Computer Science (COMP) 470

Web Server Management (Revision 1)

Status:	Replaced with new revision, see the **course listing** ↗ for the current revision ⊗
Delivery mode:	**Individualized study online** ↗
Credits:	3
Area of study:	Science
Prerequisites:	**COMP 266** or an equivalent introductory knowledge of Web programming; and **COMP 347** or an equivalent fluent knowledge of Computer Networks.
Precluded:	None
Challenge:	COMP 470 has a challenge for credit option.
Faculty:	**Faculty of Science and Technology** ↗

Notes:	Students who are concerned about not meeting the prerequisites for this course are encouraged to contact the **course coordinator** before registering

Overview

COMP 470 is designed as a three-credit course to equip the student to cope with issues surrounding the management of Web servers, including monitoring and control of faults, configuration, accounting, performance and security as well as organizational, legal and ethical concerns. The student will come to understand many of the key issues, protocols, standards and technologies relating to the operation of the Web and be prepared for current and future developments in the field.

In *COMP 470* students will be expected to use a combination of locally-installed and external electronic materials to develop skills needed for further study in the field. This will include downloading, installing and configuring specialized software tools, including servers and analytic tools.

Students of COMP 470 are expected to share at least some of their work with others on the course and, optionally, to comment on the work of others. The work is problem-based and personalized so, for the most part, no two pieces of student work will ever provide the same answers.

Outline

COMP 470 consists of the following units, which are presented as tasks, reflecting the problem-based nature of the course:

Task 1: The roles and characteristics of a webmaster (5%). This is about understanding what kinds of things webmasters do within organizations. It involves writing job advertisements for web masters.

Task 2: Open vs closed systems (10%). This is a wicked problem that

encourages you to think deeply about how and why we choose web technologies, their strengths and their weaknesses. There is no right answer.

Task 3: Management concerns with large websites (15%). A bit of investigative work to try to identify management issues and solutions for a popular public site of your choosing.

Task 4: Security 1 - SSL (5%). Here we ask you to write a simple tutorial on SSL for the benefit of web masters.

Task 5: Web server configuration and management (25%). This is where you get to manage a real web server, but the key purpose is to fit the technologies to organizational needs.

Task 6: The HTTP protocol (5%). This is a set of exercises employing your own web server developed in task 5 that introduces the main aspects of the HTTP protocol.

Task 7: Security 2 - policies (15%). This task requires you to develop an effective security policy for the web server you developed for task 5.

Task 8: Wicked problems (10%). Here you are asked to solve some web server management problems that have no single, simple solution, relating your answer to the system and context you created for task 5.

Task 9: Final reflections (10%). Summarizing what you have learned on this course.

Objectives

Students successfully completing this course will be able to:

1. critically evaluate the operational features of core web protocols and standards.

2. make effective use of a range of server management tools and techniques.

3. install and configure a Web-based server and associated software, both for static and dynamic delivery of Web content, to meet business requirements .

4. establish a safe and secure web environment in accordance with security policies and legal requirements.

5. effectively monitor and control the operations of a web server.

6. research and evaluate new web technologies as and when they arise in the context of existing and historical technologies

Learning outcomes

After completing COMP 470 students should be well prepared for dealing with the management of Web servers not just in technical terms but, more importantly, in fitting them to the needs of organizations and society. The successful student will be equipped to recognize and respond to issues relating to the management of faults, configuration, accounting, performance and security in a business context and be able to proactively research and employ new Web technologies in a reflective, ethical and critical manner.

Evaluation

To **receive credit** ⤢ for COMP 470, you must achieve a course composite grade of at least **D (50 percent)** ⅃ . There is only one final assessed piece of work, consisting of a public journal containing your responses to the various tasks and a private journal of reflections on those tasks. You may submit your work once and only once before this for *formative* assessment, for which you will receive feedback (but not a grade) from your tutor. The level of detail in this feedback will depend on when you ask for it: you will get more detailed feedback if you submit less work. It is up to you whether you do this near the beginning, when more detailed feedback will help guide future work, or near the end, when less detailed feedback will let you know whether you are on track but provide less help with addressing any problems.

Activity	Weight
Learning journal	100%
Total	**100%**

To learn more about assignments and examinations, please refer to Athabasca University's **online Calendar** ⤢ .

Materials

This course either does not have a course package or the textbooks are open-source material and available to students at no cost. This course has a **Course Administration and Technology Fee** ☑, but students are not charged the Course Materials Fee.

The course materials for COMP 470 are all in electronic format. These materials are the equivalent to the standard Athabasca University study guide, textbook, student manual, and tutor-marked exercises. Some of these materials may be student-generated.

Special Course Features

COMP 470 is offered through Moodle, a Learning Management System that can be accessed through the Web and Athabasca Landing, a web-based social networking environment. COMP 470 can be completed at the student's workplace or home. COMP 470 is an elective course in all undergraduate programs offered by the **School of Computing and Information Systems** ☑.

Challenge for credit

Overview

The challenge for credit process allows you to demonstrate that you have acquired a command of the general subject matter, knowledge, intellectual and/or other skills that would normally be found in a university-level course.

Full information about **challenge for credit** ☑ can be found in the Undergraduate Calendar.

Evaluation

The challenge assessment for COMP 470 will require you to perform a series of tasks in order to create a portfolio of evidence demonstrating that you have met the requirements of COMP 470 Web Server Management:

- A scenario you will create that demonstrates your understanding of the demands of web server management.

- A range of linked and related outputs centred around the setup of a web server based on your scenario.

- A reflective commentary on this process, relating it to your own experience in web server management.

- You will also be expected to answer questions by video conference that will last 15 minutes or longer.

You must contact the course coordinator to discuss your proposed scenario and reflective commentary before you the schedule the oral examination.

The evaluation will be based entirely on evidence presented in the portfolio and the successful completion of a Viva Voce.

Viva Voce

You will be expected to answer questions relating to your work by video conference via a technology such as Adobe Connect or Skype. The interview will take place within one month of receipt of your portfolio and will include at least 15 minutes of questions and answers. The entire conversation will not last longer than 30 minutes. You should make arrangements for this with the coordinator of the course on or around the time that you submit the portfolio.

The viva voce is marked on a pass/fail basis. This mark will not change your grade for the portfolio but failure in the viva voce will result in failure of the entire assessment. It is a required component that must be passed in order to successfully complete the challenge.

To **receive credit** ⤢ for the COMP 470 challenge registration, you must achieve a course composite grade of at least **D (50 percent)** ⤓ on the portfolio and a pass on the oral examination.

⤓   **Challenge for credit course registration form**

Important links

> **Academic advising** ⤢

> **Program planning** ⤢

> **Request assistance** ⤢

> **Support services** [↗]

Athabasca University reserves the right to amend course outlines occasionally and without notice. Courses offered by other delivery methods may vary from their individualized study counterparts.

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