# SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

# SAULT STE. MARIE, ONTARIO

# COURSE OUTLINE

**COURSE TITLE:**     Network Certification I

**CODE NO. :**     CSN210          **SEMESTER:**     Fall 2011

**PROGRAM:**     Computer Engineering Technologist - Networking

**AUTHOR:**     Dan Kachur

**DATE:**     Sept. 2011          **PREVIOUS OUTLINE DATED:**     Jan. 2011

**APPROVED:**          "Penny Perrier"          June/11

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                                        **CHAIR**                                        **DATE**

**TOTAL CREDITS:**     4

**PREREQUISITE(S):**     CSN100

**HOURS/WEEK:**     4 Hours per week / 16 weeks

## I.    COURSE DESCRIPTION:

This course begins the preparation for certification in a networking area of specialization.  At the present time the courses and exams identified as the Microsoft™ Certified IT Professional (MCITP) requirements will be the basis for this course and one other course.  Lectures on the important topics will be provided with lab activities designed to develop hands-on skills.  Students will use available resources, MCITP exam preparation guides, sample tests and hands-on lab activities to prepare for the specific objectives as published by Microsoft™. The chosen track for this course will be the Microsoft Windows 2008 Server curriculum.

### Rationale:

Windows Server 2008 is generating demand all over the world for skilled IT professionals who can support this new Windows Server operating system. IDC, a global analyst firm, estimates that there will be more than 3.5 million deployments of Windows Server 2008 in its first year.

### Demonstrating in-depth technology skills: MCITP

The Microsoft Certified IT Professional (MCITP) credential is the leading certification for Windows Server 2008, providing widely recognized, objective validation of your ability to perform critical, current IT job roles by using Microsoft technologies to their best advantage.

The building blocks of the Windows Server 2008 MCITP certification are Microsoft Certified Technology Specialist (MCTS) pre-requisites certifications designed to validate your skills on the features and functionality of key technology areas in Windows Server 2008, leading to the MCITP Certification.

### Earn an MCITP: Server Administrator certification to demonstrate your leadership and problem-solving skills in working with Windows Server 2008.

Server administrators are recognized among their peers and managers as leaders in the daily operations management of Windows Server 2008. Demonstrate and communicate your ability to administer Windows Server 2008 systems and increase your organization's return on technology investment by earning the MCITP: Server Administrator certification.

**II.    LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:**

Upon successful completion of this course, the student will demonstrate the ability to:

1.  **Server Deployment**
    Potential Elements of the Performance:
    - Become aware of the 4 versions of Windows 2008 Server
    - Prepare a Virtual Server Environment for Windows 2008
    - Plan for a Windows 2008 Server Install including provision for Rollback
    - Research BitLocker Drive Encryption with relevance to Windows 2008 Server
    - Become familiar with Windows 2008 Upgrade options and procedures
    - Analyze the Windows Automation and Installation Kit
    - Research and work with single and multiple Activation Keys
    - Install and Activate Windows 2008
    - View the installation log
    - Contrast Authentication VS Authorization
    - Secure the Server using Service packs, patches and Firewall
    - Configure Static IP Addressing
    - Configure Active Directory
    - Install and configure a DNS Server

2.  **Server Management**
    Potential Elements of the Performance:
    - Create a Backup Administrator account for 2008 Server
    - Perform User Access Control practices using Lab activities
    - Elevate a user privilege on the network
    - Become familiar with Desktop Windows Manager
    - Learn and work with authentication protocols specifically Kerberos
    - Research and apply Domain and Domain Controller Group Policies
    - Work with Security Templates
    - Utilize the Security Wizard to optimize your Network environment
    - Apply Security Defender as part of a lab activity
    - Assign Disk Quotas for users on the network
    - Install Network and IP Based Printers on your Server

3. **Monitoring and Maintaining Servers**
   Potential Elements of the Performance:
   - Work with the Windows Sidebar to manage the Server
   - Utilize the Event Viewer to diagnose Network Issues
   - Apply Performance Monitoring features to analyze the Network
   - Analyze Windows 2008 Server performance using Task Manager
   - Work with Application, Process, Performance and Networking Tabs
   - Filter Files using the Explorer utility
   - Utilize Microsoft Network Monitor

4. **Planning Application and Data Provisioning**
   Potential Elements of the Performance:
   - Invoke and populate the Microsoft Management Console
   - Install and configure the IIS Web Server software
   - Populate your DNS Server to active IIS and prepare for Exchange Server
   - Work with Application Virtualization
   - Allocate resources appropriately to balance Network Application performance

5. **Planning for Business Continuity and High Availability**
   Potential Elements of the Performance:
   - Prepare a Disaster Recovery Plan
   - Plan Storage solutions including SAN, Clustering and Disk Management strategies
   - Implement backup procedures including automated backups
   - Contrast and work with Normal, Differential, and Incremental backups
   - Implement Shadowed Copies on Shared Folders

**III.   TOPICS:**

1. Server Deployment
2. Server Management
3. Monitoring and Maintaining Servers
4. Planning Application and Data Provisioning
5. Planning for Business Continuity and High Availability

## IV.    REQUIRED RESOURCES/TEXTS/MATERIALS:

Textbook:  ***Hands-On Microsoft Windows Server 2008***

ISBN:  0-4239-0234-3
Author:  Michael Palmer
Publisher:  Course Technology


## V.    EVALUATION PROCESS/GRADING SYSTEM:

| | |
|---|---|
| Tests ( 3 @ 15% each ) | 45 % |
| LMS Quizzes | 20 % |
| Participation and Attendance | 10 % |
| Lab Assignments | 25 % |

**Note:**  This evaluation scheme is subject to change if circumstances warrant. Any changes will be discussed with students and reported in writing before implementation.

Missed Tests and Labs

Students are expected to be present to write all tests in class and submit labs on-time.  If a student is unable to write a test or submit a lab because of illness or a legitimate emergency, that student must contact the professor prior to the class and provide an explanation, which is acceptable by the professor.  Should the student fail to contact the professor, the student may receive a **grade of zero** for that test or lab.

Once a test has commenced, the student is considered absent and may not be given the privilege of writing the test.


The following semester grades will be assigned to students:

| Grade | Definition | Grade Point Equivalent |
|---|---|---|
| A+ | 90 – 100% | 4.00 |
| A | 80 – 89% | |
| B | 70 - 79% | 3.00 |
| C | 60 - 69% | 2.00 |
| D | 50 – 59% | 1.00 |
| F (Fail) | 49% and below | 0.00 |

CR (Credit)    Credit for diploma requirements has been
               awarded.
S              Satisfactory achievement in field /clinical
               placement or non-graded subject area.
U              Unsatisfactory achievement in
               field/clinical placement or non-graded
               subject area.
X              A temporary grade limited to situations
               with extenuating circumstances giving a
               student additional time to complete the
               requirements for a course.
NR             Grade not reported to Registrar's office.
W              Student has withdrawn from the course
               without academic penalty.

## VI.    SPECIAL NOTES:

Course Outline Amendments:
The professor reserves the right to change the information contained in
this course outline depending on the needs of the learner and the
availability of resources.

Contact Information:

Dan Kachur - Professor
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## VII.    COURSE OUTLINE ADDENDUM:

The provisions contained in the addendum located on the portal form part
of this course outline.