

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



Sault College

COURSE OUTLINE

COURSE TITLE: Internet / Intranet / Extranet

CODE NO. : CSN3000

SEMESTER: Five

PROGRAM: Computer Systems Support

AUTHOR: Dan Kachur

DATE: August 2002

APPROVED:

DEAN

DATE

TOTAL CREDITS: 5

PREREQUISITE(S): CSN2050

HOURS/WEEK: 4

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I. COURSE DESCRIPTION:

Students will establish an Internet / Intranet / Extranet environment using appropriate network infrastructure including Web, DHCP, and DNS servers. A live website will be created, installed and tested on your web server. Aspects of web security weaknesses will be addressed and targeted. The website will then be secured to act as an Intranet site, serving internal group members only. Firewalls will be researched and one will be installed and tested to support network shielding. Port probing software will be evaluated then focused on targeting group member firewalls for weaknesses. Virtual Private Networks will be researched and own Extranet VPN connection will be established.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. Install and configure a DHCP Server.

Potential Elements of the Performance:

This learning outcome will constitute approximately 15% of the course.

- Install and configure Windows 2000 server
- Install the latest anti-virus software for Windows 2000 server
- Update your web browser to include the latest patches
- Review TCP/IP including public and private addressing
- Obtain an overview of name resolution
- Research the role of DHCP server
- Install and configure a DHCP server
- Create a DHCP private address scope
- Identify start and end ranges for your scope
- Exclude ip addresses within a scope
- Provide hardware reservation
- Test DHCP from a Windows client
- Release and renew a client ip address
- Stop and start DHCP services
- Uninstall DHCP

2. Install and configure a Web Server.

Potential Elements of the Performance:

This learning outcome will constitute approximately 25% of the course.

- Install IIS web server for Windows 2000 server
- Install the latest IIS web security patches
- Create a website using Front Page 2000
- Bring your web server live
- Learn the 5 areas of web, folder and file security
- Grant and revoke folder and file permissions
- Contrast virtual servers vs. multiple servers
- Create virtual directories
- Produce user tracking and performance reports
- Check your web logs for daily activity
- Customize IIS “error code” .html web pages to meet your needs

3. Install an Intranet site.

Potential Elements of the Performance:

This learning outcome will constitute approximately 15% of the course.

- Define and plan an Intranet
- Identify your Intranet audience
- Identify and select appropriate Intranet software to install
- Verify adequate hardware resources
- Define bandwidth requirements
- Plan for Intranet growth

4. Secure an Intranet Site

Potential Elements of the Performance:

This learning outcome will constitute approximately 15% of the course.

- Define security
- Identify security risks and potential for security threats
- Understand key concepts such as: sniffing, eavesdropping, crackers and spoofing
- Understand remote access security issues
- Learn various firewall terminology
- Protect network users from viruses
- Implement a security policy
- Filter packets
- Apply public key encryption
- Implement audit tools
- Implement a proxy server
- Secure your site for e-commerce
- Test your security by attempting to intrude

5. Install and configure a DNS Server.

Potential Elements of the Performance:

This learning outcome will constitute approximately 20% of the course.

- Learn the role of DNS server
- Identify the purpose of Zones, Cname, A records, and MX records
- Obtain an overview of DNS name resolution
- Install a DNS server
- Create a DNS namespace
- Create and configure a zone and various records for DNS
- Test DNS
- Take your DNS Server live

6. Connect to an Extranet.

Potential Elements of the Performance:

This learning outcome will constitute approximately 10% of the course.

- Prepare a RAS (Remote Access Server) VPN connection
- Implement user, tunnelling, and encryption security
- Share information between two Intranets

III. REQUIRED RESOURCES/TEXTS/MATERIALS:

- Handouts from the professor
- Internet connection for research purposes
- Removable hard drive

IV. EVALUATION PROCESS/GRADING SYSTEM:

3 WRITTEN TESTS (approx. 22% each)	65%
TAKE-HOME AND LAB ASSIGNMENTS	35%

(The percentages shown above may vary slightly if circumstances warrant.)

The following semester grades will be assigned to students in postsecondary courses:

<u>Grade</u>	<u>Definition</u>	<u>Grade Point Equivalent</u>
A+	90 - 100%	4.00
A	80 - 89%	3.75
B	70 - 79%	3.00
C	60 - 69%	2.00
R (Repeat)	59% or below	0.00
CR (Credit)	Credit for diploma requirements has been awarded.	
S	Satisfactory achievement in field placement or non-graded subject areas.	
U	Unsatisfactory achievement in field placement or non-graded subject areas.	
X	A temporary grade. This is used in limited situations with extenuating circumstances giving a student additional time to complete the requirements for a	

NR course (see *Policies & Procedures Manual – Deferred Grades and Make-up*).
Grade not reported to Registrar's office.
This is used to facilitate transcript preparation when, for extenuating circumstances, it has not been possible for the faculty member to report grades.

ELIGIBILITY FOR X GRADES / UPGRADING OF INCOMPLETES

When a student's course work is incomplete or final grade is below 60%, there is the possibility of upgrading to a pass when a student meets all of the following criteria:

1. The student's attendance has been satisfactory.
2. An overall average of at least 50% has been achieved.
3. The student has not had a failing grade in all of the theory tests taken.
7. The student has made reasonable efforts to participate in class and complete assignments.

Note: **The opportunity for an X grade is usually reserved for those with extenuating circumstances.** The nature of the upgrading requirements will be determined by the instructor and may involve one or more of the following: completion of existing labs and assignments, completion of additional assignments, re-testing on individual parts of the course or a comprehensive test on the entire course.

V. SPECIAL NOTES:

Special Needs:

If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your instructor and/or the Special Needs office. Visit Room E1204 or call Extension 493, 717, or 491 so that support services can be arranged for you.

Retention of course outlines:

It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

Plagiarism:

Students should refer to the definition of “academic dishonesty” in *Student Rights and Responsibilities*. Students who engage in “academic dishonesty” will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course/program, as may be decided by the professor/dean. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

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.

Substitute course information is available in the Registrar's office.

VI. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult the professor. Credit for prior learning will be given upon successful completion of a challenge exam or portfolio.

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VII. DIRECT CREDIT TRANSFERS:

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean's secretary. Students will be required to provide a transcript and course outline related to the course in question.