Programme Specification

Computer Science [Villa]

Version: 2027-28, v1.0, Validated

Contents

Section 1: Key Programme Details

Part A: Programme Information

Programme title: Computer Science [Villa]

Highest award: BSc (Hons) Computer Science

Interim award: BSc Computer Science

Interim award: DipHE Computer Science

Interim award: CertHE Computer Science

Awarding institution: UWE Bristol

Affiliated institutions: Villa College

Teaching institutions: Villa College

Study abroad: No

Year abroad: No

Sandwich year: No

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:

Modes of delivery: Full-time

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 2027

Programme code: I10I00

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 familiarity of the basic tools and concepts of modern Artificial Intelligence (AI). Some of our graduates will have taken the opportunity to leave with advanced skills in AI and Data Analytics ready to meet the worldwide skills shortage in this area, while others might explore the evolving world of Software Development and Smart Technologies; making this programme valuable for the home and the overseas educational market.

Features of the programme:

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: Learning Support at Villa College helps all students to cope better with their studies by providing totally free workshops and tutorials to improve their essays, presentations, and other work-related tasks. Villa College also aims to provide students with other study and life skills so that their time at College adds to their readiness for their careers and future studies.
There are several ways in which Learning Support benefits Villa students. Most activities are online, to enable all students in different parts of the country to benefit equally. There are also web resources to support their studies at any hour of the day or night, from how to use academic references to how to search for high quality

information sources that will make their work really stand out. There are also further workshops available from the Library.

Learning Support services offered are as follows:
Academic Writing Workshops - There are two series of workshops offered to students to help students, researchers, and scholars improve their academic writing skills. These workshops cover topics ranging from organising their writing and writing paragraphs, to using correct grammar and vocabulary. The primary objective of these workshops is to provide participants with strategies, techniques, and resources to enhance their writing proficiency and produce high-quality academic papers.
Referencing Workshops - These workshops are held for all new students at the beginning of each semester and provide the necessary knowledge to use proper citations and develop accurately formatted reference lists for their work. These workshops aim to provide participants with the knowledge and skills necessary to accurately and effectively attribute information and ideas borrowed from other authors, avoiding plagiarism and maintaining academic integrity. Additionally, these workshops are available for current students upon request by faculty.
E-Tutes Appointments - This is a large community in Viber that provides regular updates on grammar, vocabulary and other language-related information to boost their learning experience. There are also quizzes, and inspirational posts to encourage students through their time at college. Many alumni also participate in this community of over 2,500 members.
VC E-Tutes on Viber - This is a large community in Viber that provides regular updates on grammar, vocabulary and other language-related information to boost their learning experience. There are also quizzes, and inspirational posts to encourage students through their time at college. Many alumni also participate in this community of over 2,500 members.
PAL programme - The VC Peer Assisted Learning programme aims to provide help for new students in their initial semester for difficult modules. The aim is to provide additional support in the selected modules in a relaxed setting. New students are provided support by students who have already finished the difficult modules with outstanding results.
Study Skills Workshops - These workshops enable students to pick up valuable study and life skills that will enable them to be more effective students and perform

better in their careers.
Google Meet 'Walk-In' - All students have the opportunity to log in to these specific time slots on Google Meet as 'walk-ins' to clarify various study-related issues. These are similar to E-Tutes appointments, but they do not require a prior booking.
Career Support - We are dedicated to providing comprehensive career support to our students to help them make informed decisions about their future.
Counselling Support - Villa College offers a range of counselling services to support students' psychological and emotional wellbeing to aid their academic performance and personal growth.
Academic Counselling - Our faculties are dedicated to provide the best academic counselling services for the students to help them achieve their academic goals.
Guest Lectures / Workshops / Hands on Sessions / Participating in Conferences with students / trying to publish the students works in academic journals / Learning Support Videos - There are several YouTube videos developed to help students learn more about doing library research, referencing and general academic writing, among other areas.

The Study Skills page on the Villa College Library provides useful information and resources for students on academic writing and referencing.

Part B: Programme Structure

Year 1
The student must take 120 credits from the modules in Year 1.

Year 1 Compulsory Modules (Full Time)
Full time students must take 120 credits from the modules in Compulsory Modules.

Module Code	Module Title	Credit
UFCET6-30-1	Foundations of Computer Systems 2027-28	30
UFCET7-15-1	Human-Computer Interaction I 2027-28	15
UFCFGS-15-1	Artificial Intelligence I 2027-28	15

UFCFHS-30-1	Principles of Programming 2027-28	30
UFCFES-30-1	Web Development and Databases 2027-28	30

Year 2
The student must take 120 credits from the modules in Year 2.

Year 2 Compulsory Modules (Full Time)
Full time students must take 120 credits from the modules in Compulsory Modules (Full Time)

Module Code	Module Title	Credit
UFCETS-30-2	Operating Systems and System Security 2028-29	30
UFCF8S-30-2	Advanced Software Development 2028-29	30
UFCF9S-15-2	Artificial Intelligence II 2028-29	15
UFCF7S-30-2	Systems Development Group Project 2028-29	30
UFCFAS-15-2	Machine Learning 2028-29	15

Year 3
The student must take 120 credits from the modules in Year 3.

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

Module Code	Module Title	Credit
UFCFJS-15-3	Professional Studies in Computing 2029-30	15
UFCETV-45-3	Digital Systems Project 2029-30	45
UFCETW-30-3	Enterprise Software Development 2029-30	30
UFCFUR-15-3	Advanced Artificial Intelligence 2029-30	15

UFCFXR-15-3	Autonomous Agents and Multi-Agent Systems 2029-30	15

Part C: Higher Education Achievement Record (HEAR) Synopsis

A graduates 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

A: Approved to University Regulations and Procedures

https://www1.uwe.ac.uk/about/departmentsandservices/professionalservices/studentandacademicservices/regulationspoliciesquality/regulationsandprocedures.aspx