Instructor: Ian Lasky
Email: ian.lasky@rcc.edu
Class: CIS 21 - Introduction to Operating Systems
Location: Business Education Room 208
Class Times: TTH 6:00 - 7:25 P.M. (LECTURE)
            TH 7:30 - 8:20 P.M. (LAB)

Required Text:
ISBN: 978-1-118-06333-0

Required Materials:
Students are expected to bring paper and something to write with to each class meeting. Additionally, you should bring your book to every class meeting.

Course Description:
An introduction to operating system concepts, structure, functions, performance, and management is covered. A current operating system, such as Windows, Linux, or UNIX is used as a case study. File multi-processing, system security, device management, network operating systems, and utilities are introduced. 54 hours lecture and 18 hours of laboratory time.

Prerequisite:
CIS 1A – Introduction to Computer Information Systems. It is advised that before entering this course students be able to:
  1. Identify the fundamental computer concepts and terminology used for input, processing, output, and storage.
  2. Identify the key features of a variety of software such as operating systems, word processors, spreadsheets, databases, communications and graphics.
  3. Use the Internet to send electronic messages (e-mail).
  4. Understand and apply the principles of distance education software.

Student Learning Outcomes:
Upon successful completion of the course, students should be able to:
  1. Demonstrate the installation, usage, and administration of a variety of operating systems.
  2. Locate, evaluate and use information effectively.
  3. Maintain and transfer academic and technical skills to workplace; understand how to apply the knowledge gained.
  4. Identify operating system features, particularly as they pertain to system performance.
  5. Using critical thinking, generalize appropriately from specific contexts
  6. Demonstrate how various operating systems interface with the network, user input and output, storage devices, and other hardware components.
  7. Recognize and assess evidence from a variety of sources.

Classroom/Lab Policies:

Board Policy 3720 - Computer and Network Use in department classrooms and labs are governed by district policies located at: http://www.rccd.edu/administration/board/New%20Board
Syllabus - Introduction to Operating Systems
Spring 2016

and are subject to Standards of Student Conduct located in the Student Handbook. Violations of these policies are subject to Disciplinary Actions as outlined in Section VI of the Student Handbook located at: http://www.rcc.edu/services/Documents/StudentHandbook.pdf

Attendance and participation: If you do not attend you cannot participate; if you do not participate, you cannot learn and therefore will not pass this class. You must show up to class prepared and ready to learn. A daily attendance sheet will be passed around at varying times during class. You should sign your name and only your name – if you sign for someone who is not in attendance, you are essentially cheating and will be treated as such. (See “Statement on Academic Dishonesty” below). If you sign the sheet and then leave class early, your name will be crossed off for that day and you will not receive points for that day.

If you want to drop this class, it is your responsibility to officially drop this class. If you miss 20% of this class, which is about two weeks, I can drop you; if you are in this situation and you don’t want to be dropped, please talk to me about your circumstances.

Classroom decorum: Be on time to class. Come to class prepared; reading and lab assignments should be completed as assigned. No food or drink is allowed in the classroom. Please bring something to write with and paper so that you can take notes. You are expected to be cooperative and respectful during class. Using your cell phone, disruptive talking or behavior is considered rude and you will be asked to leave if you insist on being rude; you will not receive points for that day. If you have an emergency and must use your cell phone, please step out of the classroom and return when you are done. You do not have the right to disrupt the learning of others.

Academic Dishonesty: RCC defines plagiarism as, “Presenting another person’s language (spoken or written), ideas, artistic works or thoughts as if they were one’s own.” Plagiarism is academically dishonest. Students must make appropriate acknowledgement of the original source where material written or compiled by another is used.” Cheating or dishonest practices, such as turning in the writing of someone else and claiming it as your own, will result in your receiving a failing grade on the assignment and possibly for the course.

Student Accommodations: If you have a physical, psychiatric/emotional, medical, or learning disability that may impact your ability to carry out assigned course work, I urge you to contact the staff in the Office of Disabled Student Services at (951)222-8060. The office is located on the Riverside Campus, in the Administration Building. The DSP&S will review your concerns and determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.

Required Lab Hours
There will be an in class lab every Thursday from 7:30 to 8:20 P.M. Attendance will be taken and it is mandatory. All lab assignments require that you are present to receive a grade. If you are not there, your grade will be zero for that session.

Course Activities and Class Format
Daily classroom instruction will consist of lectures, discussions, and demonstrations, as well as hands-on work, both collaboratively and individually. Lecture will be delivered verbally, supported by PowerPoint presentations, chalk board drawings, and on occasion, paper
handouts, among other methods. Periodically, students will be required to interact and work in
groups or teams to reinforce learning.

**One In-Class Mid-Term:** This exam will be in multiple-choice format. I will provide scantrons.
Test questions will be based on the course readings, lectures, vocabulary lists, lab exercise, and
class discussion. The exam will be worth 150 points, which is 15% of your grade. The exam will
be administered in class. There will be **NO MAKEUP** exams.

**Final Exam:** The final exam will take place during the regularly scheduled final exam period, on
**Tuesday, June 7 from 6:00 P.M. until 7:30 P.M.** Scantrons will be provided. The final exam
will be in multiple-choice format and **WILL BE** cumulative. The exam will be worth 200 points,
which is 20% of your grade. There will be **NO MAKEUP** exams. The final exam is
mandatory.

For information about final schedules, refer to Pg. 145 in the spring schedule at [http://www.rcc.edu/departments/Documents/Riverside%20City%20Final%20Exam%20Schedule%20SPR16.pdf](http://www.rcc.edu/departments/Documents/Riverside%20City%20Final%20Exam%20Schedule%20SPR16.pdf)

**Lab Assignments:** There will be weekly in class lab assignments. Each assignment will be
worth ten points, for a total of 100 points, or 10% of your grade. The assignments must be
typed and most assignments will require internet research. These assignments must be turned
in by the end of the lab session on the day it is due. The details of these assignments will be
discussed in more detail at a later time. If you are not present, your grade will be a zero. **I do not take these assignments late. There are no makeup assignments.**

**Hands-On Laboratory:** During the middle of the semester we will spend a number of days
installing and configuring a Linux OS. It is a critical time for learning, therefore you must be
present to receive credit. **No makeups for those who are absent.** This is worth a total of 250
points which is about 25% of your grade.

**Vocabulary & Chapter Write Up (lab):** Give me a write up of each chapter, showing me what
you learned, and what your takeaways from the lecture and the reading are. Do **NOT** just give
me a summary of the chapter. You need to explain, in your own words, using a minimum of 5
vocabulary words per chapter in the write up. **Bold the first occurrence** of each of the
vocabulary words in the paper. The write up should be 1-2 pages long, per chapter. The paper
should have 1 inch margins, be double spaced, and use 12 point times, helvetica, or arial font. If
you want full credit on the assignment, you must include everything that was discussed, 10
vocabulary words, and most of the reading from the chapter. The goal is for you to show me that
you actually read the chapter, paid attention in class, and that you learned something from the
experience. You can earn up to 10 points per chapter completed. This category is worth 200
points, which is 20% of your grade. Some writing assignments will be worth more than others.
See the class schedule for details.

**Final Project:** The final project will require a presentation using information learned throughout
the course. Each student will be required to do a class presentation. The specifications will be
given at a later time with sufficient time to complete the project before the due date. The project
is worth 100 points, which is 10% of your grade.
Online Quizzes based on Reading: Quizzes, based on the reading, will be given. These quizzes are open book and open notes. You will be able to retake the quiz up to three times and I keep the highest score. The quizzes will be internet based. These quizzes will total 60 points and are extra credit points. I will send out email blasts when it is time to take a quiz. You will be given a finite amount of time to complete the quizzes, usually 1 or 2 weeks, before the quiz expires. Once a quiz expires, you cannot make it up.

Late: If your assignments are late, I reserve the right to penalize your score by any amount that I deem fit. Typically, late assignments are penalized between 5 and 50 percent. Time is a factor. The later they are, the less points they are worth. In some cases, I may not take assignments late, such as the lab assignments.

Other Important Notes: I will be using mygradebook.com to grade this class. Do NOT create your own account. You will be given a unique identifier and passcode to login and to check your grades. Do not share this information with anyone. I will never ask you for your password. Official class communication will come from this website. Online Quizzes will be taken from this website. You may opt out by blocking me if you wish, but I will not use any other method of communication other than this website. No consideration will be given for missed emails and no extensions will be given, especially if you choose to opt out.

Class materials will be made available for download on my website: http://websites.rcc.edu/lasky

The official due time for the assignments are by the end of class on the day it is due. Yes, you may email me any assignment. When you email assignments, I need a PDF file sent. Do not send native files.

I reserve the right to modify assignments, due dates, and lectures to fit the needs of the class. I will notify you if I have to do that.
Your grade will be based on the following activities:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Point Value</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Assignments</td>
<td>100 points = 10x10</td>
<td>10%</td>
</tr>
<tr>
<td>Vocabulary &amp; Chapter write up</td>
<td>200 points = 10 x 20</td>
<td>20%</td>
</tr>
<tr>
<td>Hands-on Lab</td>
<td>250 points</td>
<td>25%</td>
</tr>
<tr>
<td>Mid-term</td>
<td>150 points</td>
<td>15%</td>
</tr>
<tr>
<td>Final Project</td>
<td>100 points</td>
<td>10%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>200 points</td>
<td>20%</td>
</tr>
<tr>
<td>Extra Credit (online quizzes)</td>
<td>60 points</td>
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</tr>
</tbody>
</table>

| Total Points | 1000 | (1060 possible with extra credit) | Total Percent: 100% |

**Grading**

Your grade will be calculated as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>%</th>
<th>No. of points</th>
<th>Grade</th>
<th>%</th>
<th>No. of points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90 and above</td>
<td>900 and above</td>
<td>D</td>
<td>60 - 69.9</td>
<td>600 - 699</td>
</tr>
<tr>
<td>B</td>
<td>80 - 89.9</td>
<td>800 - 899</td>
<td>F</td>
<td>Below 60</td>
<td>599 and below</td>
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<tr>
<td>C</td>
<td>70 - 79.9</td>
<td>700 - 799</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Tentative Class Schedule (Subject to change)

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Topic or Activity</th>
<th>Read</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/16/16</td>
<td>Tu</td>
<td>Introduction, Moore's Law, review syllabus.</td>
<td>Ch. 1</td>
</tr>
<tr>
<td>2/18/16</td>
<td>Th</td>
<td>Review of fundamental concepts. Lecture: Operating System Structures Lab Assignment 1</td>
<td>Ch. 2</td>
</tr>
<tr>
<td>2/23/16</td>
<td>Tu</td>
<td>Write up of Ch. 1 &amp; 2 Due (20 points). Lecture: Processes, Threading, Amdhal's Law</td>
<td>Ch. 3, 4</td>
</tr>
<tr>
<td>2/25/16</td>
<td>Th</td>
<td>Write up of Ch. 3 &amp; 4 Due. (20 points) Lecture: Process Synchronization. Organize groups for presentation. Lab Assignment 2</td>
<td>Ch. 5</td>
</tr>
<tr>
<td>3/1/16</td>
<td>Tu</td>
<td>Lecture: CPU Scheduling</td>
<td>Ch. 6</td>
</tr>
<tr>
<td>3/3/16</td>
<td>Th</td>
<td>Write up of Ch. 5 &amp; 6 Due. (20 points) Lecture: Deadlock/Starvation, Banker’s Algorithm; Lab Assignment 3</td>
<td>Ch. 7</td>
</tr>
<tr>
<td>3/8/16</td>
<td>Tu</td>
<td>Lecture - File Systems 1/2</td>
<td>Ch. 11,12</td>
</tr>
<tr>
<td>3/10/16</td>
<td>Th</td>
<td>Write up of Ch. 7 Due. (10 points) Lecture - File Systems 2/2; Lab Assignment 4</td>
<td></td>
</tr>
<tr>
<td>3/15/16</td>
<td>Tu</td>
<td>Lecture - Installing and Upgrading Operating Systems, History of Windows, Linux, and Mac OS</td>
<td>Ch. 18-20</td>
</tr>
<tr>
<td>3/17/16</td>
<td>Th</td>
<td>Write up of Ch. 11 &amp; 12 Due. (20 points) Hands On Linux Lab 1/5.</td>
<td></td>
</tr>
<tr>
<td>3/22/16</td>
<td>Tu</td>
<td>Hands On Linux Lab 2/5</td>
<td></td>
</tr>
<tr>
<td>3/24/16</td>
<td>Th</td>
<td>Hands On Linux Lab 3/5</td>
<td></td>
</tr>
<tr>
<td>3/29/16</td>
<td>Tu</td>
<td>Hands On Linux Lab 4/5</td>
<td></td>
</tr>
<tr>
<td>3/31/16</td>
<td>Th</td>
<td>Holiday - No class.</td>
<td></td>
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<tr>
<td>4/5/16</td>
<td>Tu</td>
<td>Hands On Linux Lab 5/5</td>
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<tr>
<td>4/7/16</td>
<td>Th</td>
<td>Lecture wrap up on installation of operating systems. Prepare for midterm. Write up of Ch. 18-20 Due. (30 points); Lab Assignment 5</td>
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<tr>
<td>4/12/16</td>
<td>Tu</td>
<td>Holiday - No class.</td>
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<tr>
<td>4/14/16</td>
<td>Th</td>
<td>Holiday - No class.</td>
<td></td>
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<tr>
<td>4/19/16</td>
<td>Tu</td>
<td>Mid-term based on the chapters covered above</td>
<td>Ch. 8,9</td>
</tr>
<tr>
<td>4/21/16</td>
<td>Th</td>
<td>Review Midterm. Lecture on Memory Management; Lab Assignment 6</td>
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</tr>
<tr>
<td>4/26/16</td>
<td>Tu</td>
<td>Write up of Ch. 8 &amp; 9 Due.(20 points) Lecture - Configuring input and output devices</td>
<td>Ch. 13</td>
</tr>
<tr>
<td>4/28/16</td>
<td>Th</td>
<td>Write up of Ch. 13 Due.(10 points) Lecture - Configuring storage devices; Lab Assignment 7</td>
<td>Ch. 10</td>
</tr>
<tr>
<td>5/3/16</td>
<td>Tu</td>
<td>Write up of Ch. 10 Due.(10 points) Lecture - Viruses and protection.</td>
<td>Ch. 14</td>
</tr>
<tr>
<td>Date</td>
<td>Day</td>
<td>Activity</td>
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<tr>
<td>5/5/16</td>
<td>Th</td>
<td>Write up of Ch. 14 Due. (10 points) Lecture - Security; Lab Assignment 8</td>
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<tr>
<td>5/10/16</td>
<td>Tu</td>
<td>Write up of Ch. 15 Due. (10 points) Lecture - Virtual Machines</td>
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<tr>
<td>5/12/16</td>
<td>Th</td>
<td>Write up of Ch. 16 Due. (10 points) Lecture - Communication Devices, Network connectivity, Resource Sharing, Network Topologies 1/2; Lab Assignment 9</td>
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<tr>
<td>5/17/16</td>
<td>Tu</td>
<td>Lecture - Finish lecture above and network connectivity 2/2</td>
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<tr>
<td>5/19/16</td>
<td>Th</td>
<td>Lecture - Standard operating and maintenance procedures; Lab Assignment 10</td>
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</tr>
<tr>
<td>5/24/16</td>
<td>Tu</td>
<td>Write up of Ch. 17 Due. (10 points) Lecture - Finish standard operating and maintenance procedures, Defragmentation, Backups, RAID, disk and file repair, optimization. Allow time to complete presentations, if done early.</td>
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</tr>
<tr>
<td>5/26/16</td>
<td>Th</td>
<td>Presentations - Final projects due</td>
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<tr>
<td>5/31/16</td>
<td>Tu</td>
<td>Wrap up lectures, final exam review, questions, etc.</td>
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</tr>
<tr>
<td>6/07/16</td>
<td>Tu</td>
<td>Final Exam 6:00 P.M. until 7:30 P.M.</td>
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