

Technical and Professional Skills

Module Code:	COS4015-B
Academic Year:	2018-19
Credit Rating:	20
School:	Department of Computer Science
Subject Area:	Computer Science
FHEQ Level:	FHEQ Level 4

Pre-requisites:

Co-requisites:

Contact Hours

Type	Hours
Lectures	12
Laboratory	24
Directed Study	164

Availability Periods

Occurrence	Location/Period
NLA	Namal College / Semester 1 (Sep - Jan)
BDA	University of Bradford / Semester 1 (Sep - Jan)

Module Aims

To equip students with a range of academic, professional, personal and technical skills; to provide fundamental subject specific concepts; to raise awareness of, and interest in, ethical issues such as sustainability within the context of the students' chosen discipline, intellectual property, ethics, copyright and copyleft in IT, plagiarism, cyber security and privacy. To introduce the basics of shell programming, to improve analytical skills essential to design algorithms for solving various computing problems, to provide an understanding of the techniques and skills required to develop more usable interactive secure computer systems.

Outline Syllabus

Library and information skills using suitable tools. Plagiarism awareness. Study skills. Presentations and report writing. Problem solving through group work. Aspects of professional development and cutting-edge technologies. A broad introduction to, and overview of, the discipline of computing. Basic Linux shell programming. Basic Internet technologies. An introduction to cyber security and ethical hacking. The origins and scope of human computer interaction (HCI) and its importance in the development of usable computer systems. Algorithm development for solving various computing problems. Design and implementation of computer applications as a team-based exercise.

Module Learning Outcomes

On successful completion of this module, students will be able to...

- 1 Demonstrate a broad knowledge and overview of your specific field of study. Outline the importance of key skills for professionals from a subject specific point of view.
- 2 Identify and describe basic principles, techniques and concepts underpinning cyber security, internet technologies and human computer interaction.
- 3 Develop algorithmic problem solving skills; design and develop software programmes and computer applications.
- 4 Apply a range of study and academic skills including independent learning; reflection; planning, plagiarism awareness and time management
- 5 Apply a range of communication skills including collaborative working; report writing; and presenting.

Learning, Teaching and Assessment Strategy

Lecture sessions incorporate both traditional lectures and practical exercises aimed at introducing and improving key skills; present the concepts, principles and theories underpinning the design and development of interactive computer systems. Lectures provide guidance on the availability of supporting resources within the University for individual professional development. Directed reading enables the development of study skills and support the material covered in lecture sessions. Activities in labs range from problem solving to interactive sessions around Ethics. Assessment is by coursework; you must pass assessment 1 to pass the module, this is the Library plagiarism awareness online course; Supplementary Assessment as original with the group element substituted by individual.

Mode of Assessment

Type	Method	Description	Length	Weighting	Final Assess'
Summative	Coursework	Online programme on	0 hours	%	No

plagiarism
avoidance
provided by the
Library. This
assessment must
be passed to pass
the module
(Pass/Fail)

Summative	Coursework	Case study and report	0-2000 words	50%	No
Summative	Coursework	A group based development of a prototype		50%	Yes

Legacy Code (if applicable)

CM-0139D

Reading List

To view Reading List, please go to [rebus:list](#).