learn independently
- Manage time, work to deadlines, and prioritise workloads
- Use an appropriate computer package to process data
- Present results in a way which demonstrates that they have understood the technical and broader issues of statistical inference

SYLLABUS
- Inference and decision making
F79MA Statistical Models A

- Parameter estimation
- Likelihood
- Bayesian estimation and credibility theory
- Hypothesis testing
- Project preparation
- Applied statistical project

### 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>F78PA</td>
<td>8</td>
<td>Probability and Statistics A</td>
<td>School of Math and Comp Sci.</td>
<td>Pre-Requisite</td>
</tr>
<tr>
<td>F78PB</td>
<td>8</td>
<td>Probability and Statistics B</td>
<td>School of Math and Comp Sci.</td>
<td>Pre-Requisite</td>
</tr>
<tr>
<td>F79MB</td>
<td>9</td>
<td>Statistical Models B</td>
<td>School of Math and Comp Sci.</td>
<td>Taught</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>Y</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Examination</td>
<td>60</td>
<td>120</td>
<td>Assessment</td>
<td>Semester 1</td>
<td>F79MB</td>
</tr>
<tr>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Coursework</td>
<td>40</td>
<td></td>
<td>Assessment</td>
<td>Semester 1</td>
<td>F79MB</td>
</tr>
<tr>
<td>Y</td>
<td>Y</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>F79MB</td>
</tr>
</tbody>
</table>