

Session: 2024/25

Last modified: 19/07/24

Title of Module: Digital Forensic Analysis			
Code: COMP09107	SCQF Level: 9 (Scottish Credit and Qualifications Framework)	Credit Points: 20	ECTS: 10 (European Credit Transfer Scheme)
School:	School of Computing, Engineering and Physical Sciences		
Module Co-ordinator:	Sean Sturley		
Summary of Module			
<p>The aim of the module is to provide students with a broad and specialist knowledge and understanding of the main principles of digital forensics and how it can be applied to a Computer Crime Scene Investigation to systematically and impartially approach the preservation and extraction of all digital evidence.</p> <p>Students will be introduced to practical issues associated with hardware and operating systems, together with the principles, theories and technical skills to analyse and evaluate gathered digital evidence using forensic tools and techniques through a number of practical case studies.</p> <p>The ethical and professional issues/requirements of the practitioner are embedded throughout the syllabus.</p> <p>This module will work to develop a number of the key 'I am UWS' Graduate Attributes to make those who complete this module:</p> <p>Universal</p> <ul style="list-style-type: none"> • Critical Thinker • Ethically-minded • Research-minded <p>Work Ready</p> <ul style="list-style-type: none"> • Problem-Solver • Effective Communicator • Ambitious <p>Successful</p> <ul style="list-style-type: none"> • Autonomous • Resilient • Driven 			

Module Delivery Method					
Face-To-Face	Blended	Fully Online	HybridC	HybridO	Work-based Learning
	✓				
<p>Face-To-Face Term used to describe the traditional classroom environment where the students and the lecturer meet synchronously in the same room for the whole provision.</p> <p>Blended A mode of delivery of a module or a programme that involves online and face-to-face delivery of learning, teaching and assessment activities, student support and feedback. A programme may be considered "blended" if it includes a combination of face-to-face, online and blended modules. If an online programme has any compulsory face-to-face and campus elements it must be described as blended with clearly articulated delivery information to manage student expectations</p> <p>Fully Online Instruction that is solely delivered by web-based or internet-based technologies. This term is used to describe the previously used terms distance learning and e learning.</p> <p>HybridC Online with mandatory face-to-face learning on Campus</p>					

HybridO

Online with optional face-to-face learning on Campus

Work-based Learning

Learning activities where the main location for the learning experience is in the workplace.

Campus(es) for Module DeliveryThe module will **normally** be offered on the following campuses / or by Distance/Online Learning:
(Provided viable student numbers permit)

Paisley:	Ayr:	Dumfries:	Lanarkshire:	London:	Distance/Online Learning:	Other:
			✓			D&G and NCL

Term(s) for Module Delivery

(Provided viable student numbers permit).

Term 1		Term 2		Term 3	
	✓				

Learning Outcomes: (maximum of 5 statements)

On successful completion of this module the student will be able to:

- L1. demonstrate a critical understanding of the principal theories, concepts and principles of digital forensics and operating system artefacts as digital evidence;
- L2. use forensic tools for the collection and analysis of digital evidence, and critically evaluate tools and the techniques to validate results;
- L3. plan, undertake and report on sound digital forensic analysis;
- L4. explain the legal and ethical requirements of forensic evidence gathering and conduct forensic examinations in an ethical, legal and professional manner;
- L5. critically reflect on forensic literature and quality information sources.

Employability Skills and Personal Development Planning (PDP) Skills

SCQF Headings	During completion of this module, there will be an opportunity to achieve core skills in:
Knowledge and Understanding (K and U)	SCQF Level 9. Knowledge and understanding of the scope and defining features of digital forensics, and an integrated knowledge of its main areas and boundaries. A critical understanding of the principles, principal theories, concepts and terminology associated with digital forensics.
Practice: Applied Knowledge and Understanding	SCQF Level 9. Use the principle skills, techniques and practices related to digital forensics. Practise routine methods of enquiry. To practise in a range of contexts that include a degree of unpredictability.
Generic Cognitive skills	SCQF Level 9. Undertake critical analysis, evaluation and/or synthesis of ideas, concepts, information and issues in digital forensics. Identify and analyse routine professional problems and issues. Draw on a range of sources in making judgements.
Communication, ICT and Numeracy Skills	SCQF Level 9.

	Use a wide range of skills in support of established practices; Present or convey, formally and informally, information about topics to informed audiences; Interpret, use and evaluate data.	
Autonomy, Accountability and Working with others	SCQF Level 9. Exercise autonomy and initiative in activities. Manage complex ethical and professional issues in accordance with ethical codes or practices.	
Pre-requisites:	Before undertaking this module the student should have undertaken the following:	
	Module Code: COMP08074	Module Title: <u>Operating Systems</u>
	Other:	
Co-requisites	Module Code:	Module Title:

* Indicates that module descriptor is not published.

Learning and Teaching	
<p>This module emphasises a "hands-on" active approach to learning, with learning taking place through a variety of complementary mechanisms, including lectures, seminars, with associated practical sessions, research into current developments and issues, and case studies.</p> <p>Topics will be introduced in lectures and discussed through guided inquiry and problem based learning activities. Theoretical material will be re-enforced and consolidated through the critical analysis and discussion of case studies in tutorials that are designed to explain and elaborate both on theoretical and laboratory content. Students are guided through real-world scenarios featuring structured inquiry based learning. Additionally directed learning will reinforce essential theory and place understanding into context. An "industry lecture series" will provide examples of current practice, approaches and challenges as portrayed by practitioners across various industry sectors.</p> <p>The subject discipline is continuously evolving and as a result students will be expected to keep up to date with developments through independent study. Students will be encouraged to adopt an independent learning style, acquiring and applying knowledge through their own enquiry, supported by a series of guided activities and exercises. Students will be encouraged to share the findings of their enquiry through seminar presentations and participation in on-line discussions with the student cohort.</p>	
<p>Learning Activities During completion of this module, the learning activities undertaken to achieve the module learning outcomes are stated below:</p>	<p>Student Learning Hours (Normally totalling 200 hours): (Note: Learning hours include both contact hours and hours spent on other learning activities)</p>
Lecture/Core Content Delivery	12
Tutorial/Synchronous Support Activity	12
Laboratory/Practical Demonstration/Workshop	24
Independent Study	152
	200 Hours Total
<p>**Indicative Resources: (eg. Core text, journals, internet access)</p>	

						Assessment Element	
Class test (practical)	✓	✓	✓	✓	✓	40	2
Component 2							
Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Learning Outcome (3)	Learning Outcome (4)	Learning Outcome (5)	Weighting (%) of Assessment Element	Timetabled Contact Hours
Report of practical/ field/ clinical work		✓	✓	✓		60	8
Combined Total For All Components						100%	10 hours

Footnotes

- A. Referred to within Assessment Section above
 B. Identified in the Learning Outcome Section above

Note(s):

1. More than one assessment method can be used to assess individual learning outcomes.
2. Schools are responsible for determining student contact hours. Please refer to University Policy on contact hours (extract contained within section 10 of the Module Descriptor guidance note).
This will normally be variable across Schools, dependent on Programmes &/or Professional requirements.

Equality and Diversity

This module is suitable for any student. The assessment regime will be applied flexibly so that a student who can attain the practical outcomes of the module will not be disadvantaged. When a student discloses a disability, or if a tutor is concerned about a student, the tutor in consultation with the School Enabling Support co-ordinator will agree the appropriate adjustments to be made.

[UWS Equality and Diversity Policy](#)

(N.B. Every effort will be made by the University to accommodate any equality and diversity issues brought to the attention of the School)