Programme specification

Award title: Computer Science with Artificial Intelligence (Part Time, Online, May Intake)

Title of programme:	Computer Science with Artificial Intelligence (Part Time, Online, May Intake)
Programme code:	PEWCSTM
Awarding institution/body:	University of Hertfordshire
Teaching institution:	University of Hertfordshire
School:	School of Physics, Engineering and Computer Science
University/partner campuses:	University of Hertfordshire, Online
Programme accredited by:	The Chartered Institute for IT (BCS)
Final qualification:	Master of Science (MSc) [Level 7 Postgraduate Taught]
Final award title (qualification and subject):	MSc Computer Science with Artificial Intelligence
UCAS code:	Not Applicable
FHEQ level of award:	7 PGT
Language of delivery:	English
This programme specification is relevant to:	2025-26
Students entering at:	Semester C - May
Related programmes:	
Mode of study:	Part Time
Typical duration:	2 Years
Version:	1.4
Version date:	02 Dec 2025
Version description	1.4
Validation status:	Validated

What is a programme specification?

A programme specification is a collection of key information about a programme of study (or course). It identifies the aims and learning outcomes of the programme, lists the modules that make up each stage (or year) of the programme, and the teaching, learning and assessment methods used by teaching staff. It also describes the structure of the programme, its progression requirements and any programme-specific regulations. This information is therefore useful to potential students to help them choose the right programme of study, to current students on the programme, and to staff teaching and administering the programme.

This programme specification (PS) is designed for prospective students, enrolled students, academic staff and potential employers. It provides a concise summary of the main features of the programme and the intended 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 teaching, learning and assessment methods, learning outcomes and content for each module can be found in Definitive Module Documents (DMDs) and Module Guides.

Changes to your course or modules

Although it is never something we do lightly, we may in certain circumstances, make changes to the advertised content or structure or methods of delivery of your course or individual modules after you have accepted your offer, which may in certain cases include discontinuing a module. We cannot cover here every possible example of when we might decide to do so, but in normal circumstances it would only be for one or more of the following reasons:

- to reflect changes to the theory in an area of research or practices around the subject or its delivery

- to improve a course or a module (for example, to take account of feedback from students)

- to safeguard academic standards

- to comply with the requirements of an external professional, commissioning or accrediting body (for example, a requirement that certain course content be added, changed or removed or that a particular module is discontinued or included)

- to comply with legal, regulatory or governmental requirements

- to safeguard the health, safety and wellbeing of our students and staff

- where insufficient students have chosen an optional module making it unviable *(and where we have indicated in this Programme Specification that this might be a possibility)*

- where the University has found it difficult, for reasons beyond its control, to appoint a member of staff with appropriate expertise to ensure that an optional module can proceed where the change results from other circumstances outside our reasonable control

If we decide to make a change (other than one which is minor or insignificant) before you have registered on the course for the first time, we will inform you as soon as reasonably practicable so that you can decide whether or not you still wish to study with us. If as a consequence you decide not to study with us, we will refund any tuition fees and/or deposit that you have paid in advance in respect of the course in question. For further details regarding our refund policy please see our **Fees and Finance Policy**.

If we decide to make a change (other than one which is minor or insignificant) after you have registered, we will similarly inform you as soon as reasonably practicable, and we will also use every reasonable effort to minimise any adverse effect it may have on you. If in spite of our efforts

the change is likely to have a serious adverse effect on you (for example, by prejudicing your future choice of career), we will try to find you a suitable alternative course or module with us or (if you prefer) we will try to suggest a suitable alternative course with another education provider. If you change course or module in these circumstances (or simply withdraw from your course), any entitlement you may have to a refund in tuition fees you have already paid will be determined in accordance with our *Fees and Finance Policy*.

In the case of a material change to a course or module, we will also in appropriate circumstances consult with student representatives with a view to identifying options for, and minimising any adverse effect on, affected students.

Some optional modules may have capacity issues and therefore we may not be able to guarantee you a place on your first choice.

More information about how we will try protect you against changes to your modules or programmes can be found in our *Student Protection Plan* at https://www.herts.ac.uk/study/your-offer-package

Additional important points

The Department of Computer Science is based at the University's College Lane Campus. Computer Science has been taught and studied here since 1956, making it one of the oldest academic Computer Science establishments in the UK. The Department is also one of the largest in the country. Students come to the Department from all over the world to obtain an education in Computer Science as undergraduates, Master's degree students, and PhD research students. The Department is also a centre for Computer Science research, with world-class research strengths that cross boundaries into computational biology, robotics, software design, processor design and cyber security. The Department has an established Cyber Security Centre.

To enrol on the project module, students must typically have studied 120 credits of taught modules from the programme and passed at least 60 credits.

In compliance with university regulations and/or professional accreditation requirements, assessments have designated submission deadlines. Some assessments may include tests, which will typically be available within a 24-hour window. Remote live invigilation may be used for academic quality assurance purposes.

The programme adopts a block teaching delivery model, which means that learners focus on one module at a time. The modules are delivered in either 8-week or 16-week blocks.

There are typically two teaching blocks per semester. For example, in Semester A, there is one teaching block commencing in September and another in November.

The programme is designed for asynchronous learning, providing greater flexibility for our learners to manage their studies alongside their commitments.

Admissions information

The normal entry requirements for the programme are:

Qualification type	Subjects	Grades
Recognition Prior to Learning		The School will consider non-standard applicants who can demonstrate that they have relevant work experience in a position equivalent to a graduate, over a sustained period of time, which will typically be 4 to 5 years via a Curriculum Vitae and/or LinkedIn profile.
Bachelors Degree		Students should have a recent good Honours Degree in a non-Computer Science

	subject combined with knowledge or experience of computing that goes beyond that of an end-user.
English Language Proficiency	For International applicants whose first language is not English, IELTS score of 6.0 (with no less than 5.5 in any band), or equivalent.

Equivalent qualifications will be considered on an individual basis, such as the Access to HE Certificate or approved equivalent.

For current entry tariff point requirements, please refer to the relevant page for the Course on the University website or on the online prospectus.

The programme is subject to the University's Principles, Policies and Regulations for the Admission of Students to Undergraduate and Taught Postgraduate Programmes (in UPR SA03), along with associated procedures. These will take account of University policy and guidelines for assessing accredited prior certificated learning (APCL) and accredited prior experiential learning (APEL).

If you would like this information in an alternative format, please contact us via https://ask.herts.ac.uk/contact-us

If you wish to receive a copy of the External Examiner's Report for the programme, please email a request to aqo@herts.ac.uk

Additional admissions information

Interview/audition required: No
Portfolio required: No
DBS check required: No
Occupational health check required: No
GTC check required: No

The academic year

The University's academic year is made up of 3 Semesters. For most undergraduate students the academic year is split into two Semesters (A & B). Each of these is made up of teaching weeks followed by exams (the re-sit period falls within Semester C). For further information please follow the link below

Term and semester dates | Study | Uni of Herts

Expected workload

In the UK, a full-time student is expected to spend 1200 hours on their studies each year. Please find below an estimate of how your time will be spent on this course during each year of study.

Year	Lectures, seminars, tutorials	Independent study	Placement
Year 1 - Part 1	3%	97%	0%
Year 1 - Part 2	3%	97%	0%
Year 2 - Part 1	3%	97%	0%

| Year 2 - Part 2 | 1% | 99% | 0% |

Method of assessment

Year	Test	Written exam	Coursework	Practical
Year 1 - Part 1	40%	0%	60%	0%
Year 1 - Part 2	40%	0%	60%	0%
Year 2 - Part 1	60%	0%	40%	0%
Year 2 - Part 2	0%	0%	80%	20%

Additional expenses

Please see below a list of expected materials you will need for your studies. You will be given detailed lists when the course starts.

Title	Description	Value type	Cost (£)
Equipment - Mandatory	To study online, you will need access to a suitable computer (including webcam) and a good reliable Internet connection. Most modern PCs and Macs (less than five years old) should be fine. Full system requirements details can be found on the Online Distance Learning website: https://www.herts.ac.uk/courses/online-distance-learning/how-online-study-works/system-requirements-for-study	Approximate	£500
Textbook - Optional	Texts to support the curriculum. Postgraduate study requires extensive reading and access to reference works. Recommended texts are available online via the University's the Learning Resource Centre. The average price of a recommended text is £50, although you may be able to buy second-hand copies.	Approximate	£50
Specialist Course Materials - Mandatory	As part of this course, you will study eight 15-credit taught modules. Some of these modules may require you to take an online test, which will be invigilated remotely in real-time. Estimated Cost: 25-50 per module that includes a test that requires remote live invigilation.	Approximate	£50

*Costs vary subject to supplier.
** This is an indicative cost – how much you use and need to replace these supplies will depend on your own style of working and process.

Programme specification detail

A: Programme rationale

The Programme is intended to serve the needs of computer science postgraduate students, and to offer a range of awards to suit their career development and to suit different backgrounds and circumstances.

This programme is targeted at students with a good Honours degree in a discipline other than Computer Science with knowledge or experience of computing that goes beyond that of an end-user, and who wish to obtain core knowledge and skills in Computer Science that they can apply to problems drawn from the subject discipline of their first degree, and to problems that are relevant to their chosen career.

Students who are working towards this award will be required to follow a prescribed course of taught modules designed for non-computing entrants and will be expected to complete a major independent project that applies what they have learnt to a problem drawn from the subject of their first degree, or from their chosen career path.

Graduates obtaining this award will be equipped to apply Computer Science knowledge and techniques in the context of PhD level research situated within the discipline area of their first degree, or to enter employment in working environments requiring sound judgment and the exercise of personal responsibility and initiative in computer science discipline.

The School also offers specialist awards targeted at students who have a good Honours degree in Computer Science or a very closely related discipline, and who have decided upon a specialist career path or are aiming to enter a PhD programme in one of the specialisms on offer. The specialist awards offered are: MSc Artificial Intelligence; MSc Cyber Security; MSc Data Science and Analytics; MSc Software Engineering; MSc Advanced Computer Science. These specialist awards are part of distinct programme, designed for STEM applicants.

The programme adopts a block teaching delivery model, which means that learners focus on one module at a time. The modules are delivered in 8-week blocks. There are typically two teaching blocks per semester. For example, in Semester A, there is one teaching block commencing in September and another in November.

The programme is designed for asynchronous learning, providing greater flexibility for our learners to manage their studies alongside their commitments. However, in line University regulations and/or professional.

B: Educational aims of the programme

The programme has been devised in accordance with the University's graduate attributes of programmes of study as set out in UPR TL03.

Additionally this programme aims to:
build upon existing degree-level knowledge and practical experience;
undertake a substantial programme of individual project work at postgraduate level;
evaluate and further develop their skills in research, independent study and self-management, and prepare themselves for lifelong learning;
develop an understanding of the social, legal and ethical context within which a computing

professional is expected to operate, and of the standards that will be expected of them when they graduate;
acquire the necessary skills to undertake further study or research at postgraduate level, and to secure employment in their chosen career.

For the MSc Computer Science, to provide students with opportunities to:
develop an understanding of, and practical skills in, the application of Computer Science principles and techniques to the modelling and solution of problems in other disciplines;
develop an understanding of how different approaches to modelling, design and programming can affect the nature of solutions to computational problems, and their fitness for purpose;
extend knowledge and understanding of, and practical skills in, a range of computer science topics;
deploy, articulate and evaluate key principles and techniques of computer science and be in a position to make critical responses and design decisions on the basis of those principles.

C: Intended learning outcomes

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, skills and other attributes in the following areas. The programme outcomes are referenced the Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies (2014), and relate to the typical student. Additionally, the SEEC Credit Level Descriptors for Further and Higher Education (2021) have been used as a guiding framework for curriculum design.

Programme outcomes
Learning outcomes are split into four different types.

Intellectual skills
On successful completion of this programme, a student will be able to:

IS1   Deploy, articulate and evaluate key principles and techniques of computer science and be in a position to make critical responses and design decisions on the basis of those principles.

IS2   Use and evaluate a range of methods and tools currently employed in the design and/or development of computer systems.

Knowledge and understanding
On successful completion of this programme a student will have knowledge and understanding of:

KU1   Demonstrate knowledge and understanding of professional, social, legal, and ethical issues related to contemporary practices in computer science.

KU2   Demonstrate knowledge and understanding of fundamental computer science concepts and how they may be applied to the solution of problems from outside computer science.

KU3   Demonstrate knowledge and understanding of principles and practices of software development methodologies.

KU4   Demonstrate knowledge and understanding of the scope and limitations of different computational paradigms in artificial intelligence.

KU5   Demonstrate knowledge and understanding of the technical principles behind data science and relevant computational algorithms.

Practical skills
On successful completion a student will be able to:

PS1   Carry out a significant independent investigation as part of their project, typically including software development.

PS2   Plan, execute, monitor and reflect upon a substantial piece of independent development work or experimentation in computer science.

PS3   Extend knowledge and understanding of, and practical skills in, a range of computer science topics.

PS4   Extend knowledge and understanding of, and practical skills in, a range of computer science topics.

Transferable skills

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

TS1   Undertake a substantial piece of practical work at postgraduate level, independent of close supervision.

TS2   Evaluate and make critical use of relevant academic and technical literature.

TS3   Utilise their knowledge in practical applications.

TS4   Build upon and extend their knowledge with a minimum of guidance.

TS5   Express themselves knowledgably and coherently, both in writing and orally.

TS6   Be able to explain, justify and otherwise defend their work and ideas, both in its specific details and within a broader context.

Graduate Attributes

Graduate Attributes are delivered in the constituent modules. It provides (i) an aid to academic staff in understanding how individual modules contribute to the development of the Graduate Attributes (ii) a checklist for quality control purposes and (iii) a means to help students monitor their own personal and professional development as the programme progresses**.**

GA1   Professionally Focused
GA2   Globally minded
GA3   Sustainability driven
GA4   Digitally capable and confident
GA5   Inclusive and collaborative
GA6   Evidence based and ethical

D: Teaching methods

Knowledge and Understanding:
Acquisition of knowledge and understanding is through a combination of, for example, web-based presentations, simulations, practical activities, embedded formative assessment, written materials, online discussion groups and guided reading among specialist textbooks and journals as the means of acquainting students with topics at the forefront of the discipline.

Students are progressively expected to integrate such leading-edge material into the core themes for their subject area with a minimum of support and to take responsibility for selection and use of advanced theories, particular contexts, developing their understanding of these independently. Subject-specific research methods are embedded in the taught modules. The general principles are covered explicitly in the supporting material for the project module. In the project, students learn how to apply these methods, where appropriate, to their chosen subject area, under the guidance of their project supervisor.

Student-student and student-tutor interactions will typically be mediated via asynchronous online

discussions.

Throughout, the learner is encouraged to undertake independent study both to supplement and consolidate what is being taught/learnt and to broaden their individual knowledge and understanding of the subject.

Intellectual Skills:
Intellectual skills are developed through the methods and strategies outlined in section KU, above. There is a strong expectation that students independently will develop the capacity to evaluate and select suitable candidates for specific tasks.

Throughout, the learner is encouraged to develop intellectual skills further by independent study.

Practical Skills:
Practical skills are developed through the programme by the methods and strategies outlined in section KU, above.

There is a strong expectation that students independently will develop the capacity to evaluate and select suitable candidates for specific tasks. The major vehicle for this development is the final individual project, where they are guided by one-to-one supervision from a member of the academic staff.

Transferable Skills:
Skill TS1 is developed through the final project and supporting materials.
Skill TS2 is developed through coursework assignments, the final project and supportive materials.
Skill TS3 is developed through coursework assignments and the final project.
Skill TS4 is developed through coursework assignments and the final project.
Skill TS5 is developed through coursework assignments and the final project.
Skill TS6 is developed through course-work assignments and the final project.

E: Assessment strategy

The programme complies with the University's academic regulations (in particular, UPR AS11, UPR AS12/UPR AS13 and UPR AS14) with the exception of those listed below, which have been approved by the University:
https://www.herts.ac.uk/about-us/our-leadership-strategy-and-plans/our-governance-and-leadership/university-policies-and-regulations-uprs

Assessment Strategy for:

Knowledge and Understanding:
Knowledge and understanding are assessed through a combination of coursework and online tests as appropriate for the modules in question, followed by the project, in which this knowledge and understanding must be shown to be applied to a substantial piece of independent investigative and/or developmental work.

Intellectual Skills:
Domain specific intellectual skills are assessed directly through in-course assignments and the project, but also indirectly through unseen online tests where understanding is developed through activity relying on these skills is required.

Practical Skills:

Domain specific practical abilities are assessed directly through in-course assignments and the project, but also indirectly through unseen online tests where understanding developed through activity replying on these skills is required.

Planning, analysis and design activities are also assessed by the individual project, within which development work applying practical skills to novel problems is also normally needed in order for students to demonstrate mastery of computing related practical abilities relevant to their award.

Transferable Skills:
Skill TS1 is assessed through the final project.
Skill TS2 is assessed through coursework assignments and the final project.
Skill TS3 is assessed through coursework assignments, online tests and the final project.
Skill TS4 is assessed through coursework assignments and the final project.
Skill TS5 is assessed through coursework assignments and the final project.
Skill TS6 is assessed through coursework assignments and the final project.

F: Programme specific assessment regulations

The programme is compliant with the University's academic regulations (in particular, UPR AS11, UPR AS12 and UPR AS14) with the exception of those listed below, which have been specifically approved by the University:
As specified by the professional accreditation body, no compensation for the Masters Project is permitted.

Further points of clarification and interpretation relevant to this specific programme are given below:
A pass grade in the Masters Project is required for an MSc award;
The maximum period within which a student may gain an award on the programme is 5 years from their date of registration on it;
Students are required to study 120 credits and pass a minimum of 60 credits before studying the project module.

G: Professional accreditation requirements

The Chartered Institute for IT (BCS)
Accredited by BCS, The Chartered Institute for IT for the purposes of partially meeting the academic requirement for registration as a Chartered IT Professional.

H: Management of programme and support for student learning

Management
The programme is managed and administered through:

- The programme is managed and administered through: The Dean and Associate Dean (Academic Quality Assurance) of the School of Physics, Engineering and Computer Science, who are responsible for overseeing the successful delivery and assessment of the programme; A Programme Leader, who is responsible for day-to-day management of the programme; Module Leaders, who are responsible for the delivery of a module and module-level academic support; Student representatives who liaise with the Programme Leader and Module Leaders; A designated administrative team to deal with day-to-day administration associated with the programme and its modules; A Programme Committee which meets twice a year and is chaired by the Programme Leader; A

Student Success team to administer student satisfaction surveys and collect qualitative feedback.

Support

Students are supported by:

- Students are supported by: An onboarding experience that will include online events, meet and greets, Q&A sessions, study skills orientation and ongoing Canvas guidance and support; Signposted support services to direct students to the support available, be it pastoral, academic or technical support; Pastoral support will be provided through a ticketing system to enable students to book one-on-one appointments with their dedicated student success advisor. The student success team is available across multiple time zones and provides weekend coverage. During one on one appointments students can reschedule module start dates and discuss non-academic issues. Teaching teams will run regular live drop-in sessions, in case there are academic queries; A dedicated student success advisor who will be an important point of contact, able to provide a good understanding of the School and programme you are studying; Proactive advisors who will assess progress and reach out to any student who is not meeting the prescribed engagement levels; Student Wellbeing (incorporating Counselling, Mental Health and Disability Support); A versatile online, interactive intranet and learning environment; Guided student-centred learning on Canvas module sites; Access to extensive digital collections of information resources; University Disability Advisors; Careers and Employment; Hertfordshire Student's Union; A dedicated online programme site.

I: Programme structures, features, levels, modules, and credits

Programme structure

Year 1 - Part 1
Semester A, September, represented as A (09)
Semester A, November, represented as A (11)
Semester B, January, represented as B (01)
Semester B, March, represented as B (03)
Semester C, May, represented as C (05)
Semester C, July, represented as C (07) Maximum credits: 30

Semester	Module Code	Module Title	Credits	Level	Core/optional
C (05)	7WCM2025	Data Structure and Algorithms 1	15	7	Core
C (07)	7WCM2036	Principles of Data Science	15	7	Core

Year 1 - Part 2
No information available Maximum credits: 60

Semester	Module Code	Module Title	Credits	Level	Core/optional
A (09)	7WCM2032	Principles of Machine Learning	15	7	Core
A(11)	7WCM2035	Principles of AI Programming	15	7	Core

Semester	Module Code	Module Title	Credits	Level	Core/optional
B(01)	7WCM2027	Responsible Technology 1	15	7	Core
B(03)	7WCM2029	Fundamentals of Artificial Intelligence	15	7	Core

Year 2 - Part 1
No information available Maximum credits: 30

Semester	Module Code	Module Title	Credits	Level	Core/optional
C (05)	7WCM2009	Programming and Program Design	15	7	Core
C (07)	7WCM2015	Information System Design	15	7	Core

Year 2 - Part 2
No information available Maximum credits: 60

Semester	Module Code	Module Title	Credits	Level	Core/optional
AB (09)	7WCM2038	Applied Research Project (Computer Science)	60	7	Core

Final and interim awards available

Final award	Award title	Minimum requirements	Available at the end of level
MSc	Computer Science with Artificial Intelligence	See UPR AS11, section 13: http://sitem.herts.ac.uk/secreg/upr/AS11.htm 180 credits, to include at least 150 credits @ Level 7 (with no more than 15 credits below Level 6) The title 'Master of Science' is generally used where studies are substantially based on science, engineering or mathematics and their applications. It can also be used in social sciences.	7 PGT

Interim award	Award title	Minimum requirements	Available at the end of level
PGCert	Untitled	See UPR AS11, section 13: http://sitem.herts.ac.uk/secreg/upr/AS11.htm 60 credits, to include at least 45 credits @ Level 7	7 PGT
PGDip	Computer Science	See UPR AS11, section 13: http://sitem.herts.ac.uk/secreg/upr/AS11.htm 120 credits, to include at least 90 credits @ Level 7 (with no more than 15 credits below Level 6)	7 PGT

Other sources of information

In addition to this Programme Specification, the University publishes guidance to registered students on the programme and its constituent modules:

- A dedicated programme site on the University's Virtual Learning Environment (Canvas);
- A Definitive Module Document (DMD) for each constituent module;

The Ask Herts website provides information on a wide range of resources and services available at the University of Hertfordshire including academic support, accommodation, fees, funding, visas, wellbeing services and student societies.

As a condition of registration, all students of the University of Hertfordshire are required to comply with the University's rules, regulations and procedures. These are published in a series of documents called 'University Policies and Regulations' (UPRs). The University requires that all students consult these documents which are available on-line, on the UPR web site, at: http://www.herts.ac.uk/secreg/upr/. In particular, UPR SA07 'Regulations and Advice for Students' Particular Attention - Index' provides information on the UPRs that contain the academic regulations of particular relevance for undergraduate and taught postgraduate students.

In accordance with section 4(5) of the Higher Education and Research Act 2017 (HERA), the UK Office for Students (OfS) has registered the University of Hertfordshire in the register of English higher education providers. The Register can be viewed at: https://www.officeforstudents.org.uk/advice-and-guidance/the-register/the-ofs-register/.

Furthermore, the OfS has judged that the University of Hertfordshire delivers consistently very high-quality teaching, learning and outcomes for its students. Consequently, the University received a Silver award in the 2023 Teaching Excellence Framework (TEF) exercise. This award was made in October 2023 and is valid for up to 4 years. The TEF panel's report and conclusions can be accessed via this link.

J: Development of intended programme learning outcomes in the constituent modules

These maps identify where the programme learning outcomes are assessed in the constituent modules. It provides (i) an aid to academic staff in understanding how individual modules contribute to the programme aims (ii) a checklist for quality control purposes and (iii) a means to help students monitor their own learning, personal and professional development as the programme progresses.

X = Delivered and Assessed

Module Code	IS 1	IS 2	KU 1	KU 2	KU 3	KU 4	KU 5	PS 1	PS 2	PS 3	PS 4	TS 1	TS 2	TS 3	TS 4	TS 5	TS 6
7WCM2009	X	X		X	X				X	X				X	X	X	X
7WCM2015	X	X		X	X				X				X	X	X	X	X
7WCM2025	X	X		X	X				X	X			X	X	X	X	X
7WCM2027	X		X	X									X		X	X	X
7WCM2029	X			X		X							X		X	X	X
7WCM2032	X			X									X		X	X	X
7WCM2035	X	X		X		X				X	X		X	X	X	X	X
7WCM2036	X			X			X						X		X	X	X
7WCM2038	X	X	X	X	X			X	X	X		X	X	X	X	X	X

Key to module codes

Module code	Level	Title
7WCM2009	7	Programming and Program Design
7WCM2015	7	Information System Design
7WCM2025	7	Data Structure and Algorithms 1
7WCM2027	7	Responsible Technology 1
7WCM2029	7	Fundamentals of Artificial Intelligence
7WCM2032	7	Principles of Machine Learning
7WCM2035	7	Principles of AI Programming
7WCM2036	7	Principles of Data Science
7WCM2038	7	Applied Research Project (Computer Science)

Key to programme learning outcomes for Intellectual Skills

IS1   Deploy, articulate and evaluate key principles and techniques of computer science and be in a position to make critical responses and design decisions on the basis of those principles.

IS2   Use and evaluate a range of methods and tools currently employed in the design and/or development of computer systems.

Key to programme learning outcomes for Knowledge and Understanding

KU1   Demonstrate knowledge and understanding of professional, social, legal, and ethical issues related to contemporary practices in computer science.

KU2   Demonstrate knowledge and understanding of fundamental computer science concepts and how they may be applied to the solution of problems from outside computer science.

KU3   Demonstrate knowledge and understanding of principles and practices of software development methodologies.

KU4   Demonstrate knowledge and understanding of the scope and limitations of different computational paradigms in artificial intelligence.

KU5   Demonstrate knowledge and understanding of the technical principles behind data science and relevant computational algorithms.

Key to programme learning outcomes for Practical Skills

PS1   Carry out a significant independent investigation as part of their project, typically including software development.

PS2   Plan, execute, monitor and reflect upon a substantial piece of independent development work or experimentation in computer science.

PS3   Extend knowledge and understanding of, and practical skills in, a range of computer science topics.

PS4   Extend knowledge and understanding of, and practical skills in, a range of computer science topics.

Key to programme learning outcomes for Transferrable Skills

TS1   Undertake a substantial piece of practical work at postgraduate level, independent of close supervision.

TS2   Evaluate and make critical use of relevant academic and technical literature.

TS3   Utilise their knowledge in practical applications.

TS4   Build upon and extend their knowledge with a minimum of guidance.

TS5   Express themselves knowledgably and coherently, both in writing and orally.

TS6   Be able to explain, justify and otherwise defend their work and ideas, both in its specific details and within a broader context.

Development of Graduate Attributes in the constituent modules

This map identifies where the Graduate Attributes are delivered in the constituent modules. It provides (i) an aid to academic staff in understanding how individual modules contribute to the development of the Graduate Attributes (ii) a checklist for quality control purposes and (iii) a means to help students monitor their own personal and professional development as the programme progresses. [Note that there is no requirement for the Graduate Attributes to be assessed through these modules]

D = Delivered

Module Title	Module Code	Level	Professionally Focused	Globally Minded	Sustainability Driven	Digitally Capable & Confident	Inclusive and Collaborative	Evidenced-based and Ethical
Programming and Program Design	7WCM2009	7 PGT	D	D		D	D	D
Information System Design	7WCM2015	7 PGT	D	D		D		D
Data Structure and Algorithms 1	7WCM2025	7 PGT	D	D		D		D
Responsible Technology 1	7WCM2027	7 PGT	D	D	D	D	D	D
Fundamentals of Artificial Intelligence	7WCM2029	7 PGT	D	D		D		D
Principles of Machine Learning	7WCM2032	7 PGT	D	D		D		D
Principles of AI Programming	7WCM2035	7 PGT	D	D		D		D
Principles of Data Science	7WCM2036	7 PGT	D	D		D		D
Applied Research Project (Computer Science)	7WCM2038	7 PGT	D	D		D		D