



## **Programme Specification**

### **Cyber Security and Digital Forensics [Frenchay]**

Version: 2023-24, v2.0, 12 Feb 2024

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## Section 1: Key Programme Details

### Part A: Programme Information

**Programme title:** Cyber Security and Digital Forensics [Frenchay]

**Highest award:** BSc (Hons) Cyber Security and Digital Forensics

**Interim award:** BSc Cyber Security and Digital Forensics

**Interim award:** DipHE Cyber Security and Digital Forensics

**Interim award:** CertHE Cyber Security and Digital Forensics

**Awarding institution:** UWE Bristol

**Teaching institutions:** UWE Bristol

**Study abroad:** Yes

**Year abroad:** Yes

**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:**

British Computer Society (BCS)

**Modes of delivery:** Full-time, Sandwich

**Entry requirements:** For the current entry requirements see the UWE public website.

**For implementation from:** 01 September 2020

**Programme code:** G4HE00

## Section 2: Programme Overview, Aims and Learning Outcomes

## **Part A: Programme Overview, Aims and Learning Outcomes**

**Overview:** The general aims of the programme are:

To prepare students for careers in computer security and computer crime-investigation (e.g. 'forensic technician')

To develop problem-solving, communication and other transferable skills applicable to a variety of careers

To prepare students for study for higher degrees in related subjects

### **Features of the programme:**

**Educational Aims:** The specific aims of the programme are:

To develop knowledge of computer hardware and software systems

To provide an understanding of applicable law, court procedure and the role of the expert witness

To introduce a variety of approaches to both the analysis of the security requirements of computer systems and the investigation of computer crime

### **Programme Learning Outcomes:**

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

### **Programme Learning Outcomes**

PO1. Understand computer systems and networks, trusted computing base, threats and security policy, computer security mechanisms in networks and computers at various layers and levels, security technology innovations.

- PO2. Understand, and be able to apply tools and techniques for investigating computer crime such as data mining and profiling. Demonstrate competence in the skills and responsibilities of a forensic computing practitioner and expert witness.
- PO3. Apply coherent and detailed knowledge of global landscapes and critique and appraise legislation policies, and regulations governing fields of cyber security and digital forensics.
- PO4. Analyse key security mechanisms and investigative frameworks used in access control, authentication, encryption, digital signatures, and evidence preservation to perform systems analysis in terms of computer security and digital forensic casework.
- PO5. Formulate security management policies and procedures. Defining, modelling and describing the concepts of trust and security policy. Securing access to services and applications from various devices.
- PO6. Critically appraise and use a variety of professional and academic literature sources to support independent research and enquiry.
- PO7. Develop rigorous and creative solutions to complex IT problems, involving uncertainty, that satisfy a range of stakeholder requirements.

**Assessment strategy:**

Assessment strategies for Cyber Security and Digital Forensics focus on ensuring a strong technical knowledge skills in the use of appropriate tools and abilities in devising and deploying security measures, and an understanding of adversarial behaviors.

**Student support: Pastoral Care:**

At UWE a wide range of services are on offer to provide pastoral care through its Student Support Advisers, a team of staff who provide comprehensive, full-time student support service on a drop-in basis or by appointment. All students on the same route are allocated to the same Adviser, who is trained to provide advice on matters commonly of concern, including regulatory and other matters; the Adviser will, when necessary, advise the student to seek advice from other professional services.

### Student Support and Guidance:

At UWE, student support is provided by academic staff, usually module leaders, for all issues relating to the content and delivery of the module. At UWE, the UWE student advice services provide timely, accurate and confidential advice where necessary on all aspects of the provision including that relating to fees, assessment arrangements, late work and extenuating circumstances procedures, option choice, timetabling, examination and progression counselling and so on, as well as where and how to access the support provided by UWE.

Additional support and guidance is provided by Programme Leaders who are also responsible for ensuring the collection of and response to student feedback using student representatives and Programme Management Committees.

Further support is provided through the UG administration team, the admissions office, the Students Union, the central University career service and UWE's counselling provision. The UWE placements services provide extensive support for students in preparation for, as well as throughout, their study year abroad and acts both as an intermediary with partner institutions and as a recruitment service for employers.

Students seeking employment opportunities during their studies have access to UWE's Job Shop and are also encouraged to develop valuable skills by volunteering with the Community Volunteer Service. The UWE Global Centre provides support and organises specific activities to assist international students in adapting to life in the UK, such as an additional induction week, and the provision of specific literature to assist with their study.

All students have a formal induction process to socialise them to university life and to provide them with the means to access the support that they may require during their study at UWE. A student handbook documents this for students. There are a range of central services offered to students. These include: Student Advice and Money and Finance service for advice on finance and UWE's counselling provision; Career Development Team for careers information; information technology services, student

accommodation services, sports facilities, student union services, the Chaplaincy, and the Centre for Performing Arts.

Support to students with disability is offered centrally through UWE's Disability Service. The Disability Adviser coordinates academic support for disabled students in the college. This includes communication of individual student's support requirements to teaching and support staff and advice and recommendations on reasonable adjustments to teaching and assessment. The Disability Adviser also coordinates staff development on disability issues and provides information and advice to academic and support staff and to students in relation to disability issues. Together, these act as a holistic service for disabled students and applicants to UWE and also support the academic and administrative staff members who work with disabled students.

The Career Team provides various services and programmes to assist students in analysing their career interests, aptitudes, values and goals. It also assists students in career planning and preparation for job interviews, in addition to providing job placement services for graduating students through our network with industry and potential employers. Its services include: career counselling; career talks and workshops; resume writing and grooming seminars; career-related fairs and company trips.

An orientation programme (Starting Block) is organised for all students prior to the start of the programme. It introduces students to the support available within the School and University, via a range of speakers. An ICT services orientation will introduce students to the email, blackboard and student portal.

International students will receive an induction from the International Office.

**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).

<b>Module Code</b>	<b>Module Title</b>	<b>Credit</b>
UFCF93-30-1	Computer and Network Systems 2023-24	30
UFCFP4-30-1	Computer Crime and Digital Evidence 2023-24	30
UFCFTK-30-1	Introduction to Databases 2023-24	30
UFCFGL-30-1	Programming in C++ 2023-24	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 105 credits from the modules in Compulsory Modules (Full Time and Sandwich).

<b>Module Code</b>	<b>Module Title</b>	<b>Credit</b>
UFCE8B-30-2	Data Science for Cyber Security 2024-25	30
UFCFWK-15-2	Operating Systems 2024-25	15
UFCFLC-30-2	Secure Computer Networks 2024-25	30
UFCFJ6-30-2	Security and Forensic Tools 2024-25	30

**Year 2 Optional Modules (Full Time and Sandwich)**

Full time and sandwich students must take 15 credits from the modules in Optional Modules (Full Time and Sandwich).

<b>Module Code</b>	<b>Module Title</b>	<b>Credit</b>
UF CFVK-15-2	Internet of Things 2024-25	15
UF CFDL-15-2	Secure Embedded Systems 2024-25	15

### **Year 3**

Full time students must take 120 credits from the modules in Year 3.  
Sandwich students must take 15 credits from the modules in Year 3.

### **Year 3 Compulsory Modules (Full Time)**

Full time students must take 90 credits from the modules in Compulsory Modules (Full Time).

<b>Module Code</b>	<b>Module Title</b>	<b>Credit</b>
UFCE8A-30-3	Cyber Security Project 2025-26	30
UF CFC5-15-3	Forensic Computing Practice 2025-26	15
UFCE88-30-3	Global Landscapes of Cyber Security and Adversaries 2025-26	30
UF CFRB-15-3	Security Management in Practice 2025-26	15

### **Year 3 Compulsory Modules (Sandwich)**

Sandwich students must take 15 credits from Compulsory Modules (Sandwich).

<b>Module Code</b>	<b>Module Title</b>	<b>Credit</b>
UF CFE6-15-3	Professional Experience 2025-26	15

### **Year 3 Optional Modules (Full Time)**

Full time students must take 30 credits from the modules in Optional Modules (Full Time).

<b>Module Code</b>	<b>Module Title</b>	<b>Credit</b>
UFCE8C-15-3	Cyber Security Consultancy 2025-26	15
UFCE87-15-3	Cyber Security Engineering 2025-26	15



UFCE8F-15-3	Digital Evidence - Crime Scene to Court Room 2025-26	15
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**Year 4**

Sandwich students must take 105 credits from the modules in Year 4.

**Year 4 Compulsory Modules (Sandwich)**

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

Module Code	Module Title	Credit
UFCE8A-30-3	Cyber Security Project 2026-27	30
UFCEFC5-15-3	Forensic Computing Practice 2026-27	15
UFCE88-30-3	Global Landscapes of Cyber Security and Adversaries 2026-27	30
UFCEFRB-15-3	Security Management in Practice 2026-27	15

**Year 4 Optional Modules (Sandwich)**

Sandwich students must take 15 credits from Optional Modules (Sandwich).

Module Code	Module Title	Credit
UFCE8C-15-3	Cyber Security Consultancy 2026-27	15
UFCE87-15-3	Cyber Security Engineering 2026-27	15
UFCE8F-15-3	Digital Evidence - Crime Scene to Court Room 2026-27	15

**Part C: Higher Education Achievement Record (HEAR) Synopsis**

Graduates in the field of Computer Security and Computer Forensics would be expected to have an excellent understanding of the internal operation of computers and operating and file systems. They would be able to use appropriate tools to investigate computer-based activities, deploy tools and techniques to prevent security breaches and investigate the mis-use of computer systems and other

devices. As much of this work is carried out either directly in support of legal processes an understanding of appropriate legal systems and law would be expected.

#### **Part D: External Reference Points and Benchmarks**

This programme is consistent with the UWE 2030 strategy in that its focus on the practice of computer security and forensics aligns with our aim of producing practice-oriented graduates.

The partnership with Taylors helps to ensure that the programme has an inclusive and global reach. The programme adopts the general approach of the school of Computing and Creative Technologies in including input from industry in terms both of visiting speakers and placement and work experience opportunities.

The QAA Computing and Law benchmark statements:

The QAA Subject Benchmark Statements for Computing (2022) and for Law (2023) are applicable to this programme.

The programme clearly falls into the cognate area described by the Computing benchmark. Due to the nature of Digital Forensic practice, much of the computing material is of a technical, low-level nature, with relatively little computing theory. Thus, in terms of the benchmark's high-level characterisation of Computing, the emphasis of the programme is on software, communication and interaction and practice, developed within the context of the specialised requirements of the programme. From the body of knowledge the following are considered essential to a study of Digital Forensics: Data Mining (in the context of forensic investigations); Computer Based Systems; Computer Networks; Data Structures and Algorithms, with emphasis on data structures; Distributed Computer Systems; Operating Systems; Programming Fundamentals; Security and Privacy; Web-based Computing.

The Computing Benchmark Statement also contains (section 4) statements of the standards expected of graduates at both modal and threshold levels. The team is of the view that graduates of the proposed programme will be able to meet the required

standards.

The Law benchmark has been considered during the design process at the 'Law as Subsidiary' level of performance, which focuses on the development of legal skills related to some specific area (in this case Digital Forensics). Though the Statement is targeted at programmes with at least 180 credits of legal subjects, its expectations also apply to programmes such as Digital Forensics, where the legal aspects make up a relatively small, but very important component. No attempt has been made to include all aspects of law or to provide the foundation for a legal career as such – instead the most important points of law and court procedure are covered. The aim of the design team has been to provide sufficient legal knowledge to be aware of the rules and legal system pertaining to Digital Forensics: as suggested in the Benchmark, the relevant law is treated mainly as data from which legal conclusions or opinions can be derived. It is expected that student will be able to assimilate legal information from a variety of sources and apply the knowledge acquired to computer crime investigation and security analysis.

### **Part E: Regulations**

Approved to University Regulations and Procedures.