

I. COURSE DESCRIPTION:

This course is divided into three operating systems related modules that will focus on: Operating System concepts and implementation strategies, hands-on interaction with Microsoft Windows 2000 Professional using the Graphical User Interface (GUI) and Command Line Interface; and hands-on interaction with Red Hat Linux (Unix) using the Graphical User Interface (GUI) and Command Line Interface.

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

Using Microsoft Windows, you will explore and become familiar with components of, and interaction with, the Graphical User Interface (GUI). Students will also explore and become familiar with the Command Line interface, command syntax, individual commands, and ultimately batch file (command) execution.

Using Red Hat Linux , you will explore and become familiar with components of, and interaction with, the Graphical User Interface (GUI).. Students will also explore and become familiar with the Command Line interface, command syntax, individual commands, and ultimately script file (command) execution.

Important Note: Your main means of communication with your instructors outside of class time is via e-mail. You are expected to read your e-mail at least once per day, but strongly encouraged to read your e-mail several times per day. Test times and dates, helpful tips and arranging tutor times with instructors will be arranged via e-mail if it is not established during class time. If you are going to be late or miss a class, you are expected to advise your instructor via e-mail.

Attendance:

Absenteeism will affect a student's ability to succeed in this course. Attendance is encouraged because many things are discussed and learned that may not be specifically available in the textbook. Absences due to medical or other unavoidable circumstances should be discussed with the instructor.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:**1. Define and apply Operating System theories and concepts**Potential Elements of Performance:

- Learn the component pieces of a computer system and the operating system's relevant roles and responsibilities
- Learn how operating systems are classified based on the number of users and tasks that can execute commands simultaneously
- Learn the significance of the binary representation of bits, bytes, and words.
- Understand the significance of ascii, ebcdic, and Unicode character set representation.
- Learn the concepts of kernel, shell, process, program execution, input / output operations, communications, error detection, and memory management
- Explore the fundamentals of secondary storage covering: disk sectors, tracks, cylinders, platters, partitions, and the master boot record.
- Explore the boot process of an operating system in relation to computer hardware.

2. Utilize Microsoft Windows 2000 ProfessionalPotential Elements of Performance:

- Study the history of Windows operating systems
- Identify desktop components
- Identify and explain the purpose and parts of the task bar
- Use the start button and start menu
- Utilize the on-line Help feature available to the user
- Identify and apply proper shutdown and log-off procedures
- Create shortcuts to the desktop
- Understand Windows file naming conventions
- Differentiate between various file types: system, data and executable
- Understand the purpose of and utilization of folders and directories, sub-folders and sub-directories; paths, relative and explicit paths
- Copy, move, and delete files using My Computer, Windows Explorer, and the command line
- Restore files using the recycle bin.
- Understand, view, and modify file attributes
- Identify the parts of a Window
- Identify and use available disk drives

- Explore various filesystems used by Windows - FAT and NTFS
- Describe the purpose of formatting a disk.
- Be able to format both system and non-system diskettes
- Access the Command Line interface
- Understand Windows command syntax and execution from the command line
- Differentiate between Internal and External commands
- Create and execute batch files comprised of a series of Windows commands
- Understand the concept of Multi-tasking in a Windows environment

3. Utilize Red Hat Linux

Potential Elements of Performance:

- Study the history of Unix/Linux operating systems
- Interact with Graphical User Interface and the Command Line Interface
- Identify the parts of a Window
- Utilize the on-line Help features available to the user
- Identify and apply proper shutdown and/or log-off procedures
- Create shortcuts to the desktop
- Understand Linux/Unix file naming conventions
- Differentiate between various file types: system, data and executable scripts
- Understand the purpose of and utilization of folders and directories, sub-folders and sub-directories; paths, relative and explicit paths
- Copy, move, and delete files using the GUI and command line
- Understand, view, and modify file permissions
- Identify and use available disk drives
- Explore various filesystems used by Linux/Unix
- Describe the significance of formatting a disk.
- Access the Command Line interface
- Understand Linux/Unix command syntax and execution from the command line
- Differentiate between Internal and External commands
- Create and execute script files comprised of a series of BASH shell commands
- Classify Unix based on the number of simultaneous users and processes

III. REQUIRED RESOURCES/TEXTS/MATERIALS:**Textbook:**

Title: Operating Systems – A Systematic Overview 5th Edition

Authors: William S. Davis & T.M. Rajkumar

Publisher: Addison Wesley Longman Inc.

ISBN: 0-201-61257-7

- 1/2 box of 3.5" Floppy diskettes
- Additional reference material will be made available to students
- Students are expected to utilize available research modes such as: Internet, Library and topical papers

IV. EVALUATION PROCESS/GRADING SYSTEM:

3 WRITTEN TESTS	50%
LAB AND TAKE-HOME ASSIGNMENTS	30%
2 LAB PRACTICAL TESTS	20%

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

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

The percentages shown above may vary slightly if circumstances warrant.

The Professor reserves the right to adjust the mark up or down 5% based on attendance, participation, leadership, creativity and whether there is an improving trend.

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 course (see <i>Policies & Procedures Manual – Deferred Grades and Make-up</i>).
NR	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.

VI. 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.

VII. 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.

VIII. 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.