F21CA Conversational Agents and Spoken Language Processing

**COURSE DETAILS**

Course Code: F21CA  
Full Course Title: Conversational Agents and Spoken Language Processing  
SCQF Level: 11  
SCAF Credits: 15  
Available as Elective: No

**DELIVERY LEVEL**

Undergraduate: Yes  
Postgraduate Taught: Yes  
Postgraduate Research: No

Addional Information:

**COURSE 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.

**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.

**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.

Reassessment for Postgraduates only

Prerequisites: Programming skills.

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