F20CA Conversational Agents and Spoken Language Processing

**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>
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<th>Undergraduate:</th>
<th>Yes</th>
<th>Postgraduate Taught:</th>
<th>No</th>
<th>Postgraduate Research:</th>
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Additional Information:

**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
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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>
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<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>
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**LOCATION AND ASSESSMENT METHODS**

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<th>Edi</th>
<th>SBC</th>
<th>Ork</th>
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