

Undergraduate Programme Specification

Session	2025/26	Last Modified				
Named Award Title	BEng (Hons) Cyber S	ecurity (Sandwich Ava	ilable)			
Award Title for Each	BEng (Hons) Cyber Sec	curity (Sandwich Availab	le)			
Award	BSc (Hons) Cyber Secu	urity				
	BEng Cyber Security (S	Sandwich Available)				
	Dip HE Computing					
	Cert HE Computing					
Date of Approval	30/05/2025					
Details of Cohort Applies to	Cohort entering in Sep	eptember 2025				
Awarding Institution	University of the West of Scotland	Teaching Institution(s)	University of the West of Scotland (Lanarkshire and London)			
			Paisley campus for Wuxi L10			
			New College Lanarkshire (L8 & L9)			
			Dumfries & Galloway College (L9 & L10)			
			ISMT Nepal			
Language of Instructi	on & Examination	English				
Award Accredited by						
Maximum Period of R	egistration	6 years (Full-Time), 8 Y	ears (Part-Time)			
Duration of Study						
Full-time	4 Years	Part-time	8 Years			
Placement (compulsory)	n/a					
Mode of Study	 ⊠ Full-time ∑ Part-time 					
Campus	☐ Ayr ☐ Dumfries	∠ Lanarkshire∠ London∠ Paisley	☐ Online / Distance Learning ☐ Other (specify)			

			New College Lanarkshire, Dumfries & Galloway College ISMT Nepal
School	Computing, Engineer	ing and Physical Scienc	ces
Divisional Programme Board	Computing		
Programme Leader	Raman Singh		

Admissions Criteria

Candidates must be able to satisfy the general admission requirements of the University of the West of Scotland as specified in Chapter 2 of the University Regulatory Framework together with the following programme requirements:

SQA National Qualifications:

YEAR 1 ENTRY

- Standard Entry Requirements: BCCC (90 UCAS Tarrif points) including Maths, Computing or Physics
- · Minimum Entry Requirements: CCCC (84 UCAS Tarrif points) including Maths, Computing or Physics

Year 2 ENTRY

Scottish Advanced Highers: CCD (112 UCAS Tarrif points) including Computing or evidence of programming

Year 3 Entry

SQA HND/BTEC Level 5 HND: Networking (with programming); Cyber Security; Computing Science (with networking modules); Information Security.

Or GCE

Year 1:

A Levels: CCC (96 UCAS Tarrif Points) including Maths, Computing or Physics

Year 2:

A Levels: BBC (112 UCAS Tarrif points) including Computing or evidence of programming

Or SQA National Qualifications / Edexcel Foundation

Other Required Qualifications/Experience

Year 1:

Irish Leaving Certificate: H3H3H3H4 including Maths, Computing or Physics International Baccalaureate: 24 points including Maths, Computing or Physics

Scottish Wider Access Programme: Access to STEM (BBB)

Year 2:

International Baccalaureate: 28 points including Computing or evidence of programming

BTEC Extended Diploma: DDM

Further desirable skills pre-application

General Overview

This programme has been devised to meet a growing need, as identified by the Scottish and UK Governments, for individuals who possess a skillset to meet the challenges posed by the constantly evolving computer systems that they may be employed to support today. There is currently a short supply of highly skilled cyber professionals. Therefore, this programme will produce graduates with the skillset to fill this gap by teaching them in such a way that they can identify, assess and evaluate cyber security threats and attacks, and in turn work with others to develop robust and secure solutions using best practice frameworks. The exciting programme has been developed with due cognisance of the IISP (Chartered Institute of Cyber Security) and NCSC (National Cyber Security Centre) frameworks. The integration of academia and industry in delivering the programme will ensure the currency of this innovative industry-focused programme.

Typical Delivery Method

Students are expected to attend classes in Face-to-Face mode. Most modules have mandatory lab work. Most modules have either 20 credits or 10 credits of weightage. The module study material is delivered over 12 weeks for the 20-credit module and 6 weeks for the 10-credit module. Each module is expected to engage on a weekly basis, mostly in 4-hour sessions. Each term, students are offered a total of 60-80 credit modules.

Any additional costs

There are no additional costs associated with the programme.

Graduate Attributes, Employability & Personal Development Planning

Graduate Attributes

UWS's Graduate Attributes focus on academic, personal and professional skills and throughout the programmes, these skills develop graduates who are universally prepared, work-ready and successful. The Cyber Security programme provides opportunities throughout the levels to enable these skills to be developed and focussed appropriately. Critical analytical and inquiry skills are developed and used to solve industry-related problems wherever possible. The programme promotes cultural awareness and emotional intelligence with a variety of group exercises developing resilient, ambitious and enterprising leadership qualities whilst ensuring that group members are emotionally and culturally aware and respectful communication and behaviours are the norm.

Ethical awareness and social responsibility are developed throughout and are formalised in 4th year during project studies where School/University ethical approval is sought if required. Links to current University programme research are promoted through the programme with opportunities for students to become involved in aspects of the research from the earliest opportunity either discretely or as part of an assessment.

Employability - The School regularly receives interest from companies to engage with our students and we are keen to facilitate this where see benefits for our students. The School also runs a number of specific employability events at the Lanarkshire and/or Paisley campuses, including employer speed networking events and an annual 'Working with

Industry' event. Invited industrial speakers and former students will also provide input to the programme.

Personal Development Planning (PDP) within the programme is based on four standards: personal tutor support, a number of modules linked to PDP outcomes, support for the development of an e-portfolio, and a number of events relating to PDP.

A personal tutor is identified for each student, and students are expected to meet with their personal tutors on a regular basis - at least once per term - to discuss issues relating to PDP, including progress, development goals and aspirations.

A number of modules core to the programme at each level have been identified as being strongly linked to PDP themes, and these are:

First Year: APPD07001 ASPIRE

Second Year: APPD08001 ASPIRE 2 and embedded in several of the modules.

Third Year: COMP09093 Professional Computing Practice

Honours Year: COMP10034 Computing Honours Project and COMP10074 Advanced

Professional Practice in Computing

Work Based Learning/Placement Details

Students will be encouraged to actively engage in summer internships and placements throughout the programme of study and have the option to complete an industrial (sandwich) placement year, to ensure the relevance of skills development as applied to industry is established. To facilitate these activities, students will be given opportunities to network with professional practitioners through supported activities and given workshops on developing techniques of networking.

Opportunities for industry focused learning activities have been built into some of the modules of the programme enabling students to engage with employers. These include 'live' case studies, problem-solving scenarios, and individual work-related projects. Some industry and research-based placement will be offered in the programme.

The sandwich year for MEng students are offered after L9 for full 12 months. A sandwich year is typically assessed through a combination of a written report/ reflective log, and employer evaluation. Based on student's submitted report/portfolio and employer's evaluation, a grade of pass/fail decided. If a student pass this evaluation, the sandwich placement is added in the title, else normal award (BEng or BEng Hons) is provided.

Attendance and Engagement

In line with the <u>Student Attendance and Engagement Procedure</u>, Students are academically engaged if they are regularly attending and participating in timetabled on-campus and online teaching sessions, asynchronous online learning activities, course-related learning resources, and complete assessments and submit these on time.

Equality and Diversity

The University's Equality, Diversity and Human Rights Procedure can be accessed at the following link: <u>UWS Equality, Diversity and Human Rights Code.</u>

In alignment with the University's commitment to equality and diversity, this programme actively promotes equal opportunities for students from all backgrounds and with diverse learning needs. Learning materials will be delivered via the Virtual Learning Environment (VLE) in electronic formats that support flexible access and allow for content manipulation to suit individual requirements.

Module coordinators are responsible for ensuring that all University-created materials use inclusive and culturally sensitive language. However, it should be noted that some external resources, such as textbooks or websites, may contain outdated or non-inclusive terminology. Students will be informed of this where applicable.

The programme adheres to the University's regulations and guidance on inclusive learning and teaching practices. Students are encouraged to consult the relevant module coordinator to discuss any specific needs. This will enable appropriate arrangements to be made regarding assistive technologies, support services, or assessment adjustments, in line with University policies.

Module coordinators will also ensure that all teaching resources are appropriate to the mode of delivery for each module. For laboratory-based modules, where access to physical devices or hardware may not be possible, suitable alternatives such as emulators and virtual software will be provided to ensure that all students have equitable access to essential tools and resources.

Programme structures and requirements, SCQF level, term, module name and code, credits and awards (Chapter 1, Regulatory Framework)

Learning Outcomes

	SCQF LEVEL 7
	Learning Outcomes
	Knowledge and Understanding
A1	Describe and explain the dynamic nature of the cyber security sector.
A2	Define and discuss the key areas, concepts and principles of cyber security.
А3	Describe and explain the standard mathematical and statistical concepts used in computing.
A4	
A5	
	Practice - Applied Knowledge and Understanding
B1	Develop computing applications by applying knowledge and understanding of the principles and techniques of structured programming.
B2	Compile, execute, debug and document software using a current Integrated Development Environment (IDE).
В3	Employ the professional skills, techniques, practices and/or materials associated with cyber security.
B4	
B5	
	Communication, ICT and Numeracy Skills
C1	Solve problems of a non-routing nature in creative and innovative ways.
C2	Practice numeracy in understanding and presenting cases involving a quantitative dimension.
C3	Use a range of ICT applications to support and enhance work and adjust features to suit purpose.
C4	Practice communication skills in electronic as well as written and oral form to a range of audiences.
C5	
	Generic Cognitive Skills - Problem Solving, Analysis, Evaluation
D1	Coherently present and evaluate arguments, information and ideas.
D2	Participate within the legal, ethical and professional framework within which they study.
D3	
D4	
D5	
	Autonomy, Accountability and Working with Others
E1	Define and explain key issues in relation to the accountability and responsibilities of computer professionals to clients, the community, and the society at large.

	ranage limited	resou	rces within defined areas of	computing	work	ζ.		
E3								
E4								
E5								
evel 7	Modules							
SCQF	Module Cod	le	Module Title	Credit	Terr			Footnotes
Level 7	COMP07009)	Introduction to Web Development	20	1		3	
7	COMP07012	<u>)</u>	CCNA 1: Introduction to Networks	20				
7	COMP07027	7	Introduction to Programming	20				
7	COMP07086	6	Fundamentals of Computing System	10				
7	APPD07001		ASPIRE	20				
7	COMP07075	5	Security Fundamentals	20				
7	MATH07005		Mathematics for Computing	10				
	Modules	s a 20 d	credit module spread over T	1 and T2 lor	ng and	d thin	•	
SCQF	Module	Modu	ıle Title	Credit	Terr	n		Footnotes
Level	Code				1	2	3	
Footno	tes for Option	Modul	es					
Level 7	a for Progress	sion an	d Award					

Please refer to <u>UWS Regulatory Framework</u> for related regulations

Refer to Guidance note.

Award of Certificate of Higher Education (Cert HE) in Computing Science - At least 120 credits at SCQF level 7.

Distinction will be awarded in line with University Regulations and no imported credit can be used. (Regulations 3.25 & 3.26)

Links: UWS Regulatory Framework; and Student Experience Policy Statement.

	SCQF LEVEL 8
	Learning Outcomes
	Knowledge and Understanding
A1	
AI	Define and explain the concepts and principles of the object-oriented paradigm in the development of computing applications.
A2	Identify and explain the importance of data abstraction and the role this plays in computing.
A3	Demonstrate an intellectual understanding of, and an appreciation for, the central role of algorithms and data structures, and work with a variety of them.
A4	Identify and explain the key aspects of relational database theory.
A5	
	Practice - Applied Knowledge and Understanding
B1	Analyse the extent to which a proposed or existing computer-based application meets the criteria defined for its intended use.
B2	Use a range of routine and advanced skills, techniques and practices to develop software.
В3	Analyse a new or existing workplace system and design and implement a relational database to better meet company the requirements.
B4	
B5	
	Communication, ICT and Numeracy Skills
C1	Present a reasoned and evidence-based proposal for a computer-based solution to meet an identified need in the workplace.
C2	Employ routine and specialised software development skills. For example, use a range of standard applications to process and obtain data.
СЗ	Utilise a database to store and retrieve information effectively.
C4	Employ routine and specialised network penetration testing and ethical hacking skills.
C5	
	Generic Cognitive Skills - Problem Solving, Analysis, Evaluation
D1	Employ a range of approaches to formula evidence-based solutions/ responses to defined and/or routine cyber security problems/issues.
D2	Critically evaluate and analyse evidence-based solutions/ responses to defined and/or routine cyber security problems/ issues.
D3	
D4	
D5	
	Autonomy, Accountability and Working with Others
E1	Deal with ethical and professional issues in accordance with current professional and/ or ethical codes or practices in the discipline of computing science as a whole and cyber security specifically, under guidance.

E2	Identify and apply current professional and/or ethical codes or practices in the discipline of computing science as a whole and cyber security, specifically.
E3	
E4	
E 5	

Level 8 Modules

CORE

SCQF	Module	Module Title	Credit	Term			Footnotes
Level	Code			1	2	3	
8	COMP08002	Database Development	20	\boxtimes			1
8	COMP08074	Operating Systems	20	\boxtimes			
8	COMP08094	Ethical Hacking: Tools & Techniques	20				
8	COMP08100	Linux: Tools and Administration	20				
Footno	Footnotes for Core Modules						

Level 8 Modules

OPTION

SCQF	Module	Module Title	Credit	Term			Footnotes
Level	Code			1	2	3	
7	MATH07005	Mathematics for Computing	10		\boxtimes		2
7	COMP07027	Introduction to Programming	20	\boxtimes	\boxtimes		3
8	COMP08101	Programming for Cyber Security	20	\boxtimes			3
8	COMP08097	CCNA2 Switching Routing & Wireless Essentials	20				4
9	COMP09115	CCNA1/2: Networks, Routing, Switching & WLANs	30				4

Footnotes for Option Modules

- 1. From 2026/27 year, APPD08001 ASPIRE 2 (T2) will be offered at level 8 in place of COMP08002 Database Development.
- 2. MATH07005 Mathematics for Computing is offered to direct entry students who have not undertaken any mathematics module at HNC or level 7. This may result in additional credit for direct-entry students.
- 3. COMP07027 Introduction to Programming, is offered, as an alternative to COMP08101 Programming for Cyber Security, for direct entry students to Yr 2 with no previous programming experience. COMP07027 module runs as 20 credits spread over Term 1 and Term 2 long and thin.

4. COMP09115 - CCNA1/2: Networks, Routing, Switching & WLANs, is offered, as an alternative to COMP08097 - CCNA2 Switching Routing & Wireless Essentials, for direct entry students to Yr 2 with no previous networking experience.

Level 8

Criteria for Progression and Award

Please refer to <u>UWS Regulatory Framework</u> for related regulations

Award of Diploma of higher Education (Dip HE) in Cyber Security- At least 240 credits of which a minimum of 90 are at least at SCQF level 8. If a student misses any core module but earns required credits from other optional modules, they can be awarded Dip HE in Information Technology.

Distinction will be awarded in line with University Regulations and no imported credit can be used. (Regulations 3.25 & 3.26)

SCQF LEVEL 9 Learning Outcomes (Maximum of 5 per heading) **Knowledge and Understanding** Α1 Demonstrate a critical understanding of relevant cyber security principles and practices. Demonstrate a critical understanding of the scope, main areas and boundaries of cyber **A2** А3 Analyse theories, principles, concepts and terminology with cyber security. Α4 Α5 **Practice - Applied Knowledge and Understanding** В1 Practise routine methods of enquiry and research associated with computing science. Apply the principal skills, techniques, practices and/or materials associated with cyber **B2** security. **B3** Practise routine methods of enquiry and/or research associated with cyber security. **B4 B5 Communication, ICT and Numeracy Skills** C1 Use a range of tools and techniques associated with cyber security. C2 C3 C4 C5 Generic Cognitive Skills - Problem Solving, Analysis, Evaluation **D1** Understand and apply a range of computing concepts, principles and practices in the context of well-specified scenarios, exercising judgment in the selection of tools and techniques. D2 Draw on a range of sources in making judgements. D3 D4 D5 **Autonomy, Accountability and Working with Others** E1 Recognise and deal with the professional, economic, social, environmental, moral and ethical issues involved in the sustainable exploitation of computer technology, and be guided by the adoption of appropriate professional, ethical and legal practices in the work place. **E2** Use initiative in managing ethical and professional issues in accordance with current professional and/or ethical codes or practices. **E3 E4 E**5

Level 9 Modules

CORE

SCQF	Module	Module Title	Credit	Terr	n		Footnotes
Level	Code			1	2	3	
9	COMP09092	Research Methods in Computing	10				
9	COMP09093	Professional Computing Practice	10				
9	COMP09106	Cryptography	20	\boxtimes			
9	COMP09107	Digital Forensic Analysis	20	\boxtimes			
9	COMP09111	Systems Programming Concepts	20				
Footno	Footnotes for Core Modules						

Level 9 Modules

OPTION

SCQF	Module	Module Title	Credit	Term			Footnotes
Level	Code			1	2	3	
8	COMP08101	Programming for Cyber Security	20	\boxtimes			1
9	COMP09115	CCNA1/2: Networks, Routing, Switching & WLANs	30				2
9	COMP09024	Unix System Administrations	20	\boxtimes			3
9	COMP09116	CCNA: CyberOps	20		\boxtimes		
9	COMP09109	Web Application Security Testing	20				

Footnotes for Option Modules

- 1. COMP08101 Programming for Cyber Security and COMP09110 Python for Network Engineers are offered to direct-entry students with no previous programming experience. This may result in additional credit for direct-entry students.
- 2. COMP09115 CCNA1/2: Networks, Routing, Switching & WLANs is core for direct entry students to Yr 3 with no previous networking experience. This may result in additional credit for direct-entry students.
- 3. COMP09024 Unix System Administration module is only available as an option to franchise partners.

Level 9
Criteria for Progression and Award
Please refer to <u>UWS Regulatory Framework</u> for related regulations

Award of BEng Cyber Security - At least 360 credits of which a minimum of 90 are at least at SCQF level 9.

Distinction will be awarded in line with University Regulations and no imported credit can be used. (Regulations 3.25 & 3.26)

	SCQF LEVEL 10
	Learning Outcomes (Maximum of 5 per heading)
	Knowledge and Understanding
A1	Demonstrate and work with a knowledge that covers and integrates most of the principal areas, features, boundaries, terminology and conventions within cyber security.
A2	Demonstrate a critical understanding of the principal theories, concepts, principal conventions within the selected area of cyber security study, some of which are informed by or at the forefront of the selected theme(s) of study.
A3	Demonstrate knowledge and understanding of cyber security including a range of established techniques of enquiry or research methodologies.
A4	
A5	
	Practice - Applied Knowledge and Understanding
B1	Execute a defined project of research, development or investigation within the area of cyber security and identify and implement relevant outcomes.
B2	Critically review and assess contributions to the research literature on cyber security.
В3	Use a range of the principal skills, practices and/or materials associated within the selected theme(s) of study in a project.
B4	Use a range of the principal skills, practices and/or materials associated within the selected theme(s) of study in a project.
B5	Use and integrate skills, practices and/or materials which are specialised, advanced, or at the forefront of cyber security.
	Communication, ICT and Numeracy Skills
C1	Deliver a coherent and reflective presentation of an extended piece of project work to an informed audience.
C2	Produce a critical and evaluative written report of a development project.
C3	Use a wide range of routine and specialised skills in support of established practices within the selected theme(s) of study - for example:
	- make formal presentations about specialised topics to informed audiences.
	- use a range of software to support and enhance work at this level and specify refinements/ improvements to software to increase effectiveness.

	- interpret, use and evaluate a range of numerical and graphical data to set and achieve
	goals/ targets.
C4	
C5	
	Generic Cognitive Skills - Problem Solving, Analysis, Evaluation
D1	Critically analyse and apply a range of computing concepts, principles and practices in the context of loosely defined problems where information is limited and/or comes from a range of sources, exercising judgment in the selection of tools and techniques.
D2	Critically review and consolidate knowledge, skills, practices and thinking within the selected theme(s) of study.
D3	Demonstrate originality and creativity in dealing with professional-level computing issues.
D4	
D5	
	Autonomy, Accountability and Working with Others
E1	Practice in ways which show a clear awareness of own and other's roles and responsibilities.
E2	Deal with complex ethical and professional issues in accordance with current professional and/or ethical codes or practices.
E3	
E4	
E5	

Level 10 Modules

CORE

SCQF	Module	Module Title	Credit	Term		Footnotes	
Level	Code			1	2	3	
10	COMP10034	Computing Honours Project	40	\boxtimes	\boxtimes		
10	COMP10068	Secure Programming	20				
10	COMP10073	Advanced Digital Forensics Analysis	20				
10	COMP10075	Governance, Risk & Compliance	20				
Footno	tes for Core Mo	dules					

Level 10 Modules

OPTION

		Module Title	Credit	Term	Footnotes
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SCQF	Module		1	2	3	
Level	Code					
10	COMP10014	Network Security	\boxtimes			COMP10014
						or
						COMP10082
10	COMP10082	Machine Learning for Data	\boxtimes			COMP10014
		Analytics				or
						COMP10082
Footno	tes for Option N	1odules		ı	ı	

Level 10

Criteria for Award

Please refer to <u>UWS Regulatory Framework</u> for related regulations

Award of BEng (Honours) Cyber Security - At least 480 credits of which a minimum of 180 are at least at SCQF level 9 and 10, including at least 90 at level 10.

Award of BSc (Honours) Cyber Security – This award is available to the Wuxi cohort only who joined UWS at level 10 after completing levels 7, 8 and 9 at the Scotland Academy, Wuxi. Wuxi students must acquire a total of 120 credits, and at least 90 credits at SCQF level 10 are required.

No Distinction is awarded at the Honours level (Regulation 3.25).

Regulations of Assessment

Candidates will be bound by the general assessment regulations of the University as specified in the <u>University Regulatory Framework</u>.

An overview of the assessment details is provided in the Student Handbook and the assessment criteria for each module is provided in the module descriptor which forms part of the module pack issued to students. For further details on assessment please refer to Chapter 3 of the Regulatory Framework.

To qualify for an award of the University, students must complete all the programme requirements and must meet the credit minima detailed in Chapter 1 of the Regulatory Framework.

Combined Studies

There may be instances where a student has been unsuccessful in meeting the award criteria for the named award and for other more generic named awards existing within the School.

Provided that they have met the credit requirements in line with the SCQF credit minima (please see Regulation 1.21), they will be eligible for a Combined Studies award (please see Regulation 1.61).

For students studying BA, BAcc, or BD awards the award will be BA Combined Studies.

For students studying BEng or BSc awards, the award will be BSc Combined Studies.

Version no: 1

Change/Version Control

What	When	Who
Updated Links:	19/10/2023	C Winter
Academic		
Engagement Procedure		
Equality and Diversity		
 University Regulatory 		
Framework		
Removed invalid links		
Guidance Note 2023-24	12/12/23	D Taylor
provided		
General housekeeping to text	12/12/23	D Taylor
across sections and addition		
of links and some specific		
guidance.		
Addition of Duration of Study		
Addition of Duration of Study and some other text – for		
CMA.		
1. Condition of Hons Project	21/03/2025	R Singh
for MEng to BEng transferred	2170372023	Tr Singn
students removed because		
Hons Project is added as		
core for all students.		
2. At level 9, wording in the		
footnote related to optional		
modules COMP08101 and		
COMP09110 modified to		
reflect the actual situation,		
for example, these modules		
are offered to students who		
entered at level 9 with no		
previous programming		
experience and may result in		
additional credit.		
3. At level 7, replaced		
COMP07067 Professional		
Development in Computing		
(10 credit) with COMP07086		
Fundamentals of Computing		
System 10 credits T2.		
4. At level 7, replaced		
COMP07061 Computing		

module is available as an option only to franchise partners.	Systems (20 credits) module with APPD07001 ASPIRE 1 module (20 credits, T1). 5. At level 8, replaced COMP08002 Database Development (20 credits, T1) with APPD08001 ASPIRE 2 (20 credits, T2), w.e.f. from 2026-27 academic year. 6. At level 9, removed MATH07005 Mathematics for Computing, COMP09115 Python for Network Engineers and COMP09086 Information Security Management from options. 7. At level 9, Added a note for COM09024 Unix System Administration that this	
	Administration that this module is available as an	
	_ ·	