

SAMPLE COURSE OUTLINE

Course Code, Number, and Title:

WMDD 4950: Security and Cloud & Server Administration

Course Format:

[Course format may vary by instructor. The typical course format would be:]

Lecture 3 h + Seminar 0 h + Lab 2 h

Credits: 3

Transfer credit: For information, visit bctransferguide.ca

Course Description, Prerequisites, Corequisites:

Most websites and many mobile apps require some type of customized backend; that is, hardware and software hosted on a server that ultimately serves up the content to the user. Students install and configure a Linux server along with services for websites and mobile apps. Topics include network and Internet infrastructure, including configuration tools, and cloud-based server management. Security will be emphasized and applied throughout.

Prerequisites: A minimum grade of C in WMDD 4920 and 4935

Registration in this course is restricted to students admitted to the Post-Degree Diploma in Web and Mobile App Design and Development Program.

Learning Outcomes:

Upon successful completion of this course, students will be able to:

- Install, configure, patch and administer a Linux server on the cloud
- Install, configure, patch and administer the following minimum services on a server: secure shell, web server, programming languages, DNS, email, and databases.
- Configure cloud infrastructure tools to optimize the server and its services
- Create and implement security procedures to keep the server and its services secure
- Deploy a web application using a commercially shared and a cloud-based host

Instructor(s): TBA

Office: TBA

Phone: 604 323 XXXX

Email: TBA

Office Hours: TBA

Textbook and Course Materials:

[Textbook selection may vary by instructor. An example of texts and course materials for this course might be:]

For textbook information, visit https://mycampusstore.langara.bc.ca/buy_courselisting.asp?selTerm=3|8

Note: *This course may use an electronic (online) instructional resource that is located outside of Canada for mandatory graded class work. You may be required to enter personal information, such as your name and email address, to log in to this resource. This means that your personal information could be stored on servers located outside of Canada and may be accessed by U.S. authorities, subject to federal laws. Where possible, you may log in with an email pseudonym as long as you provide the pseudonym to me so I can identify you when reviewing your class work.*

Assessments and Weighting:

Final Exam 20%

Other Assessments %

(An example of other assessments might be:) %

Midterm Exam: 20%

Assignments: 35%

Project: 25%

Proportion of individual and group work:

Individual: 70%

Group: 30%

Grading System: Letter grade

Specific grading schemes will be detailed in each course section outline.

Passing grade: C

Topics Covered:

[Topics covered may vary by instructor. An example of topics covered might be:]

- 1) Internet Infrastructure
 - Hardware
 - IP addresses
 - Domain name registration
 - Configuring DNS records

- 2) Linux server administration
 - Installation and patching of operating system
 - Installation, configuration and patching of necessary services

This generic outline is for planning purposes only.

- Web, web proxy, DNS, email, secure shell, databases, server-side scripting languages and frameworks (e.g. PHP and node.js)
 - User account management
 - Storage management
 - Backup and recovery
- 3) Cloud based infrastructure
 - Creating and launching of virtual machines
 - Load balancing and auto-scaling
 - Backup and recovery
- 4) Security (should be brought up when individual services are configured)
 - Create appropriate security configurations for accessing the cloud infrastructure, in addition to the individual virtual machines
 - Firewall methods and rules
 - Determine procedures and processes for testing and securing each installed service

As a student at Langara, you are responsible for familiarizing yourself and complying with the following policies:

College Policies:

[E1003 - Student Code of Conduct](#)

[F1004 - Code of Academic Conduct](#)

[E2008 - Academic Standing - Academic Probation and Academic Suspension](#)

[E2006 - Appeal of Final Grade](#)

[F1002 - Concerns about Instruction](#)

[E2011 - Withdrawal from Courses](#)

Departmental/Course Policies:

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