UNIVERSITY of BRADFORD

Module Descriptor

Module Details	
Module Title	MSc Group Project
Module Code	COS7048-B
Academic Year	2021/2
Credits	20
School	Department of Computer Science
FHEQ Level	FHEQ Level 7

Contact Hours	
Type	Hours
Lectures	10
Laboratories	28
Directed Study	162

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Semester 2

Module Aims

The module aims to give students experience of carrying out a computer science research project that solves a particular research problem relevant to the programme of study (e.g. Cyber Security, Artificial Intelligence, Big Data Systems, Internet of Things, etc.). The students will either provide a computational solution using scientific tools and methods and performing computational analysis, or they provide a software engineering solution by developing a fully functional software system using state-of-the-art software development techniques.

By working in teams, the students are expected to demonstrate the need for a professional approach to all aspects of research and software development. As part of the project, teams will deliver reports, code, and demonstrate a working software system or a computational solution. In addition, they will present certain elements of their work in written, graphical and verbal forms through the production of materials, e.g. reports, a demo, and an oral presentation. The students will be guided by academics or researches from the relevant research disciplines.

Outline Syllabus

- research methods
- critical evaluation
- project management
- software design aspects: architectures, quality assurance, maintainability, performance and scalability
- testing and validation
- legal, social, ethical, and professional issues
- academic report writing

Learning Outcomes

Outcome Number	Description
01	Understand research methods and methodologies.
02	Understand a research problem and provide a computational or software engineering solution.
03	Work collaboratively to develop a good quality software application and/or computational analysis.
04	Gain adequate project management and communication skills.
05	Address legal, social, ethical, and professional issues in computer science.
06	Present project outputs and critical reflections, orally and in writing.

Learning, Teaching and Assessment Strategy

Lectures introduce the theoretical concepts, which are then applied to a research problem relevant to the programme of study (e.g. Cyber Security, Artificial Intelligence, Big Data Systems, Internet of Things, etc.). The students working in small groups are closely supervised and supported by academics or researchers through laboratory practical sessions; and their interactions within the teams are continuously monitored by a supervisor.

Students' understanding of the problems to be solved, the ability to provide good solutions and practical communication skills are assessed through practical demonstration of the code functionality, through documentation of the project and presentations made to postgraduate students and research staff. The assessment takes into account both team contributions to the project as well as individual performance. The team contribution is based on the outcomes produced - code, reports and presentation. Individual assessment results from the overall contribution to the project based on evidence produced, as well as the observations made by supervisors throughout the term regarding individual contributions and the assessment made by team members.

Mode of Assessment

Type	Method	Description	Weighting
Summative	Coursework - Written	First Report and Demo	40%
Summative	Coursework - Written	Second Report and Demo	50%
Summative	Presentation	Oral Presentation	10%

Reading List
To access the reading list for this module, please visit https://bradford.rl.talis.com/index.html

Please note:
This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.

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