Course Outline

Title: NETWORK OPERATING SYSTEMS

Code: ITECH1002

Formerly: CP560

Faculty / Portfolio: Faculty of Science

Program Level:

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

Pre-requisites: Nil

Co-requisites: Nil

Exclusions: (CP560 and CP880 and ITECH5002)

Progress Units: 15

ASCED Code: 020113

Learning Outcomes:

Knowledge:

K1. explain and discuss Internet Protocol (IP) networking;
K2. describe and discuss Linux and Windows configuration, administration, security and interoperability;
K3. outline the benefits and operation of virtualization of operating systems;
K4. explain security implementations of network operating systems;

Skills:

S1. employ virtualization software and associated operating system virtual machines;
S2. observe and configure IP network settings;
S3. administer Linux and Windows Operating systems;
S4. explain and modify Linux and Windows scripts;

Application of knowledge and skills:

A1. establish secure computer networks of disparate systems;
A2. test and repair network connectivity issues and remotely administer computer systems;
A3. secure file system resources and share files over computer networks;
A4. administer network operating systems;

Values and Graduate Attributes:

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Values:

V1. appreciate the responsibilities that accompany the high level access that network administrators have to company data;
V2. understand the importance of data and its security to large and small organizations;

Graduate Attributes:

Attribute	Brief Description	Focus
Continuous Learning	In a blended learning approach facilitated by the use of contemporary industry based virtualisation software and associated operating system virtual machines, students will continue to develop their knowledge and skills.	High
Self Reliance	Students will participate in a self-directed learning environment to develop their theoretical and technical expertise in the field of networking.	Medium
Engaged Citizenship	Students will administer, configure and automate operating systems for widespread use.	Low
Social Responsibility	Students will configure industry standard operating system software to operate seamlessly and securely for disparate clients.	Low

Content:

This course investigates current network operating systems and how to use, secure and interoperate between similar and disparate systems.

Topics may include:

- IP addressing;
- configuring and testing network operating system IP parameters;
- testing network connectivity between similar and disparate systems;
- creating and administering network users;
- creating and securing file systems and other network resources;
- accessing local and remote file systems;
- interoperation between similar or disparate systems;
- encryption and security models of all operating systems studied;
- configuring and troubleshooting remote systems.

Assessment:

Learning Outcomes Assessed	Assessment Task	Assessment Type	Weighting
K1, K2, K3, K4, S2, S3, S4, A1, A2, A3, A4	Attend lectures, read and summarise theoretical aspects of the course, establish strong familiarity with practical application of material covered.	Exercises and assignments	20 - 50%
K1 - K4, S1 - S4, A2 - A4	Research, study, lectures, reading. Review and practice of skills and knowledge.	Final examination and tests	50 - 80%

Adopted Reference Style:

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APA

Presentation of Academic Work:

https://federation.edu.au/students/assistance-support-and-services/academic-support/general-guide-for-the-presentation-of-academic-work