Programme Specification

Computer Science with Artificial Intelligence {Foundation} [GCET]

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Section 1: Key Programme Details

Part A: Programme Information

Programme title: Computer Science with Artificial Intelligence {Foundation} [GCET]

Highest award: BSc (Hons) Computer Science with Artificial Intelligence

Interim award: BSc Computer Science with Artificial Intelligence

Interim award: DipHE Computer Science with Artificial Intelligence

Interim award: CertHE Computer Science with Artificial Intelligence

Awarding institution: UWE Bristol

Affiliated institutions: GCET

Teaching institutions: GCET

Study abroad: No

Year abroad: No

Sandwich year: Yes

Credit recognition: No

School responsible for the programme: CATE School of Computing and Creative Technologies, College of Arts, Technology and Environment

Professional, statutory or regulatory bodies: Not applicable

Modes of delivery: Full-time, Sandwich

Entry requirements: Tariff points as appropriate for the year of entry - up to date requirements are available through the UWE Bristol website.

For implementation from: 01 September 2026

Programme code: G40K13

Section 2: Programme Overview, Aims and Learning Outcomes

Part A: Programme Overview, Aims and Learning Outcomes

Overview: This programme provides a flexible, employer-facing education in Computer Science.
Through modern teaching methods the programme supports students to use complex algorithms, implement software on state of the art platforms and explore big data. Suitably designed and selected modules offer students the opportunity to specialise their knowledge.

All our graduates will leave with advanced skills in AI and Data Analytics ready to meet the worldwide skills shortage in this area.

The foundation year acts as a vital stepping stone into the first year of the degree, designed to support students from diverse educational backgrounds in developing the broad academic and professional fundamentals required for higher-level study. Rather than focusing narrowly on subject-specific content, it provides a wide-ranging introduction to essential skills and concepts—including computational thinking, problem solving, academic literacy, project management, and effective communication. This generalist approach ensures that all learners, regardless of prior experience, build confidence in the core principles that underpin university-level learning. Alongside these transferable skills, students are introduced to best practices relevant to their subject area, laying the groundwork for deeper, discipline-specific engagement in subsequent years.

Features of the programme: A placement year is optional, nonetheless, students are strongly encouraged to take up this opportunity. The College provides support in preparation for the placement in a number of ways. For example, the College arranges a series of talks from former placement students and industrialists, aimed at illustrating the benefits of the placement year. Support in applying for placements is also provided through CV workshops, advertising of placement vacancies and more general information on careers and employability. Students who elect not to do a year-long placement are encouraged to gain work experience in other ways, for example through volunteering, summer internships, and entrepreneurial schemes.

If a student opts to take a placement year, they must also take the relevant Level 6 module, while they are undertaking the placement.

Educational Aims: This programme aims to:

Develop able and enabled graduates who contribute to their profession and society.

Develop competent software developers who can explore and make use of new technologies as they emerge.

Develop graduates who have the skills and habits of thinking that allow for life-long learning.

Develop graduates who are equipped to make a contribution to the discipline either through research or practice.

Develop graduates who recognise their ethical and professional responsibilities.

Programme Learning Outcomes:

On successful completion of this programme graduates will achieve the following learning outcomes.

Programme Learning Outcomes

PO1. Apply Artificial Intelligence concepts and techniques to develop effective solutions to problems, or to improve the efficiency and functionality of existing systems.

PO2. Apply their technical knowledge and skills to contribute to the development and improvement of computing solutions, drawing on appropriate evidence and working with increasing autonomy.

PO3. Recognise security threats and their implications, plan actions and design systems to manage them

PO4. Demonstrate competency in software development by applying problem-solving skills and adapting to a range of development environments, tools, and practices.

PO5. Exhibit the ability to contribute effectively to the development of computer-based systems, both independently and as part of a team, by offering appropriate solutions across a range of application areas.

PO6. Demonstrate an understanding of the ethical, legal and professional issues relevant to computing practice, and reflect on these when making decisions about the design, development and use of digital systems.

PO7. Show awareness of how computing practices and technologies respond to evolving industry and societal needs, and reflect on these changes when evaluating or proposing technical solutions.

Assessment strategy: This programme uses a range of assessment methods, designed to speak to different leaning styles and to assess not only knowledge and skills but also to develop essential professional attributes such as the ability to work in a group and synthesise work and present it to an audience . While all forms of assessment will be utilised across the full length of studies, the aim is to have students exposed to the full range of assessments and output formats before they reach level 6 of studies, to ensure their performance will not be affected by lack of experience with a new type of assessment.

The assessment regime is designed to scaffold the students' confidence in their abilities and in the assessment process. For example, at level 4 students will experience in-class tests and on-line tests moving on to formal exams as the programme progresses.

Coursework assignments will be in a mixture of individual and group work and will be assessed by a range of outcomes: written essays providing reflective evaluation of individual or group effort; demonstrations of working systems; High level poster presentations; presentations using digital media capabilities will be utilised to demonstrate student achievement. Technical Reports will also be employed to allow students to present the capabilities of a system that have implemented and critically analyse its potential.

Peer assessment will be employed where group work is assessed. This will allow students to develop more balanced evaluation skills, appreciate the needs of project

requirements and dynamics and the limitations of collaborative work. It will also support the building of their professional maturity and appreciation of team and work ethics.

Throughout the programme there are opportunities for formative feedback as summative assessment is developed. Formative feedback is designed not only to help the students with their learning but also to build their sense of connection and community with their peers and with the academics

Student support: It is a strong programme tradition that students on this programme are encouraged to participate in field trips. These address the objective of widening horizons for the students by experiencing places or events of interest in Oman, GCC and the UK and help to build a sense of community.

Examples of previous trips to UWE included visiting key sites for AI such as Bletchley Park, Bristol Robotic Laboratory and other industrial visits, attending national and international scientific conferences and visiting UWE's other partner institutions overseas. Inclusive access for all students is supported through cost subsidies where required.

The expectation is that students will be inspired by the scientific experiences (research and industry talks at places of visit), the history of a venue or the different way different countries and cultures interact with computing systems. We expect that such experiences will inform and inspire students focus on their interests.

As part of community building, students are also invited to join student societies. These are student-led, academic-supported forums in which topics of interest to students can be discussed.

Also in the spirit of community building, all computing students have sessions for community discussions organised, regularly. This is a time when students at all levels on the programme can get together for employer talks, preparation for competitions and general discussions about the programme and is an opportunity for

peer support and bonding.

All students also benefit from a number of modules that offer input from invited speakers from UWE, industrial and research institutions. These in turn can help stimulate students' interest in particular areas of computer science and support their choices.

In addition, students on this programme will be also be supported by:

Study skills support is offered via the UWE and GCET websites, and includes programming support sessions.

At level 4, timetabled Student Peer Teaching Assistant (SPTA) sessions in which level 5 students will offer advice and guidance about study issues.

The provision of large Open Access spaces which are well-used by their peers and open 24/7. The Open Access Spaces contain machines that provide students with access to the software they need for their studies and more besides.

Published office hours for support outside of scheduled classes.

A library that is well-stocked with reference texts, computers and extensive on-line resources.

The provision of other, frequently available, computer laboratories that provide similar access. Students also have access to 24/7 computer facilities.

The provision of university IT services provides a range of support for learning to students including: support for a wide range of applications used by the students; help in the form of assistants who are trained to resolve many common student problems.

Part B: Programme Structure

Year 1

Full-time and Sandwich students must take 120 credits from the modules in Year 1.

Year 1 Compulsory Modules (Full-time and Sandwich)

Full time and sandwich students must take 120 credits from the modules in Compulsory Modules (Full Time and Sandwich).

Module Code	Module Title	Credit
UFCEUF-30-0	Introduction to Speciality 2027-28	30
UFCEUP-30-0	Computational Thinking 2027-28	30
UFCEUS-30-0	Foundation Project 2027-28	30
UFCEV3-30-0	Professional and Communication Skills 2027-28	30

Year 2

Full-time and Sandwich students must take 120 credits from the modules in Year 2.

Year 2 Compulsory Modules (Full Time and Sandwich)

Full time and sandwich students must take 120 credits from the modules in Compulsory Modules (Full Time and Sandwich).

Module Code	Module Title	Credit
UFCFGS-15-1	Artificial Intelligence I 2028-29	15
UFCET7-15-1	Human-Computer Interaction I 2028-29	15
UFCET6-30-1	Foundations of Computer Systems 2028-29	30
UFCFHS-30-1	Principles of Programming 2028-29	30
UFCFES-30-1	Web Development and Databases 2028-29	30

Year 3
Full-time and Sandwich students must take 120 credits from the modules in Year 3.

Year 3 Compulsory Modules (Full Time and Sandwich)
Full time and sandwich students must take 120 credits from the modules in Compulsory Modules (Full Time and Sandwich).

Module Code	Module Title	Credit
UFCF8S-30-2	Advanced Software Development 2029-30	30
UFCF9S-15-2	Artificial Intelligence II 2029-30	15
UFCETS-30-2	Operating Systems and System Security 2029-30	30
UFCF7S-30-2	Systems Development Group Project 2029-30	30
UFCFAS-15-2	Machine Learning 2029-30	15

Year 4
Full-time students must take 120 credits from the modules in Year 4.
Sandwich students must take 15 credits from the modules in Year 4.

Year 4 Compulsory Modules (Full-time)
Full time students must take 105 credits from the modules in Compulsory Modules (Full Time).

Module Code	Module Title	Credit
UFCETV-45-3	Digital Systems Project 2030-31	45
UFCF95-15-3	Entrepreneurial Skills 2030-31	15
UFCFJS-15-3	Professional Studies in Computing 2030-31	15
UFCETW-30-3	Enterprise Software Development 2030-31	30

Year 4 Optional Modules (Full-time)
Full time students must take 15 credits from the modules in Optional Modules (Full Time).

Module Code	Module Title	Credit
UFCFUR-15-3	Advanced Artificial Intelligence 2030-31	15
UFCFXR-15-3	Autonomous Agents and Multi-Agent Systems 2030-31	15

Year 4 Compulsory Modules (Sandwich)
Sandwich students must take 15 credits from the modules in Compulsory Modules (Sandwich).

Module Code	Module Title	Credit
UFCFE6-15-3	Professional Experience 2030-31	15

Year 5
Sandwich students must take 105 credits from the modules in Year 5.

Year 5 Compulsory Modules (Sandwich)
Sandwich students must take 90 credits from the modules in Compulsory Modules (Sandwich).

Module Code	Module Title	Credit
UFCETV-45-3	Digital Systems Project 2031-32	45
UFCETW-30-3	Enterprise Software Development 2031-32	30
UFCF95-15-3	Entrepreneurial Skills 2031-32	15

Year 5 Optional Modules (Sandwich)
Sandwich students must take 15 credits from the modules in Optional Modules (Sandwich).

Module Code	Module Title	Credit
UFCFUR-15-3	Advanced Artificial Intelligence 2031-32	15
UFCFXR-15-3	Autonomous Agents and Multi-Agent Systems 2031-32	15

Part C: Higher Education Achievement Record (HEAR) Synopsis

A graduate of this programme will be equipped with excellent technical and thinking skills thus enabling them to be an innovative problem solver. They will be familiar with a and practised in a range of programming languages and deployment environments. They will be familiar with tools, techniques and methods in Artificial Intelligence. They will have experienced a rich teaching environment and will be practised in professional skills. They will have connected with industry and will be equipped to respond to the future. They will understand their ethical, legal and professional responsibilities as practising technologists.

Part D: External Reference Points and Benchmarks

This programme has been designed with reference to a comprehensive set of national and institutional benchmarks and frameworks to ensure academic rigour, relevance, and alignment with current sector expectations.

QAA Subject Benchmark Statement for Computing (2022):
https://www.qaa.ac.uk/t...rk-statements/computing
The most recent QAA Subject Benchmark Statement for Computing, published in March 2022, has been fully considered in the design of this programme. The statement reflects the evolving nature of the discipline and highlights the importance of:

•Fundamental computational concepts and algorithmic thinking, including distributed and parallel approaches.
•The relationship between requirements, specification, design, programming, data, validation, and maintenance.
•The power and role of abstraction across multiple levels.
•The balance between automation and human-computer interaction, with attention to reliability, usability, and security.
•Ethical, professional, and societal considerations, including sustainability and inclusivity.

These principles are embedded throughout the curriculum, teaching, learning, and assessment strategies of the programme.

SEEC Credit Level Descriptors (2021):

https://cradall.org/sit...el-descriptors-2021.pdf
The programme structure and learning outcomes are aligned with the SEEC Credit Level Descriptors (2021). These descriptors provide a detailed articulation of the expected learning at each academic level (Levels 4–6), supporting consistency in curriculum design, assessment, and progression. They are used to ensure that modules are appropriately pitched in terms of complexity, autonomy, and depth of learning.

QAA Frameworks for Higher Education Qualifications (FHEQ):
https://cradall.org/sit...el-descriptors-2021.pdf
The programme also adheres to the QAA Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies (2024 edition). This ensures that the qualification descriptors for bachelor's degrees with honours are met, and that the programme outcomes are appropriate for Level 6 study.

UWE Strategy 2030 and Enhancement Framework
https://www.uwe.ac.uk/a...2030/strategy-documents
The UWE Strategy 2030 and the University's Enhancement Framework have informed the programme’s design, particularly in relation to sustainability, inclusivity, and student experience. The programme supports the University's commitment to transforming futures through outstanding learning, research, and enterprise, and aligns with strategic priorities such as climate action, digital innovation, and community engagement.

British Computer Society (BCS) Accreditation:
https://www.bcs.org/del...academic-accreditation/
The programme is informed by the requirements of the British Computer Society (BCS), the professional body for IT in the UK. BCS accreditation ensures that the programme meets industry-recognised standards for technical, professional, and ethical competencies. It supports students in developing the skills necessary for professional registration, including Chartered IT Professional (CITP) status, and aligns with global standards such as the Seoul Accord for international recognition.

Part E: Regulations

Approved to University Regulations and Procedures.

It is the Award Board's responsibility to determine whether the student's attainment at FHEQ Level 3 is sufficient to progress to Level 4.