SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



CICE COURSE OUTLINE

| COURSE TITLE: | Introduction to Operating Systems | | | | |
|--|---|-------------------|------------|------------|--|
| CODE NO. : MODIFIED CODE: | CSO105 CSO0105 | : | SEMESTER: | Fall | |
| PROGRAM: | Computer Studies (CNT/CPA/CF) | | | | |
| AUTHOR: MODIFIED BY: | Doug McKinnon/Cindy Trainor Amy Peltonen, Learning Specialist CICE Program | | | | |
| DATE: | Sept. 2010 | PREVIOUS OUTL | INE DATED: | Sept. 2009 | |
| APPROVED: | | "Angelique Lemay" | | Oct. 2010 | |
| | CHAIR | , COMMUNITY SEF | RVICES | DATE | |
| TOTAL CREDITS: | 5 | , | | | |
| PREREQUISITE(S): | None | | | | |
| HOURS/WEEK: | 4 | | | | |
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I. COURSE DESCRIPTION:

This course will provide CICE students with an introduction to:

- Sault College's Student Computing facilities including Internet and e-mail
- Fundamental computer Operating System concepts and methodologies
- File Transfer Protocol (FTP) from a Graphical User Interface(GUI) and Command Line Interface (CLI) perspective
- Practical, hands-on interaction with implementations of Microsoft Windows using the Graphical User Interface (GUI) and Command Line Interfaces

The first section of this course is dedicated to familiarizing students with Sault College's computing infrastructure regarding: security and terms-ofuse policies, login/logout procedures, disk storage access and quota. Internet and email usage is also covered providing CICE students with rudimentary skills for topical research and effective communication.

The Operating System concepts section of this course will introduce students to the physical components of a computer system and how the operating system manages and coordinates all computing activity.

CICE students will use Microsoft Windows XP Professional in the GUI and CLI environment. In the CLI environment, CICE students will explore and become familiar with the Command Line Interface, command syntax, individual commands, and ultimately batch file (command) execution.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, the CICE student, along with the assistance of a Learning Specialist, will demonstrate a basic ability to:

1. Work with Sault College's Network and the Internet <u>Potential Elements of the Performance:</u>

- Read and abide by Sault College's policy on computer usage
- Explore fundamental Internet concepts and protocols
- Work with Internet browser software application(s)
- Understand the purpose and components of URLs
- Identify common web sites and utilities
- Identify and use Search Engines effectively

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- Work with File Transfer Protocol in the GUI and CLI environment
- Learn e-mail etiquette
- Identify e-mail protocols
- Configure your mailbox including mail server entries
- Send, receive, reply, forward and copy e-mail
- Send, receive, forward and copy e-mail attachments
- Apply CC and BCC e-mail addressing
- Understand the purpose of a listserv
- Understand the purpose of and organize e-mail folders
- Understand the basic fundamental concepts related to Internet telecommunications
- 2. **Begin to comprehend Operating System theories and concepts** <u>Potential Elements of the Performance</u>:
 - Have a basic understanding of the component pieces of a computer system and the operating system's relevant roles and responsibilities
 - Be familiar with how operating systems are classified based on the number of users and tasks that execute simultaneously
 - Display knowledge of the binary representation of bits, bytes, and words.
 - Demonstrate a basic understanding of the significance of the ascii, ebcdic, and Unicode character set representation.
 - Be familiar with concepts of kernel, shell, process, program execution, input / output operations, communications, error detection, and memory management
 - Be aware of the fundamentals of secondary storage covering: disks, sectors, tracks, cylinders, platters, partitions, the master boot record, and the boot process.

3. **Be familiar with Microsoft Windows XP Professional** <u>Potential Elements of the Performance</u>:

- Have basic knowledge of the history of Windows operating systems
- Identify and utilize Windows desktop components
- Identify the component parts of a Window and their purpose
- Understand the significance of the Start button and menu
- Utilize the on-line Help features availed by the GUI
- Identify and apply proper shutdown and log-off procedures
- Create shortcuts on the desktop
- Understand Windows file naming conventions
- Effective use of various dialogue techniques
- Demonstrate an awareness between various file types: system, data and executable

- Begin to understand the purpose of, utilization, and manipulation of folders (or directories), sub-folders or sub-directories; relative and explicit paths
- Copy, move, edit and delete files using My Computer, Windows Explorer; and cut, copy, paste techniques
- Understand and implement effective use of the Recycle Bin.
- Understand, view, and modify file and folder attributes
- Identify and utilize available disk drives
- Begin to identify and differentiate between various file systems used by Windows - FAT and NTFS
- Be able to discuss the theory and purpose of formatting a disk.
- Differentiate between system, non-system, and recovery disks
- Develop effective use of Windows Search capabilities
- Develop awareness of the purpose of the Windows Registry
- Develop awareness for the purpose of a Restore Point
- Develop awareness of Windows memory allocation and utilization
- Begin to differentiate between Internal and External commands, and the concept of Path to locate external commands
- Understand the concept of Multi-tasking in Windows
- Determine how to access the Command Line interface
- 4. Be familiar with Windows/DOS commands and batch files, understanding of the command execution environment. Potential Elements of the Performance:
 - Develop knowledge of how to interact with the Command Line
 Interface
 - Utilize the on-line Help features availed from the command line
 - Develop understanding, interpretation of Windows/DOS command syntax using a syntax map
 - Understand command execution
 - Begin to differentiate between executable commands, programs and batch files
 - Demonstrate awareness of the theory and methodology which Windows/DOS follows when executing commands and/or programs
 - Display knowledge of how to create, store, retrieve and edit batch files
 - Develop understanding and effective utilization of command parameters.
 - Develop awareness of the effective utilization environment variables using the set command
 - Recognize the purpose and effective deployment of batch file commands: cls, rem, echo, pause, call, if, goto, shift, for, choice
 - Illustrate basic use of command wildcard syntax and processing

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- Differentiate between various file types: directories, system, data and executable scripts
- Understand the purpose of and utilization of directories, subdirectories and directory paths
- Differentiate between relative and explicit directory paths and associated syntax
- Copy, move, and delete files and directories using the command line
- Understand, view, and modify file permissions

III. TOPICS:

- 1. Work with Sault College's Network and the Internet
- 2. Define and apply Operating System theories and concepts
- 3. Utilize Microsoft Windows XP Professional
- 4. Develop and implement Windows/DOS commands and batch files, understanding of the command execution environment.

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

USB 2.0, IDE External Hard Drive Enclosure with Hard Drive Or USB 2.0 to Hard Drive Adapter and Hard Drive, at least 20 GB in capacity

V. EVALUATION PROCESS/GRADING SYSTEM:

3 WRITTEN TESTS50%LAB AND TAKE-HOME ASSIGNMENTS30%2 LAB PRACTICAL TESTS20%

QUIZZES MAY BE ASSIGNED RANDOMLY, <u>without advance notification</u>, and factored into The Evaluation/Grading system.

Late or missed assignments, quizzes, and/or tests are subject to a ZERO grade unless PRIOR consent is granted by the Instructor.

The Instructor reserves the right to apply a grading penalty to late assignments. Penalty amount will be determined by the Instructor.

Absenteeism will affect a student's ability to succeed in this course. Absences due to medical or other unavoidable circumstances should be discussed with the professor. Students are required to be in class on time and attendance will be taken within the first five minutes of class. A missed class will result in a penalty in your marks unless you have discussed your absence with the professor as described above. The penalty depends on course hours and will be applied as follows:

Course HoursDeduction5 hrs/week (75 hrs)1% / hr4 hrs/week (60 hrs)1.5% /hr3 hrs/week (45 hrs)2% /hr2 hrs/week (30 hrs)3% /hr

Absentee reports will be discussed with each student during regular meetings with Faculty Mentors. Final penalties will be reviewed by the professor and will be at the discretion of the professor

The following semester grades will be assigned to students:

| Grade | Definition | Grade Point <u>Equivalent</u> | | | |
|-------------|---|----------------------------------|--|--|--|
| A+ A | 90 – 100% 80 – 89% | 4.00 | | | |
| В | 70 - 79% | 3.00 | | | |
| С | 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. | | | | |
| Х | 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:

Attendance:

Sault College is committed to student success. There is a direct correlation between academic performance and class attendance; therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session. *It is the departmental policy that once the classroom door has been closed, the learning process has begun. Late arrivers will not be granted admission to the room.*

VII. COURSE OUTLINE ADDENDUM:

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

CICE Modifications:

Preparation and Participation

- 1. A Learning Specialist will attend class with the student(s) to assist with inclusion in the class and to take notes.
- 2. Students will receive support in and outside of the classroom (i.e. tutoring, assistance with homework and assignments, preparation for exams, tests and quizzes.)
- 3. Study notes will be geared to test content and style which will match with modified learning outcomes.
- 4. Although the Learning Specialist may not attend all classes with the student(s), support will always be available. When the Learning Specialist does attend classes he/she will remain as inconspicuous as possible.

A. Tests may be modified in the following ways:

- 1. Tests, which require essay answers, may be modified to short answers.
- 2. Short answer questions may be changed to multiple choice or the question may be simplified so the answer will reflect a basic understanding.
- 3. Tests, which use fill in the blank format, may be modified to include a few choices for each question, or a list of choices for all questions. This will allow the student to match or use visual clues.
- 4. Tests in the T/F or multiple choice format may be modified by rewording or clarifying statements into layman's or simplified terms. Multiple choice questions may have a reduced number of choices.

B. Tests will be written in CICE office with assistance from a Learning Specialist.

The Learning Specialist may:

- 1. Read the test question to the student.
- 2. Paraphrase the test question without revealing any key words or definitions.
- 3. Transcribe the student's verbal answer.
- 4. Test length may be reduced and time allowed to complete test may be increased.

C. Assignments may be modified in the following ways:

- 1. Assignments may be modified by reducing the amount of information required while maintaining general concepts.
- 2. Some assignments may be eliminated depending on the number of assignments required in the particular course.

The Learning Specialist may:

- 1. Use a question/answer format instead of essay/research format
- 2. Propose a reduction in the number of references required for an assignment
- 3. Assist with groups to ensure that student comprehends his/her role within the group
- 4. Require an extension on due dates due to the fact that some students may require additional time to process information
- 5. Formally summarize articles and assigned readings to isolate main points for the student
- 6. Use questioning techniques and paraphrasing to assist in student comprehension of an assignment

D. Evaluation:

Is reflective of modified learning outcomes.