

School of Computing and Information Sciences

Course Title: Computer Operating Systems

Date: 8/16/11

Course Number: CGS3767

Number of Credits: 3

Subject Area: System	Subject Area Coordinator: Nagarajan Prabakar email: prabakar@cis.fiu.edu
Catalog Description: Introduction to fundamental concepts of operating systems and their implementation in UNIX and Windows.	
Textbook: Guide to Parallel Operating Systems with Windows 7 and Linux, 2nd Edition by Carswell, Jiang, Freese Course Technology 2012 (ISBN: 1-111-54370-4)	
References:	
Prerequisites Courses: COP 2250 or COP2210.	
Corequisites Courses: None	

Type: Elective

Prerequisites Topics:

- Primitive data types
- Basic program control structures
- Familiarity with methods or functions

Course Outcomes:

1. Be familiar with hardware and software concepts
2. Be familiar with OS functions and management
3. Be familiar with the management of file systems
4. Be familiar with the use of text editors
5. Master basic command line functions
6. Master simple shell programming
7. Be exposed to windowing systems

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Outline

Topic	Number of Lecture Hours	Outcome
<ul style="list-style-type: none"> • Hardware <ul style="list-style-type: none"> ○ Hardware and peripherals ○ Maintenance and testing 	3	1
<ul style="list-style-type: none"> • Software <ul style="list-style-type: none"> ○ Virtual machines ○ Software components ○ Functions of an operating system ○ Interaction between OS and hardware ○ Common OS ○ Common utilities and applications 	3	1,2
<ul style="list-style-type: none"> • File Systems <ul style="list-style-type: none"> ○ Characteristics of file systems ○ Creating and managing file systems ○ Directory commands ○ Files and file attributes 	6	2,3
<ul style="list-style-type: none"> • Text Editors <ul style="list-style-type: none"> ○ Windows editors ○ Unix editors 	6	4
<ul style="list-style-type: none"> • Command Line <ul style="list-style-type: none"> ○ File and directory commands ○ Utility commands ○ Command files 	3	2,5
<ul style="list-style-type: none"> • GUI <ul style="list-style-type: none"> ○ Windows ○ KDE ○ GNOME 	3	2,6
<ul style="list-style-type: none"> • OS Management <ul style="list-style-type: none"> ○ Administrative activities ○ User policies 	1	2
<ul style="list-style-type: none"> • Shell programming <ul style="list-style-type: none"> ○ File processing tools ○ Variables: configuration/environment/shell ○ Operators: defining/evaluating/arithmetic ○ Logic: sequential/decision/loop/case ○ Debugging scripts ○ String tests, integer tests, boolean conditions ○ Script development cycle 	13	2, 7

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Course Outcomes Emphasized in Laboratory Projects / Assignments

	Outcome	Number of Weeks
1	Hardware, software Outcomes: 1,2	2
2	File system, command line, editor Outcomes: 3,4,5	2
3	System management Outcomes: 2,6	2
4	Shell script Outcomes: 7	2

Oral and Written Communication: No significant coverage

Number of written reports:

Approximate number of pages for each report:

Number of required oral presentations:

Approximate time for each presentation:

Social and Ethical Implications of Computing Topics
 No significant coverage

Topic	Class time	Student performance measures

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Theoretical Contents

Topic	Class time

Problem Analysis Experiences

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Solution Design Experiences

1.

Design of simple bash and powershell scripts
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2.

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