



COURSE OUTLINE

CENTRE FOR COMPUTER TECHNOLOGY

COURSE NAME: Network Operations Management

COURSE CODE: COMP1163

CREDIT HOURS: 56 Hrs

PREREQUISITES: COMP1154

COREQUISITES:

PLAR ELIGIBLE: YES (X) NO ()

EFFECTIVE DATE: January 11, 2010

PROFESSOR: Suri Nagavarapu

OFFICE #:

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NOTE TO STUDENTS: Academic Departments at George Brown College will NOT retain historical copies of Course Outlines. We urge you to retain this Course Outline for your future reference.

FOR OFFICE USE ONLY		
ORIGINATOR: _____	_____	_____
	SIGNATURE	DATE
CHAIR: _____	_____	_____
	SIGNATURE	DATE
DATE OF REVISION: _____		

EQUITY STATEMENT: George Brown College values the talents and contributions of its students, staff and community partners and seeks to create a welcoming environment where equity, diversity and safety of all groups are fundamental. Language or activities which are inconsistent with this philosophy violate the College policy on the Prevention of Discrimination and Harassment and will not be tolerated. The commitment and cooperation of all students and staff are required to maintain this environment. Information and assistance are available through your Chair, Student Affairs, the Student Association or the Human Rights Advisor.

STUDENT RESPONSIBILITIES: Students should obtain a copy of the *Student Handbook* and refer to it for additional information regarding the grading system, withdrawals, exemptions, class assignments, missed tests and exams, supplemental privileges, and academic dishonesty. Students are required to apply themselves diligently to the course of study, and to prepare class and homework assignments as given. Past student performance shows a strong relationship between regular attendance and success.

COURSE DESCRIPTION:

This course covers the fundamentals of network management, network operations and network fault triage. With a focus on industry standard network management tools based on the Simple Network Management Protocol (SNMP), the student will learn how to monitor the network for alarms and react to those alarms using a standard escalation policy as defined by the instructor. The students will learn issue escalation and network triage as well as problem isolation and tracking.

ESSENTIAL EMPLOYABILITY SKILLS:

As mandated by the Ministry of Training, Colleges and Universities essential employability skills (EES) will be addressed throughout all programs of study. Students will have the opportunity to **learn (L)** specific skills, to **practice (P)** these skills, and/or **be evaluated (E)** on the EES outcomes in a variety of courses. The EES include communication, numeracy, critical thinking & problem solving, information management, interpersonal and personal skills. The faculty for this course has indicated which of the EES are either Learned (**L**), Practiced (**P**) or Evaluated (**E**) in this course.

Skill	L	P	E	Skill	L	P	E
1. to communicate clearly, concisely and correctly in the written, spoken and visual form that fulfills the purpose and meets the needs of the audience		x	x	7. to locate, select, organize and document information using appropriate technology and information sources	x	x	x
2. to respond to written, spoken or visual messages in a manner that ensures effective communication		x	x	8. to show respect for the diverse opinions, values, belief systems, and contributions of others	x		
3. to execute mathematical operations accurately	x	x		9. to interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals	x	x	x
4. to apply a systematic approach to solve problems		x	x	10. to manage the use of time and other resources to complete projects	x	x	x
5. to use a variety of thinking skills to anticipate and solve problems.	x	x	x	11. to take responsibility for my actions, decisions and consequences			
6. to analyze, evaluate, and apply relevant information from a variety of sources	x	x					

COURSE OUTCOMES:

1. Explain the concept of Network Management based on the concepts supported by the Simple Network Management Protocol (SNMP).
2. Explain the role of the Management Information Base in Network Management.
3. Demonstrate hands on experience of a common SNMP based network management system in a Network Operation Centre (NOC) environment.

4. Examine the role of Network Planning, Network Engineering and Field Engineering in the Network Operations process.
5. Analyze and respond to network issues as reported by the network management system.
6. Conduct issue management and resolution techniques.
7. Study the communication protocols, file system, security and directory implementation of a Modern Server Operating System.
8. Understand the Network administration tasks such as User Management, Device Management, Backup and Recovery etc and study the tools available under a modern server operating system.
9. Implement popular servers such as Web Server, File Server, Terminal Services using software available under a modern server operating system

DELIVERY METHODS / LEARNING ACTIVITIES:

The instructional methods of this course are comprised of class lectures using high quality multi media projection system, lecture-demonstration, lecture-discussion, hands-on lab exercises, and project assignments.

LIST OF TEXTBOOKS AND OTHER TEACHING AIDS:

Required:

1. "MCSE Guide to Managing a Microsoft Windows Server 2003 Environment, Enhanced , 1st Edition" by Dan DiNicolo, Brian T. McCann, ISBN-10: 061217529, Course Technology

Recommended / Optional:

TESTING POLICY:

1. A score of zero will be recorded for a missed assignment or examination unless the student presents the professor with official substantiation of the absence the first day she or he returns to class.
2. Students are responsible for reading the appropriate material before classes so that they may benefit from their practical activities and examples.

ASSIGNMENT POLICY:

1. Students are responsible for keeping a back-up copy of each assignment submitted.
2. All assignments submitted should adhere to the documentation standards distributed by the Professor.
3. Students should check the assignment handouts for the instructions for submission.

EVALUATION SYSTEM:

Assessment Tool:	Description:	Outcome(s) demon- strated:	EES demon- strated:	Date / Week:	% of Final Grade:
Labs	Lab Activities	5,6,7,8,9	2,4,7	Wks 1-15	30
Assignments	Four assignments on topics of importance	6,7,8,9	1,4,5,6	Ongoing	10

Group Presentation	Covers enhancements in Windows 2008 Server	8,9	7,9	Wk 15	10
Quiz 1	Multiple choice test that evaluates concepts from the topics covered in Weeks 1-3	7,8,9	2,4,5	Wk 4	5
Quiz 2	Multiple choice test that evaluates concepts from the topics of Weeks 9-11	7,8,9	2,4,5	Wk 12	5
MidTerm Exam	Test containing Multiple choice, short answer etc questions on topics covered in weeks 1-6	7,8,9	2,4,5,6	Wk 7	20
Final Exam	Test containing Multiple choice, short answer etc questions on topics covered in weeks 1-14	7,8,9	2,4,5,6	Wk 15	20
				TOTAL:	100%

GRADING SYSTEM

The passing grade for this course is: **D**

A+	90-100	4.0	B+	77-79	3.3	C+	67-69	2.3	D+	57-59	1.3	Below 50	F	0.0
A	86-89	4.0	B	73-76	3.0	C	63-66	2.0	D	50-56	1.0			
A-	80-85	3.7	B-	70-72	2.7	C-	60-62	1.7						

Excerpt from the College Policy on Academic Dishonesty:

The *minimal* consequence for submitting a plagiarized, purchased, contracted, or in any manner inappropriately negotiated or falsified assignment, test, essay, project, or any evaluated material will be a grade of zero on that material. To view George Brown College policies please go to www.gbrownc.on.ca/policies

TOPICAL OUTLINE:

Week	Topic	Outcome	Content/Activities	References
1	Intro to Windows 2003 Server	7,8	Windows 2003 Server Capabilities, Networking concepts, Workgroups, Domains, Intro to Active Directory	Ch.1 (Ref 1)
2	Windows 2003 Server Operation	6,7,8	Managing Hardware devices, Device Drivers, User account creation, User Profiles	Ch.2,3 (Ref 1)
3	Windows 2003 Groups and Computer accounts	6,7,8	Intro to Group Accounts, Creating Group Accounts, Managing Security Groups, Resetting Computer Accounts	Ch 4 (Ref 1)
4	Windows 2003 Server File Management	6,7	Managing File Access, Windows 2003 File system, NTFS permissions, combining shared and NTFS permissions	Ch 5 (Ref 1)
5	Windows 2003 Disk Management	6,7,8	Managing Disk and data storage, Managing Partitions and Volumes, Fault Tolerant disk strategies, Disk Management Utilities	Ch 6 (Ref 1)
6	Windows 2003 Advanced File System Management	6,7,8	Advanced File System Management, File and folder attributes, Disk quotas, Distributed File Systems	Ch 7 (Ref 1)
7	Midterm Examination			
8	Inter Session Week			
9	Windows 2003 Group Policy	6,7,8	Implementation and usage of group policies, Creating a group policy, group policy inheritance, software deployment using group policy	Ch 9 (Ref 1)
10	Windows 2003 Server Administration	6,7	Network administration procedures, Configuring Terminal services and Remote desktop for administration, Software Update services	Ch 10 (Ref 1)
11,12	Windows 2003 Web Management	6,8,9	Installing and configuring IIS, Web-Site Virtual servers, Authentication, Configuring FTP Virtual Servers, Updating and maintaining security for an IIS server, Remote administration tools	Ch 13 (Ref 1)
13	Windows 2003 Security	6,7,8	Security features, security configuration manager tools, Security logs, auditing access	Ch 14 (Ref 1)
14	Group Presentations	8,9	Selected Topics in Windows 2008 Server	
15	Final Examination			