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

Additional 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.