

COURSE SYLLABUS

COM382: Survey of Operating Systems

Course Description

Software Development professionals seeking to develop maximally efficient applications need a clear understanding of operating system resource allocation and management. In this course you will explore the management of memory and processes. Device, file and network resource management is also covered. Special attention will be given to operating systems that are currently popular in industry to include the various derivations of UNIX, and Windows.

General Course Information

Number of Units/Weeks	04/10
#Hours Lecture/#Hours Laboratory/#Hours Homework	40/00/80
Prerequisite(s)	None
Co-requisites (s)	None
Course Developer(s)	Leticia Rabor, M.S.
Date Approved / Last Review	September 2017 / September 2017

Learning Outcomes

- (CLO1) Enumerate the subsystems that are provided by modern operating systems
- (CLO2) Explain the functionality of each of the subsystems provided by modern operating systems
- (CLO3) Explain the relationship between job scheduling and process scheduling to include the similarities and differences between processes and threads
- (CLO4) Contrast the provision of services provided by Windows and UNIX based operating systems
- (CLO5) Evaluate the tools that are commonly used in system maintenance

Instructional Methods Employed in this Course

- Lecture and reading assignments
- Hands-on exercises and labs
- Research
- Student presentations
- Practical application of theory and skills in authentic projects
- Build on prior knowledge and experience of students to enhance richness of class activities

Information Resources for this Course



Textbook

J. Holcombe, C. Holcombe (2016). Survey of Operating Systems (5th Ed.).
MacGraw-Hill, New York, NY. ISBN-13: 9781259618635



Web Site Readings

History of Operating Systems. YouTube

<https://www.youtube.com/watch?v=BTQ6HtCkSBQ>

Types of Operating Systems

https://www.youtube.com/watch?v=MR2ntdZW_A

Introduction to Operating Systems

<https://www.youtube.com/watch?v=vBURTt97EkA>

Table/Topics & Assignments

Types of Assignments:

Lecture -

Considered Lecture Hours

Classroom Discussion -

Considered Lecture Hours

In Class Critique -

Considered Lecture Hours

Delivering Oral Presentations -

Considered Lecture Hours

In Class (IC) Exercise -

Considered Lecture Hours

Reading - +-

Considered Homework (HW), work done outside of class

WebClass lesson (non-online courses) -

Considered HW, work done outside of class

Quiz, Midterm or Final -

Considered Lecture Hours

Week 1						
Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 1A	Introduction to Class,	3				

	Introduction to Operating Systems					
IC EX 1A	In-Class Exercise	1				
HW 1A	Read Chapter 1 (34 pages). Evaluated by HW 1B.			3.4		
HW 1B	Review Questions			1	10	Due Week 2
HW 1C	Project 1			4	50	Due Week 2
Total Week 1		4	0	8.4	60	
Week 2						
Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 2A	Computer Security Basics, Desktop Virtualization	3				
IC EX 2A	In-Class Exercise	1				
HW 2A	Read Chapter 2 - 3 (66 pages). Evaluation by HW 2B Look Ahead: Read Ch. 11 pgs. 325-335 (10 pages)			6.6		
HW 2B	Review Questions			1	10	Due Week 3
HW 2C	Project 2			4	50	Due Week 3
Total Week 2		4	0	11.6	60	
Week 3						
Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 3A	Windows 7	3				
IC EX 3A	In-Class Exercise	1				
HW 3A	Read Chapter 4 (43 pages). Evaluation by HW 3B.			4.3		
HW 3B	Review Questions			1	10	Due Week 4
HW 3C	Project 3			4	50	Due Week 4
Total Week 3		4	0	9.3	60	
Week 4						
Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due

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LEC 4A	Windows 8.1	3				
IC EX 4A	In-Class Exercise	1				
HW 4A	Read Chapter 5 (40 pages). Evaluation by HW 4B			4		
HW 4B	Review Questions			1	10	Due Week 5
HW 4C	Project 4			4	50	Due Week 5
Total Week 4		4	0	9	60	
Week 5						
Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 5A	Windows 10	2				
HW 5A	Read Chapter 6 (50 pages). Evaluated by HW 5B			5		
EXAM 5A	Midterm Exam Chapters 1-5	1			150	Due Week 5
EXAM 5B	Midterm Practical	1			60	Due Week 5
HW 5B	Review Questions			1	10	Due Week 6
HW 5C	Project 5			4	50	Due Week 6
Total Week 5		4	0	10	310	
Week 6						
Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 6A	Under the Windows Desktop: Supporting and Troubleshooting Windows	3				
IC EX 6A	In-Class Exercise	1				
HW 6A	Read Chapter 7 (37 pages). Evaluated by HW 6B.			3.7		
HW 6B	Review Questions			1	10	Due Week 7
HW 6C	Project 6			4	50	Due Week 7
Total Week 6		4	0	8.7	60	

Week 7

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 7A	Apple OSX, Linux on the Desktop	3				
IC EX 7A	In-Class Exercise	1				
HW 7A	Read Chapters 8 - 9 (72 pages). Evaluated by HW 7B.			7.2		
HW 7B	Review Questions			1	10	Due Week 8
HW 7C	Project 7			4	50	Due Week 8
Total Week 7		4	0	12.2	60	

Week 8

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 8A	Connecting Desktops and Laptops to Networks	3				
IC EX 8A	In-Class Exercise	1				
HW 8A	Read Chapter 10 (45 pages). Evaluated by HW 8B			4.5		
HW 8B	Review Questions			1	10	Due Week 9
HW 8C	Project 8			4	50	Week 9
Total Week 8		4	0	9.5	60	

Week 9

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 9A	Mobile Operating Systems	3				
IC EX 9A	In-Class Exercise	1				
HW 9A	Read Chapter 11 (24 pages). Evaluated by HW 9B.			2.4		
HW 9B	Review Questions			1	10	Due Week 10
HW 9C	Project 9			4	50	Due Week 10
Total Week 9		4	0	7.4	60	

Week 10

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 10A	File Management in the Cloud	2				
EXAM 10A	Final Exam	1			150	
HW 10A	Final Project	1			100	
Total Week 10		4	0	0	210	

Course Hours Summary

Week	Topic	LEC LEC	LAB LAB	HW HW Hours
1	Introduction to Class, Introduction to Operating Systems	4	0	8.4
2	Computer Security Basics, Desktop Virtualization	4	0	11.6
3	Windows 7	4	0	9.3
4	Windows 8.1	4	0	9
5	Windows 10	4	0	10
6	Under the Windows Desktop: Supporting and Troubleshooting Windows	4	0	8.7
7	Apple OSX, Linux on the Desktop	4	0	12.2
8	Connecting Desktops and Laptops to Networks	4	0	9.5
9	Mobile Operating Systems	4	0	7.4
10	File Management in the Cloud	4	0	0
Total		40	0	86.1

Table/Point Breakdown

Week	Assignment	Possible Points	Percent of Grade
	Projects (9 total at 50 points)	450	45%
	Midterm Examination	150	15%
	Midterm Practical	60	6%
	Review Questions (9 total at 10 points)	90	9%
	Final Examination	150	15%
	Final Project	100	10%
Total		1000	100%

Your Grades for this Course

Your final grade for this course will be based on an assessment by the Instructor of your performance on a number of course activities, which may include objective tests, classroom exercises, laboratory demonstrations, project papers, or other types of activities. The chart below indicates in what activities you will engage, how many possible points can be earned for each activity, and the percentage of your final grade that will be accounted for by each activity.

Students in this course should be graded following Coleman University assessment practices and policies. A point system is used in the University to indicate student performance on various required activities or projects. For this course, it is recommended that points be distributed as follows:

Coleman University Grade Assignment Policy:

Percent	Letter Grade	Grade Points
94-100	A	4
90-93	A-	3.67
87-89	B+	3.33
84-86	B	3
80-83	B-	2.67
77-79	C+	2.33
74-76	C	2
70-73	C-	1.67
67-69	D+	1.33
64-66	D	1
60-63	D-	0.67
N/A	INC	0
N/A	W	0
60 or above	CR	0
59 or below	NC	0
N/A	I	0
N/A	W	0
N/A	AU	0
N/A	TR	0
N/A	WV	0

Legend	
CR = Credit	NC = No Credit
I = Incomplete	W = Course Withdrawal
AU = Audit	TR = Transfer Credit

Academic Accommodation / Adjustment Policy:

In accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA), Coleman University offers accommodations to students with documented physical, psychological, and/or cognitive disabilities. Coleman University will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to offer equal educational opportunities to qualified disabled individuals.

To qualify for an academic accommodation under ADA, the student must provide adequate documentation of a disability. Students seeking academic accommodations should contact the campus ADA Coordinator at 858-966-3953 or via email at ada@coleman.edu. The ADA Coordinator will review the documentation provided and verify ADA coverage. Students covered under ADA must meet with the ADA Coordinator at the beginning of every term to determine the appropriate academic accommodations. Failing to meet with the ADA Coordinator at the beginning of every term may impact the availability of accommodations.

After the academic accommodations have been determined, the students' instructors will be notified by the ADA Coordinator. If any problems or concerns regarding the provision of accommodations occur, the student must inform the ADA Coordinator. If the student feels accommodation is not being made appropriately, the student may follow the published Student Grievance Procedures.