Course descriptor F21CA

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<thead>
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<th>Course code</th>
<th>F21CA</th>
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<tbody>
<tr>
<td>Course title</td>
<td>Conversational Agents and Spoken Language Processing</td>
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<tr>
<td>Credits</td>
<td>15</td>
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<tr>
<td>School</td>
<td>Mathematical and Computer Sciences</td>
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<tr>
<td>SCQF Level</td>
<td>11</td>
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<td>Semester</td>
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**Aims**

This course aims to give students the opportunity to develop:

- An extensive, detailed and critical knowledge of design, implementation and evaluation techniques for conversational agents and spoken language processing.
- A critical awareness of current research and emerging issues in the field of conversational agents and spoken language processing.
- Knowledge that covers most, if not all, of the main interdisciplinary research methods and specialised practical skills involved in building working conversational interfaces.

**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.

**Learning Outcomes**

**Subject Mastery**

- A detailed and integrated knowledge and understanding how to review, critically analyse, evaluate and synthesize previous research in the field of conversational agents and spoken language processing.
- Identify and propose innovative applications and extensions of current technologies.
- Acquire extensive knowledge and confidence 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.

| 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.  

| Assessment method   | 100% coursework |