Course Outline (Higher Education)

Institute / School:	Institute of Innovation, Science & Sustainability
Course Title:	CLOUD AND MOBILE SECURITY
Course ID:	ITECH3100
Credit Points:	15.00
Prerequisite(s):	(ITECH1102 or ITECH5102)
Co-requisite(s):	Nil
Exclusion(s):	(ITECH3300)
ASCED:	020103

Description of the Course:

Cloud and mobile computing are essential technologies in contemporary computing. Their wide usage in software applications exemplifies the need to appreciate and understand the security threats that exist in this area. This subject covers the security and privacy aspects of both mobile and cloud computing, where students will not only gain knowledge to manage and secure mobile devices, data, applications, and infrastructure, but also obtain practice in cloud operation and virtual machines management. The course aligns with requirements for the Certified Cloud Security Professional (CCSP) certification.

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						

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

Learning Outcomes:

Knowledge:

K1. Articulate the need for cloud and mobile data security management.

K2. Discuss the complexities of threat models and the trust in mobile cloud computing.

K3. Analyse key elements associated with cloud computing security.

K4. Discuss and reflect on industry security compliance for mobile and cloud services.

K5. Develop an understanding of agent-based trustworthy infrastructure for mobile cloud computing.

Skills:

S1. Critically evaluate various types of trust in mobile cloud computing.

S2. Distinguish different levels of security for mobile cloud computing.

S3. Analyse and evaluate emerging technologies such as sensor and vehicular mobile cloud computing.

S4. Research emerging trends of mobile and cloud.

S5. Compose security governance policies for enterprise mobile and cloud applications.

Application of knowledge and skills:

A1. Audit different security threats involved in mobile and cloud.

A2. Reflect on mobile and cloud risk provention from the view point of compliance inspection.

A3. Negotiate professionally with stakeholders to perform mobile and cloud security inspection.

A4. Validate security policies and standards through compliance inspection.

Course Content:

Topics may include:

- Wireless Networks Communication
- Cellular Mobile Networks 1G-5G
- Mobile Security Threats
- Wireless Local Area Network (WLAN) Security
- Malicious Software and Android Security
- Cryptography for Mobile Security
- Mobile Device Management
- Cloud Computing Architecture
- Cloud Operation Security
- Cloud Data Security
- Cloud Application Security

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	S5	AT1, AT2
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	K2, K5, S2,S3, A1, A4	AT1, AT2
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	A3	AT1, AT2

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.	S4, S5, A2	AT1, AT2

Learning Task and Assessment:

Learning Outcomes Assessed	Assessment Tasks	Assessment Type	Weighting
K1 - K5, S1 - S5, A1 - A4	The tasks will develop skills in the analysis and practical application of content introduced.	Lab(s)/Tutorial(s)	30% - 50%
K1 - K5, S1 - S5, A1 - A4	Self directed initiatives aimed at producing an artifact that demonstrates skill acquisition.	Assignment(s)/Presentation(s)	30% - 50%
K1 - K5, S1 - S5, A1 - A4	Participate in lectures and labs/tutorials, read and summarise theoretical and practical aspects of the course.	Examination(s)/Test(s)	20% - 30%

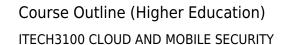**Alignment to the Minimum Co-Operative Standards (MiCS)**

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