Course Outline

Title: OPEN SOURCE & LINUX

Code: ITECH2103

Formerly: CP628

Faculty / Portfolio: Faculty of Science

Program Level:

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

Pre-requisites: (CP560 or ITECH1002)

Co-requisites: (CP515 or CP616 or ITECH2101 or ITECH3201)

Exclusions: (CP628 and ITECH6103)

Progress Units: 15

ASCED Code: 020117

Learning Outcomes:

Knowledge:

K1. explain how the Free and Open Source movements (FOSS) have arisen, what they are, how they work;

K2. describe some of the recent contributions made by FOSS approaches;

K3. describe basic mainframe concepts and terminology;

K4. recognise how a GNU/Linux operating system fits in a mainframe architecture framework;

K5. describe basic principles of system security, availability, data management and system administration.

Skills:

S1. demonstrate skills in the use of the GNU/Linux operating system including tools, libraries and utilities;

S2. demonstrate appropriate usage of common FOSS concurrent versions systems in the management of software projects;

Application of knowledge and skills:

A1. Identify a current open source project and make a contribution towards it

Values and Graduate Attributes:

Course Outline

ITECH2103 OPEN SOURCE & LINUX

Values:

V1. Develop a professional attitude towards the incorporation and further development of FOSS projects

Graduate Attributes:

Attribute	Brief Description	Focus
Continuous Learning	In a blended learning approach facilitated by exploration of existing FOSS projects, students will continue to develop their knowledge and skills.	Medium
Self Reliance	Students will participate in a self-directed and collaborative learning environment to develop their theoretical and technical expertise in the field of FOSS and Linux.	Medium
Engaged Citizenship	Students will produce solutions, based upon existing FOSS products, which meet industry standards.	Medium
Social Responsibility	Students will use industry standard development environments and development techniques to deploy solutions.	Medium

Content:

This course introduces the major functions and capabilities of Open Source as well as the use of Linux on a Mainframe Operating system. The course further describes the technical differences between Linux and other UNIX/Linux implementations on a mainframe operating system environment. The course further shows how Linux on a mainframe operatinfg system fits into the e-business/eServer environment.

Topics may include:

- what is Free and Open Source software? Definitions, licenses and their effects;
- a comparison of the Free Software Foundation and the Open Source community;
- Open Source method of development in a business environment;
- FOSS project management tools: concurrent management systems, bug reporting, clearing houses, groupware tools;
- major FOSS applications/projects: e.g. office suites, graphical products;
- major FOSS commercial organisations and their contributions;
- a comparison of FOSS software and proprietary software;
- current issues and challenges: software development forking and standards, attacks from proprietary organisations, software support, potential legal challenges;
- GNU/Linux utilities - vi, sed, tr, grep, awk, cut, gzip, tar, etc;
- installation of applications on GNU/Linux - binaries, source code, package managers;
- software development using Open Source methodologies and tools;
- basic mainframe concepts and terminology with focus on running GNU/Linux on mainframe.

Assessment:

Learning Outcomes Assessed	Assessment Task	Assessment Type	Weighting
K1, K2, K3, K4, K5, S1, S2, A1	Self-directed or group exploration	Projects/Presentations	40 - 50%

Course Outline

ITECH2103 OPEN SOURCE & LINUX

K1, K2, K3, K4, K5, S1, S2, A1	Review and skills practice	Tests/Examination(s)	50 - 60%

Adopted Reference Style:

APA

Presentation of Academic Work:

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