



**School of Computing, Engineering and Built Environment**

**Department of Computing**

**MSc Computer Science**

**Programme Specification**

**May 2024**

**GLASGOW CALEDONIAN UNIVERSITY****Programme Specification Pro-forma (PSP)****GENERAL INFORMATION**

<b>Programme Title:</b>	Computer Science
<b>Final Award:</b>	MSc Computer Science
<b>Exit Awards:</b>	MSc Computer Science PgD Computer Science PgC Computing Science
<b>Awarding Body:</b>	Glasgow Caledonian University
<b>Period of Approval:</b>	September 2024-August 2029
<b>School:</b>	School of Computing, Engineering and Built Environment/GCU London
<b>Department:</b>	Department of Computing
<b>Mode of Study</b>	Full time Part time
<b>UCAS Code:</b>	N/A
<b>Accreditations (PSRB)</b>	N/A
<b>Location of Delivery:</b>	Glasgow and London Campuses
<b>Subject Benchmark Statement:</b>	Computing
<b>Dates of PSP Preparation/Revision:</b>	11 <sup>th</sup> April 2024

**2. EDUCATIONAL AIMS OF THE PROGRAMME**

The aim for MSc Computer Science is to deliver a programme that allows students to develop an advanced knowledge and relevant in-depth practical skills in the rapidly expanding fields of Computer Science and Analytics technologies. Students study and apply the underpinning technologies of cloud-based, information security, programming principles, software development methodologies and human computer interaction, together with developing a working knowledge of AI and Machine Learning – The programme offers a comprehensive curriculum covering both theoretical foundations and practical applications, preparing them for careers in industry or further study at the doctoral level. The programme combines the latest academic advances and provides practice in utilising the tools, techniques and design patterns used by industry professionals, to produce graduates that are intellectually and practically equipped for high quality relevant employment or capable of moving onwards to undertake related research. The programme philosophy and content are consistent-with and underpinned by professional and academic quality bodies, i.e., the BCS, ACM, IEEE and QAA. At this current time whilst the programme has been aligned to the professional bodies' standards, it has not yet been accredited to any. The programme is consistent with the University's 2030 Vision that aims to create employable graduates wanting to use their skills to make a positive difference to society.

## **INTENDED LEARNING OUTCOMES**

*The programme provides opportunities for students to develop and demonstrate knowledge and understanding, skills, qualities and other attributes in the following areas: [cross refer to the appropriate benchmark statement]*

### **3A Knowledge and understanding;**

- A1 Explain theoretical and practical concepts of Computer Science and their applications to real-world problems.
- A2 Compare processes, methods, techniques, tools and technologies and their application within Computer Science systems.
- A3 Evaluate a range of technology options to determine the most appropriate within the development of Computer Science applications.
- A4 Understand the principles and processes involved in the architecture structure and development of Computer Science systems.
- A5 Evaluate advances in processes, methods, techniques and tools used to develop, evolve and support the operation of systems that utilize Computer Science.

### **3B Practice: Applied knowledge, skills and understanding;**

- B1 Demonstrate a comprehensive knowledge and understanding of the professional and ethical responsibilities for Computer Science practitioners.
- B2 Demonstrate a deep understanding of the concepts and practical application of Computer Science.
- B3 Demonstrate a deep understanding of the concepts, architecture and practical application of Cloud Computing Platforms.
- B4 Demonstrate deep knowledge and understanding of the concepts and application of Computer Science by undertaking a Masters dissertation on a Computer Science-centred topic.
- B5 Demonstrate an understanding of the required theory, process and practice of applying Artificial Intelligence and Machine Learning to real world problems.
- B6 Apply and understand the fundamental concepts and techniques in Data Visualisation.
- B7 Specify a set of requirements for a solution to meet the needs of stakeholders.
- B8 Practically apply appropriate and transferrable skills for the design and testing of solutions within Computer Science domains.
- B9 Demonstrate effective use of a variety of techniques, components, tools and environments in the design and development of solutions within Computer Science domains.
- B10 Apply theory to practical and realistic career-related tasks.

### **3C Generic cognitive skills;**

- C1 Identify, analyse and solve practical problems.
- C2 Plan, conduct and report on work.
- C3 Evaluate alternative design and implementation solutions.
- C4 Critically evaluate work undertaken by themselves and others.
- C5 Critically evaluate research and technical evidence from a variety of sources.
- C6 Creativity, innovation & independent thinking.

### **3D Communication, numeracy and ICT skills**

- D1 Demonstrate appropriate communication skills: written, oral and listening.
- D2 Demonstrate numeric ability in Computer and Data Science applications
- D3 Presentation skills.
- D4 Develop good working practice within a design/development team.

D5 Effective information retrieval and research skills.

D6 Demonstrate report writing skills.

### **3E    Autonomy, accountability and working with others**

E1 Awareness of strengths and weaknesses/ Planning, monitoring, reviewing and evaluating own learning and development.

E2 Reliability, integrity, honesty and ethical awareness.

E3 Ability to prioritise tasks and time management.

E4 Appreciating and desiring the need for continuing professional development. E5 Interpersonal skills, team working and leadership.

E6 Entrepreneurial independence and risk-taking. E7

Commercial Awareness.

E8 Self-confidence, self-discipline & self-reliance (independent working).

## Strategy for Learning

In adherence to the University's Strategy for Learning 2030, the programme seeks to deliver a transformative educational experience, which champions equality of participation and attainment of students; delivers excellence in teaching and the student experience underpinned by an holistic approach to student support; enhances employability, knowledge, skills and attributes of students through collaborative and active learning; embeds the University's commitment to the UN's Sustainability Goals and; facilitates innovative learning through flexible provision and a blend of on and off campus experiences. GCU places learner agency at the centre of its Common Good Attributes. Specific examples of where the common good attributes are embedded in the curriculum in the common good attributes are offered below.

Common Good Attributes	Modules
<b>Active and Global Citizenship</b>	<b>MMI127126 Human Computer Interaction</b> Student will study theories and techniques intended to support the analysis of problems for which technology is the intended solution. In doing so, students will be enabled to think, explore and understand current social structures and problems aiming to enable users from various nations, cultures, religions and genders to experience these technologies and connect across the globe through the provision of user-friendly interactive systems. This approach is essential for successful professionals in this field and will be cultivated in class through real-life project examples developed for international use.
<b>Entrepreneurial Mindset</b>	<b>MMI226824 Artificial Intelligence and Machine Learning</b> Students will obtain fundamental concepts, theory and techniques that enable artificial intelligence (AI). The module focuses on the history, basic and advanced methods of AI and their practical uses in today's society and businesses.
<b>Systems thinking</b>	<b>MMI226820 Data Visualisation</b> Students will obtain an understanding of systems thinking through the development of knowledge and skills required for successful data visualisation. The goal of data visualisation is to expose the underlying structure of a dataset using visual representations which are targeted towards the human visual perceptual system.
<b>Responsible Leadership</b>	<b>MMI226823 Data Ethics and Research Methods</b> Students will be introduced to responsible leadership through developing understanding and practical skills in advanced research methods which are in line with industry regulations, standards and practices and are applicable to complex Data Science projects.
<b>Resilience, Compassion and Empathy</b>	<b>Information Security</b> Resilience, compassion and empathy is developed through students building an understanding of an organisation's information security requirements, developing in students the ability to deliver a fit-for-purpose information security management systems.
<b>Confidence</b>	<b>MMG411931 Dissertation</b> Student confidence is developed throughout this module as it acts as a vehicle for extending the knowledge and understanding of current issues that could be alleviated or reduced with the appropriate use of technology aiming to make a positive difference in a local, national, and global setting. The duration and complexity of this module offer a challenging opportunity for the student to research a subject of interest and provide a viable solution. The decision-making process based on information and evidence, teach the student to confidently design and evaluate a project that could demonstrate initiative and creativity in a major piece of technological work.

#### 4. PROGRAMME STRUCTURES AND REQUIREMENTS, LEVELS, MODULES, CREDITS AND AWARDS

All Modules are SHEM (SCQF 11) Level.

The GCU academic year is split into trimesters, each of 15 weeks (12 teaching plus revision and assessment weeks).

Trimester A starts at Mid of September and ends in December.

Trimester B starts at end of January and ends in May.

Trimester C starts at beginning of June and finishes at beginning of September.

**Table 1(a) MSc/PgD Computer Science (Full-Time: Trimester A September Start Point )**

Year 1 Trimester A		
Module Code	Module Title	Credits
MMI127126	Human Computer Interaction	15 SHEM
TBC	Programming Principles	15 SHEM
MMI226824	Artificial Intelligence and Machine Learning	15 SHEM
MMI226823	Data Ethics and Research Methods	15 SHEM
Year 1 Trimester B		
Module Code	Module Title	Credits
TBC	Database Systems	15 SHEM
TBC	Software Engineering and DevOps	15 SHEM
TBC	Information Security	15 SHEM
MMI226820	Data Visualisation	15 SHEM
Year 1 Trimester C		
Module Code	Module Title	Credits
MMG411931	Dissertation	60 SHEM

**Exit Awards:**

**Postgraduate Certificate in Computing: 60 SHEM credits**

**Postgraduate Diploma in Computer Science: 120 SHEM credits**

**MSc in Computer Science: 180 SHEM credits**

**SHEM = Scottish Higher Education Masters Level (SCQF Level 11)**

**SCQF = Scottish Credit and Qualifications Framework**

**Table 1(b) MSc/PgD Computer Science (Full-Time: Trimester B February Start Point)**

<b>Year 1 Trimester B</b>		
<b>Module Code</b>	<b>Module Title</b>	<b>Credits</b>
TBC	Database Systems	15 SHEM
TBC	Software Engineering and DevOps	15 SHEM
TBC	Information Security	15 SHEM
MMI226820	Data Visualisation	15 SHEM
<b>Year 2 Trimester A</b>		
<b>Module Code</b>	<b>Module Title</b>	<b>Credits</b>
MMI127126	Human Computer Interaction	15 SHEM
TBC	Programming Principles	15 SHEM
MMI226824	Artificial Intelligence and Machine Learning	15 SHEM
MMI226823	Data Ethics and Research Methods	15 SHEM

<b>Year 2 Trimester B</b>		
<b>Module Code</b>	<b>Module Title</b>	<b>Credits</b>
MMG411931	Dissertation	60 SHEM

**Exit Awards:**

<b>Postgraduate Certificate in Computing:</b>	<b>60 SHEM credits</b>
<b>Postgraduate Diploma in Computer Science:</b>	<b>120 SHEM credits</b>
<b>MSc in Computer Science:</b>	<b>180 SHEM credits</b>

**SHEM = Scottish Higher Education Masters Level (SCQF Level 11)**

**SCQF = Scottish Credit and Qualifications Framework**

**Table 1(c) MSc/PgD/PgC Computer Science (Part-Time: Trimester A September Start Point)**

<b>Year 1 Trimester A</b>		
<b>Module Code</b>	<b>Module Title</b>	<b>Credits</b>
MMI127126	Human Computer Interaction	15 SHEM
TBC	Programming Principles	15 SHEM
<b>Year 1 Trimester B</b>		
<b>Module Code</b>	<b>Module Title</b>	<b>Credits</b>
MMI226820	Data Visualisation	15 SHEM
TBC	Information Security	15 SHEM
<b>Year 2 Trimester A</b>		
<b>Module Code</b>	<b>Module Title</b>	<b>Credits</b>
MMI226824	Artificial Intelligence and Machine Learning	15 SHEM
MMI226823	Data Ethics and Research Methods	15 SHEM

<b>Year 2 Trimester B</b>		
<b>Module Code</b>	<b>Module Title</b>	<b>Credits</b>
TBC	Database Systems	15 SHEM
TBC	Software Engineering and DevOps	15 SHEM
<b>Year 2 Trimester C and Year 3 Trimester A (2 Trimesters in Duration)</b>		
<b>Module Code</b>	<b>Module Title</b>	<b>Credits</b>
MMG411931	Dissertation	60 SHEM

**Exit Awards:**

**Postgraduate Certificate in Computing: 60 SHEM credits**

**Postgraduate Diploma in Computer Science: 120 SHEM credits**

**MSc in Computer Science: 180 SHEM credits**

**SHEM = Scottish Higher Education Masters Level (SCQF Level 11)**

**SCQF = Scottish Credit and Qualifications Framework**

**Table 1(d) MSc/PgD/PgC Computer Science (Part-Time: Trimester B January Start Point)**

<b>Year 1 Trimester B</b>		
<b>Module Code</b>	<b>Module Title</b>	<b>Credits</b>
TBC	Information Security	15 SHEM
MMI226820	Data Visualisation	15 SHEM
<b>Year 2 Trimester A</b>		
<b>Module Code</b>	<b>Module Title</b>	<b>Credits</b>
MMI127126	Human Computer Interaction	15 SHEM
TBC	Programming Principles	15 SHEM
<b>Year 2 Trimester B</b>		
<b>Module Code</b>	<b>Module Title</b>	<b>Credits</b>
TBC	Database Systems	15 SHEM
TBC	Software Engineering and DevOps	15 SHEM
<b>Year 3 Trimester A</b>		
<b>Module Code</b>	<b>Module Title</b>	<b>Credits</b>
MMI226824	Artificial Intelligence and Machine Learning	15 SHEM
MMI226823	Data Ethics and Research Methods	15 SHEM



<b>Year 3 Trimester B and Year 3 Trimester C (2 Trimesters in Duration)</b>		
<b>Module Code</b>	<b>Module Title</b>	<b>Credits</b>
MMG411931	Dissertation	60 SHEM

**Exit Awards:****Postgraduate Certificate in Computing: 60 SHEM credits****Postgraduate Diploma in Computer Science: 120 SHEM credits****MSc in Computer Science: 180 SHEM credits****SHEM = Scottish Higher Education Masters Level (SCQF Level 11)****SCQF = Scottish Credit and Qualifications Framework****4. SUPPORT FOR STUDENTS AND THEIR LEARNING****Student Induction**

Student induction is a formal programme of events that occurs when students initially enroll on the MSc programmes. Students will normally meet the Programme Leader and module delivery teams prior to teaching on the new Session in Trimester A in the University and also in the first week of Trimester B.

The programme of events and information includes the following:

- Introduction to Programme Leader and academic members of the programme module teams
- An induction pack that includes a programme information handbook, module descriptors and assessment schedules
- Introduction to the programme aims and objectives, the programme content and modes of assessment.
- Introduction to GCU Learn services
- Tour of the Library and the use of on-line library catalogues
- Tour of major specialist labs and research labs
- Tour of the campus
- Introduction to IT facilities

**Student Support and Counselling****IT Support**

All students have access to a range of computer-based facilities including email, GCU Learn VLE, access to computers in laboratories and other learning spaces, software for home use through the GCU AppStore (a software service which allows students and staff to run software on-demand to any Windows PC) and an extensive printing service. Students have online access (through the My Caledonian portal) to maintain their security settings/passwords, library credentials, graduation/tuition fees and printing fees. All students and staff are connected to the eduroam<sup>1</sup> (education roaming) wireless Internet service, providing Internet access throughout GCU and at many educational institutions around the world. Everyone at GCU has access to LinkedIn Learning<sup>2</sup> - an online learning company that helps users learn business, software, technology and creative skills to achieve personal and professional goals. The IT Helpdesk is open from 8.30am to 10pm weekdays, and 9am to 6pm on weekends; it is accessible by phone or email.

**Academic Support**

Academic support is provided through access to module leaders and tutors. Staff office locations, email and telephone contact details are provided in the Module Handbooks and can be accessed through a

<sup>1</sup> <https://www.eduroam.org/>

<sup>2</sup> <https://www.linkedin.com/learning/>

### **Managed Learning Environment**

In order to provide on-going support for students, academic staff including the Programme Leader operates a policy of open access for consultation and help through email and suitable managed learning environments. If there is a major concern by an individual student, the student is encouraged in the first instance to contact the Programme Leader to discuss their concerns and to help try and facilitate an early resolution. Students are also made aware of the support and guidance offered by the Learning Development Centre (LDC) and may be referred to LDC as appropriate by both academic and administrative staff.

### **Personal Development**

As part of the learning strategy students will participate in Personal Development to ensure that they undertake effective planning for their own personal, educational and career development.

A key element in the process is to foster the employability of graduates. Students will be encouraged to make use of the University Careers Guidance service and other mechanisms in order to develop an awareness of the industry and identify career opportunities. Students will also be encouraged to attend research Seminars in the school & department and BCS and IET local branch meetings.

### **MSc Dissertation Support**

Students who undertake this module are supported through the allocation of an academic supervisor. During the development of the Masters dissertation proposal students are encouraged and facilitated to approach and meet relevant academic staff to discuss the topic intended for master's dissertation. After preparing the Masters dissertation proposal students submit a project agreement form that names the supervising staff member.

The programme also has a named academic who acts as the Masters dissertation coordinator and who provides overall guidance for both the student cohort and the academic supervisors on the management and assessment procedures of the Masters dissertations. Prior to the start of Masters dissertations, the Masters dissertation coordinator will confirm to the students the allocation of academic supervisors for their Masters dissertations.

The Masters Dissertation Handbook provides all the key information on the running, management and assessment of the Masters dissertation.

## **6. CRITERIA FOR ADMISSION**

Specific entry requirements for this programme can be found on the prospectus and study pages on the GCU website at this location: [www.gcu.ac.uk/study](http://www.gcu.ac.uk/study)

### **Programme Admission Requirements:**

Entry to the MSc Computer Science programme will normally be on the basis of a candidate having a United Kingdom (UK) Honours degree or equivalent in a subject not related to Computer Science, normally at grade 2.2 or above. Successful applicants will need to demonstrate competence in mathematics, with at least a B grade in GCSE Mathematics or equivalent.

All students whose first language is not English should meet the minimum language proficiency as stipulated by the wider GCU admissions policy of Academic IELTS/IELTS for UKVI: Overall score of 6.0, with no single element below 5.5

### **Entry with Advanced Standing**

Glasgow Caledonian University leads the way in widening access to higher education. The Contextualised Admissions Policy aims to recognise and acknowledge that not all applicants have an equal opportunity to demonstrate their full academic potential and will take into consideration the context and circumstance in which a student has achieved their academic grades. For details please access the policy here: <https://www.gcu.ac.uk/aes/documentsandpolicies/>

## **7. METHODS FOR EVALUATING AND IMPROVING THE QUALITY AND STANDARDS OF TEACHING AND LEARNING**

### ***Mechanisms for review and evaluation of teaching, learning, assessment, the curriculum and outcome standards:***

- Annual Programme Monitoring Process
- Annual Module Monitoring Process
- Module Feedback Questionnaire
- External Examiner(s) Reports
- Annual monitoring (required by Professional and/or Statutory Bodies)
- Enhancement-led Internal Subject Review (ELISR)
- Enhancement-led Institutional Review (ELIR)
- Reports from the British Computer Society

### ***Committees with responsibility for monitoring and evaluating quality and standards:***

- Student Partnership Forum (SPF)
- Programme Board (PB)
- School Board
- Progression and Awards Board (PAB)
- Learning Enhancement Sub Committee (LESC)
- Education Committee

- University Senate

***Mechanisms for gaining student feedback on the quality of teaching and their learning experience:***

- Student Partnership Forum (SPF)
- Student representation on Programme Board (PB)
- Student representation on School Board
- Module Feedback Questionnaire
- GCU Learn
- Open access to members of Programme Team e.g. Module Leaders, Programme Leader, Academic Advisor, Year Tutor

***Staff development priorities include:***

- Postgraduate Certificate in Academic Practice
- Continuous Professional Development (CPD)
- Performance and Development Annual Review (PDAR)
- Peer support for teaching
- Mentoring scheme for new teaching staff
- Conference and seminar attendance and presentation
- Research Excellence Framework (REF) submission
- Membership of Higher Education Academy (HEA)
- Membership of and involvement with Professional Bodies

## **8. ASSESSMENT REGULATIONS**

Students should expect to complete their programme of study under the Regulations that were in place at the commencement of their studies on that programme, unless proposed changes to University Regulations are advantageous to students.

The Glasgow Caledonian University Assessment Regulations which apply to this programme, dependent on year of entry can be found at:

[University assessment regulations and policies](#)

## **9. INDICATORS OF QUALITY AND STANDARDS**

- Programme Board statements on modules
- Annual Programme Analysis
- Enhancement-led Internal Subject Reviews
- Enhancement-led Institutional Review
- External Examiner Reports
- Details of approval, development events and Cognate Area Reviews organised by the School/University
- QAA subject reviews

## 10. INFORMATION ABOUT THE PROGRAMME

Key information about the programme can be found in:

- Definitive Programme Document
- Programme Handbook
- Module Handbook
- University Website <http://www.gcu.ac.uk>
- School Website
- GCU Learn
- My Caledonian
- University Prospectus

This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes, content and teaching, learning assessment methods of each module can be found in the University Module catalogue which can be accessed from the University website. The accuracy of the information in this document is reviewed by the University and may be checked by the Quality Assurance Agency for Higher Education.

A curriculum map is attached showing how the outcomes are being developed and assessed within the programme. This relates the modules from Section 4 to the outcomes in Section 3.

# Curriculum Map for MSc Computer Science

The curriculum map links the modules (Section 4) to the Outcomes listed in Section 3

**PSMAP**

This map provides both a design aid to help academic staff identify where the programme outcomes are being developed and assessed within the course. It also provides a checklist for quality assurance purposes and could be used in approval, accreditation and external examining processes. This also helps students monitor their own learning, and their personal and professional development as the course progresses. The map shows only the main measurable learning outcomes which are assessed. There are additional learning outcomes (e.g. attitudes and behaviour) detailed in the module specifications which are developed but do not lend themselves to direct measurement

Modules		Programme outcome																											
Code	Title	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	C1	C2	C3	C4	C5	C6	D1	D2	D3	D4	D5	D6	
MMI127126	Human Computer Interaction	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x		x	x	x	x		x		x	
TBC	Software Engineering and DevOps	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x			x	x	x
MMI226824	AI and Machine Learning	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x		x		x	x		x		x	x		
MMI226823	Data Ethics and Research Methods				x		x	x		x			x			x		x		x	x	x	x		x		x	x	x
TBC	Programming Principles	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x		x	x	x		x	x	x	x	
TBC	Information Security	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x		x	x	x	x	x	x	x		
MMI227050	Big Data Platforms	x	x	x	x	x		x	x				x	x	x	x	x		x			x							
MMI226820	Data Visualisation	x	x	x			x				x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x		
MMG411931	Dissertation	x	x	x	x	x		x		x			x	x	x		x	x	x	x	x	x	x		x		x	x	x

SCQF11

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SCQF11

Code	Title	E1	E2	E3	E4	E5	E6	E7	E8
MMI127126	Human Computer Interaction			X	X		X	X	X
TBC	Software Engineering and DevOps		X	X	X	X	X	X	X
MMI226824	AI and Machine Learning		X	X	X		X	X	X
MMI226823	Data Ethics and Research Methods	X	X	X	X			X	X
TBC	Programming Principles			X	X			X	X
TBC	Information Security			X	X	X	X	X	X
MMI227050	Big Data Platforms			X	X			X	X
MMI226820	Data Visualisation			X	X	X		X	X
MMG411931	Dissertation	X		X					X

**Professional Practice Modules**

MMW226498	PP Work Experience	A1,B1,B2,B5,B7,B10,C1,C2,C4,D1,D4
MWW226494	PP Consultancy Project	A1,A2,A3,A4,A5,B2,B7,B8,B9,B4,C1,C2,C3,C4,C5,C6,D1,D3.D5,D6,E1,E3,E8
MMW226500	PP Entrepreneurial Bootcamp	A1,B1,B2,B5,B7,B10,C1,C2,C4,D1,D4
MMW226495	PP Intercultural Competence	A1,B1,B2,B5,B7,B10,C1,C2,C4,D1,D4
MMW226497	PP Research Project	A1,A2,A3,A4,A5,B2,B7,B8,B9,B4,C1,C2,C3,C4,C5,C6,D1,D3.D5,D6,E1,E3,E8



## **ASSESSMENT LOADING MATRIX**

<b>SCQF Level 11</b>									
<b>Module Code</b>	<b>Module Title</b>	<b>Trimester</b>	<b>Credits</b>	<b>Assessment Weighting</b>					
				<b>Cw1</b>	<b>Cw2</b>	<b>Cw3</b>	<b>Exam1 (Exams Office)</b>	<b>Ex2 (Exams Office)</b>	<b>Ex3 (Class Test)</b>
TBC	Programming Principles	A	15	50	50				
MMI127126	Human Computer Interaction	A	15	50	50				
MMI226824	Artificial Intelligence and Machine Learning	A	15	50	50				
MMI226823	Data Ethics and Research Methods	A	15	30	70				
TBC	Information Security	B	15	50	50				
MMI126818	Software Engineering and DevOps	B	15	50	50				
MMI227050	Big Data Platforms	B	15	50	50				
MMI226820	Data Visualisation	B	15	30	70				
MMG411931	Dissertation	C	60	80	20				
MMW226498	PP Work Experience	A	60	100					
MMW226494	PP Consultancy Project	A	60	100					
MMW226500	PP Entrepreneurial Bootcamp	A	60	100					
MMW226495	PP Intercultural Competence	A	60	100					
MMW226497	PP Research Project	A	60	100					