

RYERSON UNIVERSITY

Ted Rogers School of Information Technology Management And G. Raymond Chang School of Continuing Education

COURSE OF STUDY 2012

(C)ITM 315 – Network Administration

1.0 PREREQUISITE

The prerequisite for this course is (C) ITM 301 - Introduction to IT Infrastructure or Direct Entry. Students who do not have the prerequisite will be dropped from the course.

2.0 INSTRUCTOR INFORMATION

- Name:
- Office Phone Number:
- E-mail address:
- Faculty/course web site(s):
- Office Location & Consultation hours:
 - Your instructor is available for personal consultation during scheduled consultation hours which are posted on their office door or on the course Blackboard site. However, you are advised to make an appointment by e-mail or by telephone before coming to ensure that the professor is not unavoidably absent.
- E-mail Usage & Limits:

Students are expected to monitor and retrieve messages and information issued to them by the University via Ryerson online systems on a frequent and consistent basis. ***Ryerson requires that any official or formal electronic communications from students be sent from their official Ryerson E-mail account.*** As such emails from other addresses may not be responded to.

3.0 CALENDAR COURSE DESCRIPTION

Servers and networks provide the foundation for information handling in businesses and organizations throughout the world. Effective network management plays a vital role in ensuring that this foundation is sound. In this course, students will learn concepts and practice hands-on skills related to network administration by exploring a popular server operating system.

4.0 COURSE OVERVIEW

Students enrolled in this course will build upon knowledge and skills related to designing, managing and implementing data networks that were acquired in (C)ITM301. While (C)ITM301 looks at options available in designing a network, (C)ITM315 focuses on what happens after a network is installed. Somebody has to take responsibility for ensuring that the network runs smoothly and securely once it is deployed. This course prepares students to be that somebody - the network administrator. Students will develop detailed knowledge of: 1) key concepts and methodologies related to network administration 2) management features of a major network operating system. They will apply this knowledge to hands-on network management tasks. Specifically, students will use a range of techniques to configure and manage network resources such as file systems, users, groups, and group policies in a network running Windows Network Operation Systems in particular Windows Server 2008.

5.0 COURSE OBJECTIVES

Upon completion of the course, students will be able to:

1. Describe the responsibilities and importance of the network administrator's role
2. Explain network models and server roles
3. Explain Windows Server 2008 Active Directory concepts
4. Manage hardware devices, disks and data storage on the server
5. Create and manage user, computer and group accounts
6. Manage access to the file system by configuring shared folder and file permissions
7. Create and manage group policy objects to control user desktop settings, security, scripts, software deployment, folder redirection
8. Distinguish between various methods, tools, and processes used to manage a server and monitor its performance
9. Describe backup options and perform backup and recovery procedures
10. Use a variety of techniques to secure a server system

6.0 EVALUATION

The grade for this course is composed of the mark received for each of the following components:

Method	Percentage/Weight
Midterm	25%
Lab Exercises	40%
Exam	35%
TOTAL	100%

NOTE:

In every course which contains individual assessment (including all tests, quizzes, mid-term/final exam, and assignments), to pass the course, the student must earn a combined average of at least 50% in these particular evaluations (i.e. 25 out of 50).

In addition, in order to pass this course, students must pass the final examination.

Lab Exercises

These will require you to apply the concepts outlined in each week's class to hands-on network management tasks. These include a range of techniques to configure and manage network resources such as file systems, users, groups, and group policies in a network running Windows Server 2008.

7.0 POSTING OF GRADES

- ❖ All grades, on assignments or tests must be posted or made available to students through the return of their work. Grades on final exams must be posted. However, as there may be other consideration in the determination of final grades, students will receive their official final grade in the course only from the Registrar. Final official course grades may not be posted or disclosed anywhere by an instructor.
- ❖ Posting of grades on the Course Management System (Blackboard) is preferred. If grades are posted in hard copy they must be posted numerically sorted by student identification number after at least the **first four digits** have been removed. Instructors must inform students in all course management documentation of the method to be used in the posting of grades. Students who wish not to have their grades posted must inform the instructor in writing.
- ❖ Some graded work will be returned to students prior to the last date to drop a course without academic penalty.

8.0 TOPICS – SEQUENCE & SCHEDULE

Week	Topic	LAB ACTIVITY	HOMEWORK
2	<ul style="list-style-type: none"> • Introduction to course • Intro to network mgt. • Intro to Windows Server 2008 		<ul style="list-style-type: none"> • Read Chapters 1 and 2
3	<ul style="list-style-type: none"> • Windows Networking Model 	<ul style="list-style-type: none"> • Lab Exercise 1: Introduction to Windows Server 2008 - Configuration, Navigation, Terminal Services • Exercises 2: Reviewing Published Case Studies 	<ul style="list-style-type: none"> • Answer Chapter 1 and 2 review questions
3	<ul style="list-style-type: none"> • Windows hardware requirements and Registry settings • Installation Demos 	<ul style="list-style-type: none"> • Chapter 1: Activity • Lab Exercise 3: Viewing logical & physical structure of Active Directory 	<ul style="list-style-type: none"> • Read Chapter 3 • Answer Chapter 3 review questions
4	<ul style="list-style-type: none"> • Active Directory infrastructure 	<ul style="list-style-type: none"> • Chapter 3 • Lab Exercise 4: Creating Domain Objects 	<ul style="list-style-type: none"> • Read Chapter 4 • Answer Chapter 4 review questions
5	<ul style="list-style-type: none"> • Administering Active Directory (user and group accounts) 	<ul style="list-style-type: none"> • Lab Exercise 5: Creating Domain Objects OU 	<ul style="list-style-type: none"> • Read Chapters 5 • Answer Chapter 5 review questions

		infrastructure	
6	<ul style="list-style-type: none"> • Windows File System • Managing file access 	<ul style="list-style-type: none"> • Chapter 4 • Lab Exercise 6: Creating Contact Objects 	<ul style="list-style-type: none"> • Read Lecture notes
7	<ul style="list-style-type: none"> • Calculating effective permissions • Data Storage • Distributed File System 	<ul style="list-style-type: none"> • Exercise 8: Managing File Systems 	<ul style="list-style-type: none"> • Prepare for Midterm Exam
8	<ul style="list-style-type: none"> • Managing group policy 	<ul style="list-style-type: none"> • Midterm Exam • Lab Exercise 7: Assigning a Home Folder s 	<ul style="list-style-type: none"> • Read Chapter 7 • Answer review questions for Chapters 7
9	<ul style="list-style-type: none"> • Managing group policy • Group Policy Management Console Demo • Calculating GPO Permissions 	<ul style="list-style-type: none"> • Lab Exercise 8: Managing GPO 	<ul style="list-style-type: none"> • Read Chapter 9 • Answer Chapter 9 review questions
10	<ul style="list-style-type: none"> • Server Administration • Security Groups – Review exercise 	<ul style="list-style-type: none"> • Lab Exercise 10: Delegating Group Policy Administration • Lab Exercise 11: Logon/Logoff Scripts 	<ul style="list-style-type: none"> • Read Lecture notes
11	<ul style="list-style-type: none"> • Data backup • Monitoring server performance & Troubleshooting 	<ul style="list-style-type: none"> • Exercise 12: Creating Custom Administration Tools 	<ul style="list-style-type: none"> • Read Chapter 14 & Lecture notes • Answer Chapter 14 review Questions • Chapter 15: Read Event viewer
12	Server Virtualization	<ul style="list-style-type: none"> • Lab Exercise 13: Security Groups Review • Lab Exercise 14: Backup • Lab Exercise 15: Advanced Monitoring commands 	<ul style="list-style-type: none"> • Read Chapter 11 • Answer Chapter 11 review questions
13	Managing Windows Network services	Advanced Networking. "Tgxlgy "Hpcn	<ul style="list-style-type: none"> • Read Chapter 8 • Answer Chapter 8 review questions

9.0 TEACHING METHODS

This course will incorporate the following teaching/learning methods:

Lectures, discussions and hands-on application exercises. Inherent in the approach to learning in this course are the assumptions that you are self-motivated and self-directed, will contribute to group work and class discussions, and will demonstrate the time management skills required to complete lab exercises and other homework assignments by the deadline each week.

10.0 TEXTS & OTHER READING MATERIALS

1) Course main textbook:

Title: MCITP Guide to Microsoft Windows Server 2008, Server Administration (Exam# 70-646)

Author: Michael Palmer

Publisher: Course Technology

ISBN: 978-1-4239-0238-6

2) Lecture Notes and other handouts as assigned

3) Recommended Textbook for Active Directory:

Title: MCTS Guide to Configuring Microsoft Windows Server 2008 Active Directory: Exam #70-640

Author: Gregory Tomsho

Publisher: Course Technology

ISBN: 1423902351, 978142390235511.0

11.0 VARIATIONS WITHIN A COURSE

All sections of a course (Day and CE sections) will follow the same course outline and will use the same course delivery methods, methods of evaluation, and grading schemes. Any deviations will be posted on Blackboard once approved by the course coordinator. Except for sections that are comprised entirely of Ted Rogers School of ITM students with notebooks (“notebook-enabled sections”), in most cases, the class will be 2 hours per week, plus a one-hour software lab. Notebook-enabled sections will typically integrate the lab component within a single three-hour time period. Regardless of format, an additional 9 hours will be required each week for independent reading, research, and practice using the software.

Also please note that some of the lab exercises may include into a single lab assignment/project with a higher mark than the other lab exercises.

12.0 OTHER COURSE, DEPARTMENTAL, AND UNIVERSITY POLICIES

For more information regarding course management and departmental policies, please consult the ‘**Appendix of the Course of Study**’ which is posted on the Ted Rogers School

of Information Technology Management website,

<http://www.ryerson.ca/itm/pdf/Appendix.pdf>. This appendix covers the following topics:

12.1 Attendance & Class Participation

12.2 Email Usage

12.3 Request for Academic Consideration

12.3.1 Ryerson Medical Certificate

12.3.2 Academic Accommodation for Students with Disabilities

12.3.3 Religious, Aboriginal or Spiritual Observance

12.3.4 Re-grading and Recalculation

12.4 Examinations & Tests

12.4.1 Period of Prohibition from Testing

12.4.2 Make-Up of Mid-Term Tests, Assignments and Other Assessments
During the Semester

12.4.3 Make –Up of Final Exams

12.4.4 Missing a Make-Up

12.5 Late Assignments

12.6 Standard of Written Work

12.7 Academic Grading Policy

12.8 Academic Integrity

12.8.1 Turnitin.com

12.9 Student Rights