Unit Outline (Higher Education)

Institute / School:	Institute of Innovation, Science & Sustainability
Unit Title:	Incident Management & Digital Forensics
Unit ID:	ITECH3505
Credit Points:	15.00
Prerequisite(s):	(ITECH2507)
Co-requisite(s):	Nil
Exclusion(s):	Nil
ASCED:	029901

Description of the Unit:

This advanced unit delves into the critical fields of incident management and digital forensics. It explores the best practices for incident response, from preparation and detection to containment, eradication, recovery, and post-incident review of enterprise security policies and practices. Moreover, learn digital forensics techniques for collecting, preserving, analyzing, and presenting digital evidence. Through hands-on virtual labs, gain practical experience with industry-leading tools and methodologies, preparing students to effectively manage and investigate security incidents. This unit focuses on incident handling procedures and forensic analysis, essential for a comprehensive cybersecurity skillset.

Grade Scheme: Graded (HD, D, C, P, MF, F, XF)

Work Experience:

No work experience: Student is not undertaking work experience in industry.

Placement Component: No

Supplementary Assessment: Yes

Where supplementary assessment is available a student must have failed overall in the Unit but gained a final mark of 45 per cent or above, has completed all major assessment tasks (including all sub-components where a task has multiple parts) as specified in the Unit Description and is not eligible for any other form of supplementary assessment

Course Level:

Level of Unit in Course	AQF Level of Course					
	5	**6**	**7**	**8**	**9**	**10**
Introductory						
Intermediate						
Advanced			✔			

Learning Outcomes:

Knowledge:

K1. Analyze various incident response frameworks and methodologies, evaluating their suitability for different security incident scenarios.

K2. Critically evaluate digital forensics principles and methodologies, including chain of custody, evidence collection, analysis, and presentation.

K3. Evaluate the legal and ethical considerations surrounding digital forensics investigations, including admissibility of evidence.

Skills:

S1. Develop a comprehensive incident response plan, outlining roles, responsibilities, and procedures for handling security incidents.

S2. Apply digital forensics techniques to collect, preserve, analyze, and present digital evidence from various digital devices and systems.

Application of knowledge and skills:

A1. Conduct a simulated security incident investigation, applying incident response procedures and digital forensics techniques to recover and analyze evidence.

Unit Content:

Topics may include:

- Introduction to Incident Management, Incident Response Frameworks & Methodologies
- Detection & Analysis of Security Incidents (Logs, Network Traffic, Endpoint Data)
- Containment & Eradication Strategies for Security Incidents
- Incident Recovery & Post-Incident Review
- Introduction to Digital Forensics Principles & Methodologies
- Digital Evidence Acquisition & Preservation Techniques
- Dgital Forensics Analysis Techniques (File Systems, Disk Forensics, Memory Forensics)
- Network Forensics & Analysis Techniques
- Digital Forensics Reporting & Presentation of Evidence
- Legal & Ethical Considerations in Digital Forensics Investigations
- Emerging Trends in Incident Management & Digital Forensics

FEDTASKS

Federation University Federation recognises that students require key transferable employability skills to prepare them for their future workplace and society. FEDTASKS (**T**ransferable **A**ttributes **S**kills and **K**nowledge) provide a targeted focus on five key transferable Attributes, Skills, and Knowledge that are be embedded within curriculum, developed gradually towards successful measures and interlinked with cross-discipline and Co-operative Learning opportunities. *One or more FEDTASK, transferable Attributes, Skills or Knowledge must be evident in the specified learning outcomes and assessment for each FedUni Unit, and all must be directly*

assessed in each Course.

FEDTASK attribute and descriptor		Development and acquisition of FEDTASKS in the Unit	
		Learning Outcomes (KSA)	Assessment task (AT#)
FEDTASK 1 Interpersonal	Students will demonstrate the ability to effectively communicate, inter-act and work with others both individually and in groups. Students will be required to display skills in-person and/or online in: • Using effective verbal and non-verbal communication • Listening for meaning and influencing via active listening • Showing empathy for others • Negotiating and demonstrating conflict resolution skills • Working respectfully in cross-cultural and diverse teams.	S1-S2, A1	AT2, AT4
FEDTASK 2 Leadership	Students will demonstrate the ability to apply professional skills and behaviours in leading others. Students will be required to display skills in: • Creating a collegial environment • Showing self -awareness and the ability to self-reflect • Inspiring and convincing others • Making informed decisions • Displaying initiative	A1	AT4
FEDTASK 3 Critical Thinking and Creativity	Students will demonstrate an ability to work in complexity and ambiguity using the imagination to create new ideas. Students will be required to display skills in: • Reflecting critically • Evaluating ideas, concepts and information • Considering alternative perspectives to refine ideas • Challenging conventional thinking to clarify concepts • Forming creative solutions in problem solving.	K1-K3, S1-S2, A1	AT1-AT4

FEDTASK attribute and descriptor		Development and acquisition of FEDTASKS in the Unit	
		Learning Outcomes (KSA)	Assessment task (AT#)
FEDTASK 4 Digital Literacy	Students will demonstrate the ability to work fluently across a range of tools, platforms and applications to achieve a range of tasks. Students will be required to display skills in: • Finding, evaluating, managing, curating, organising and sharing digital information • Collating, managing, accessing and using digital data securely • Receiving and responding to messages in a range of digital media • Contributing actively to digital teams and working groups • Participating in and benefiting from digital learning opportunities.	S1-S2, A1	AT2, AT4
FEDTASK 5 Sustainable and Ethical Mindset	Students will demonstrate the ability to consider and assess the consequences and impact of ideas and actions in enacting ethical and sustainable decisions. Students will be required to display skills in: • Making informed judgments that consider the impact of devising solutions in global economic environmental and societal contexts • Committing to social responsibility as a professional and a citizen • Evaluating ethical, socially responsible and/or sustainable challenges and generating and articulating responses • Embracing lifelong, life-wide and life-deep learning to be open to diverse others • Implementing required actions to foster sustainability in their professional and personal life.	A1	AT4

Learning Task and Assessment:

Learning Outcomes Assessed	Assessment Tasks	Assessment Type	Weighting
K1-K3	Weekly Quizzes: Short quizzes will assess students' understanding of key concepts.	Quiz	10%-30%
S1-S2	Lab Reports: Lab reports will document hands-on exercises and analysis.	Lab Reports	15%-35%
A1	Project proposal: Students are required to submit an initial project proposal.	Project proposal	15%-35%
A1	Final Project: Students will conduct a simulated security incident investigation, apply incident response procedures and digital forensics techniques, and write a report documenting the process.	Final Project	20%-40%

Adopted Reference Style:

IEEE

Refer to the library website for more information

Fed Cite - referencing tool