MODULE **DESCRIPTOR**

MODULE TITLE	Research Topics in Computing		
MODULE CODE	CO3709 (L6)	**CREDIT VALUE**	20 credits (10 ECTS)
SCHOOL	SCHOOL OF SCIENCE		

MODULE **AIMS**

To allow the students to gain a deeper knowledge and understanding of a range of research topics in Computing.
To provide a direct link between the Department's research interests and its teaching.
To develop students' understanding of a range of research methods used in Computing, and experience of using some of them.
To develop in students the necessary information-finding, analytical and communication skills relevant to writing and delivering technical papers.

MODULE **CONTENT**

The module explores in depth some Computing topics. The specific topics covered vary from year to year according to the interests of the tutors involved, and of the student cohort. They always reflect current research directions in the field generally, and the research interests of the Department. As a part of the module, students are expected to attend the Department's research seminar programme.

Syllabus Content
The specific research topics considered vary from year to year, according to the interests of the staff and the student cohort. The syllabus assumes that the student has taken or is studying concurrently another module that delivers some research skills in preparation for a project; this module reinforces and builds on those skills.

Finding and reading academic literature
- Library and online searching
- Assessing quality and evaluating importance
- The importance of peer review

Understanding and using statistics
- Statistical measures and tests
- Appropriate use of statistical software

The research process
Literature review
Research methods
Forming research questions
Developing hypotheses
Data collection
Data analysis
- Research ethics

Writing an academic paper
- Academic style
- Using references

Managing bibliographies

INTENDED **LEARNING OUTCOMES**

On successful completion of this module a student will be able to:

1.	Discuss in depth topical research areas in Computing
2.	Locate relevant information from journals, on-line information and other sources
3.	Evaluate the use of appropriate research methods for different research questions
4.	Select appropriate statistical tests and use statistical data in support of arguments
5.	Write a research paper in an appropriate style in a relevant area of Computing

TEACHING METHODS

Lectures introduce concepts, techniques and factual information. Tutorial classes discuss technical papers and the topic areas introduced in the lectures. Students are expected to make extensive use of the Web, other online resources, and technical papers.

Although lectures deliver factual material and present an overview of the concepts being studied, they will be interactive where possible: at relevant points, the lecturer will encourage students to consider and discuss alternative views of the topics.

Tutorials will encourage class discussion. Work in tutorials will vary. Sometimes, students will be asked to read material and respond to it individually: at other times, students will be asked to work in groups. Much of the material will be made available to students before the tutorial – for instance case studies and research papers, so that they can prepare beforehand

Some classes are led by staff and research students from research groups in the Department. They present work and lead discussions on their own research topics. Students must demonstrate knowledge of some of these topics in the examination. Some seminars are led by the students themselves.

The coursework will involve the evaluation and discussion of published research.

The examination will assess the student's ability to analyse academic reports of research. This involve evaluation of a short but complete published paper.

ASSESSMENT METHODS

This module is assessed through a coursework (50%) and an examination (50%).