Course Outline (Higher Education)

Institute / School:	Institute of Innovation, Science & Sustainability
Course Title:	INFORMATION SECURITY
Course ID:	ITECH3215
Credit Points:	15.00
Prerequisite(s):	(ITECH1002 or ITECH1102 or ITECH5102)
Co-requisite(s):	Nil
Exclusion(s):	Nil
ASCED:	029901

Description of the Course:

This course extends students' depth of knowledge and skills in information security. This course is designed to provide students with the knowledge and skills to identify risks and develop appropriate strategies to mitigate risks. Students will study information security architectures, standards, technologies like cryptography, and applications of information security on different levels like physical systems, networked systems, and software systems and technical responses to protect different types of information systems. Students will also study different use cases and the responses to safeguard information assets and ethical practices to work in the cybersecurity industry.

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

Work Experience:

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

Does Recognition of Prior Learning apply to this course?   No

Placement Component: No

Supplementary Assessment: Yes

Where supplementary assessment is available a student must have failed overall in the course but gained a final mark of 45 per cent or above and submitted all major assessment tasks.

Program Level:

Level of course in Program	AQF Level of Program					
	5	**6**	**7**	**8**	**9**	**10**
Introductory						
Intermediate						
Advanced			✔			

Learning Outcomes:

Knowledge:

K1. Describe and explain the importance of risk analysis and management of critical assets of businesses relying on public and private communication and cloud infrastructures

K2. Explain and understand the importance of security architectures in terms of information/data, services, and mechanisms in safeguarding information systems

K3. Identify technical and legal issues surrounding the implementation of secure information system infrastructures

K4. Explain the role of security in protecting physical and software systems to ensure the security of sensitive information and services

Skills:

S1. Analyse and investigate security programs, policies, procedures, standards, and guidelines appropriate for corporate environments

S2. Design awareness training and education programs

S3. Identify common threats to software, systems, and networks dealing with sensitive information

S4. Analyse and manage risk in enterprise systems and services and design test plans for contingencies and disasters

Application of knowledge and skills:

A1. Apply the knowledge of security standards, techniques, and policies to protect the privacy of data

A2. Plan and implement operational assurance programs including auditing

A3. Analyse appropriate security and privacy controls for typical use cases

Course Content:

This course introduces students to various aspects of information security. This course is designed to provide students with the necessary knowledge to identify different types of risks and develop appropriate countermeasures. Students will cover technical material and real-world case studies in lectures and assessments, and develop hands-on skills in tutorial sessions, which may require the use of different applications

Topics may include:

- Threats to the network and enterprise systems
- Common security countermeasures
- Cryptography
- Planning and implementing a security policy
- Security technologies for networked systems
- Security fundamentals, including confidentiality, integrity, and availability
- Role of firewalls in securing access to corporate networks
- Application-level security
- Identity and access management

- Standards and policies for securing assets
- Security assessment and testing
- Use cases and analysis

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 course, and all must be directly assessed in each program.*

FEDTASK attribute and descriptor		Development and acquisition of FEDTASKS in the course	
		Learning Outcomes (KSA)	Assessment task (AT#)
FEDTASK 1 Interpersonal	Students will demonstrate the ability to effectively communicate, interact 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.	Not applicable	Not applicable
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	Not applicable	Not applicable
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	S2, A2	AT1
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	K1, K2, K4, S2, A1, A3	AT1, AT2, AT3

FEDTASK attribute and descriptor		Development and acquisition of FEDTASKS in the course	
		Learning Outcomes (KSA)	Assessment task (AT#)
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.	Not applicable	Not applicable

Learning Task and Assessment:

Learning Outcomes Assessed	Assessment Tasks	Assessment Type	Weighting
K1, K2, S1-S4, A1 and A3	Assessment tasks will help the development of analysis skills and foster the practical application of course content.	Assignments	60 - 70%
K3, K4, S3, S4, A1-A3	Students will provide practical solutions to a range of questions and problem types drawn from laboratory/tutorial tasks.	Tutorial exercises	10 - 20%
K1-K4, S1-S4, A1-A3	Students will provide theoretical answers and provide practical solutions to a range of questions and problem types drawn from theory, tutorial tasks, and use cases used in this course.	Examination/Test	20 - 30%

Alignment to the Minimum Co-Operative Standards (MiCS)

The Minimum Co-Operative Standards (MiCS) are an integral part of the Co-Operative University Model. Seven criteria inform the MiCS alignment at a program level. Although courses must undertake MiCS mapping, there is NO expectation that courses will meet all seven criteria. The criteria are as follows:

1. Co-design with industry and students
2. Co-develop with industry and students
3. Co-deliver with industry
4. FedTASK alignment
5. Workplace learning and career preparation
6. Authentic assessment
7. Industry-link/Industry facing experience

MiCS program level reporting highlights how each program embraces the principals and practices associated with the Co-Operative Model. Evidence of program alignment with the MiCS, can be captured in the Program Modification Form.

MICS Mapping has been undertaken for this course   No

Date:

Adopted Reference Style:

APA

Refer to the [library website](#) for more information

Fed Cite - [referencing tool](#)