### COURSE DETAILS

**Course Code:** F20CA  
**Full Course Title:** Conversational Agents and Spoken Language Processing  
**SCQF Level:** 10  
**SCAF Credits:** 15  
**Available as Elective:** No

### DELIVERY LEVEL

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

### COURSE AIMS

This course aims to give students the opportunity to develop:

- Knowledge and understanding of design, implementation and evaluation techniques for conversational agents and spoken language processing.
- An awareness of current research and emerging issues in the field of conversational agents and spoken language processing.
- Knowledge that covers a range of interdisciplinary research methods and specialised practical skills involved in building working conversational interfaces.

### LEARNING OUTCOMES – SUBJECT MASTERY

- Knowledge and understanding of how to review, critically analyse, evaluate and synthesize previous research in the field of conversational agents and spoken language processing.
- Use of current technologies.
- Acquire knowledge in applying algorithmic and interdisciplinary methods on conversational interfaces.
- Make informed judgments about appropriate methodologies for developing and evaluating conversational interfaces.
- Practice in implementing conversational interfaces using a suitable programming language and software tools.
- Experience in the use of multimodal sensors and existing Natural Language Processing technologies.

### LEARNING OUTCOMES – PERSONAL ABILITIES

- Identification, representation and solution of problems.
- Time management and resource organisation.
- Research skills and report writing.
- Practise in the use of ICT, numeracy and presentation skills.
- Experience in group work: Take responsibility for their own and other's work by contributing effectively and conscientiously to the work of a group, actively maintaining, good working relationships with group members, and leading the direction of the group where appropriate.

### SYLLABUS

This course covers current and emerging topics in conversational agents, spoken language processing, and multimodal
interfaces, including:

- Introduction to research areas, such as spoken dialogue systems, multi-modal interaction, natural language processing, and human robot interaction.
- Spoken input processing and interpretation.
- Interaction Management.
- Output generation, multimodal fission, speech and gesture synthesis
- System development and evaluation.

### 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>F29AI</td>
<td>9</td>
<td>Artificial Intelligence and Intelligent Agents</td>
<td>School of Math and Comp Sci.</td>
<td>Pre-Requisite</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></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Coursework</td>
<td>100</td>
<td>Assessment</td>
<td>Semester 2</td>
<td></td>
</tr>
</tbody>
</table>