

Course descriptor F21CA

Course code	F21CA
Course title	Conversational Agents and Spoken Language Processing
Credits	15
School	Mathematics and Computer Sciences
SCQF Level	11
Semester	2
Aims	<p>This course aims to give students the opportunity to develop:</p> <ul style="list-style-type: none"> • 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	<p>This course covers current and emerging topics in conversational agents, spoken language processing, and multimodal interfaces, including:</p> <ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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.

	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	60% written report, 20% coursework 1 (presentation), 20% coursework 2 (demonstration)
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