COURSE SYLLABUS**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, Introduction to Operating Systems | 3 |  |  |  |  |
| 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 |
| 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% |

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| --- | --- | --- | --- | --- | --- | --- |
| **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 | |  |  |  |
|  | WV = Waiver |  | |  |  |  |
|  |  |  |  |  |  |  |
| **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. | | | | | | |