

CISC 324 COMPUTER INFORMATION SCIENCE

LINUX Operating System Course Outline (Syllabus)

Online Distance Learning Spring 2012

Instructor: Patrick J. Hogarty

Office: B 212

Office Hours: Online Office Hour Mon 1:00 - 2:00 p.m.
On Campus Office Hours

Tue 4:30 – 5:30 p.m., Thurs 4:30 – 6:00 p.m.

Wed 4:30 – 6:00 p.m.

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Special Note: Email is the best method for contacting me. Normally, I check my email several times a day and often-on weekends.

Required Text: Guide To UNIX Using Linux, Jack Dent and Tony Gaddis, Second Edition, Course Technology, ISBN: 0-619-12147-5, Third Edition, Course Technology, ISBN 0-619-21562-3 or Fourth Edition, Course Technology, ISBN 1-4188-3723-7

Class Schedule: Labs may be completed on campus in computer labs, at home or work.

Units: 1 Credit units

Course Prerequisites: CISC 323 (Linux)

Acceptable for credit: CSU

Course Description This course is a continuation of CISC 323. It covers advanced shell scripting. C Shell, K Shell, BASH, and other varieties will be compared. It also includes decision-making logic looping, nesting, and other scripting tools will be used.

Learning Outcomes and Objectives:

Upon completion of this course, the student will be able to:

- explain and apply advanced Linux system concepts.
- use looping and nesting in a script.
- create advanced script files.
- compare C shell, K shell, and BASH.
- implement decision making logic in scripts.

Course Requirements/Assignments: Class participation and completing course work on schedule is essential to your success in this course. As this is a short-term course, we move quickly from one topic to the next. You are responsible for material covered in Online Computer Based Training Videos, textbook, assignments, handouts, and any changes in assignments. Homework assignments are listed in the Detailed Course Schedule at the end of this Class Outline (Syllabus) document.

Lab Exercises: Each chapter has step-by step exercises that show the student how to perform specific functions using the Linux Operating system. ***In the second edition of the textbook the exercises are shown with a gray background color In the third and Fourth editions of the textbook the same exercises are shown as Hand-on Projects at the end of each chapter.*** These exercises are very important because they show the student how to enter and execute commands and instructions. ***Each student is required to perform all of these exercises.*** These Exercises are worth 300 points toward your final score. On the day shown in the course schedule, each student must show and demonstrate to the instructor that they have completed these exercises.

Special Note: Students must complete and demonstrate all lab exercises.

There is **no partial credit** for lab exercises. All exercises must be completed to receive 300 points credit.

Online End of Chapter Quizzes: Each week students will be required to take an online quiz that covers material covered in each textbook chapter, lectures, and lab exercises. See attached copy of the "Detail Course Schedule" for a list of the week when each online quiz must be complete.

Midterm/Final Exams: There will be a midterm and comprehensive final exam for this class. These exams will include all material covered in the class to the date shown in the attached class outline. Students will be required to come to the Learning Resource Center Room LR 141 to take both the Midterm and Final Examinations. The instructor will notify all students via email on the scheduled date of the Examination.

How to Prepare for Your Career Video: An important part of a college student's education is to learn how to prepare for a career. The Sacramento City College Business Advisory Committee created a video, which discusses tips, techniques, and ideas on how to prepare for your career. All students in this course are required to watch this video and complete a discussion Forum posting, which asks students to post their response to three questions. The video link is available to all students over the Internet. A link to the video is contained in the course Desire2Learn web site under the Content area. The title of the link is **How to Prepare for Your Career Video.**

Mandatory Course Orientation Quiz: All students are required to complete an online orientation quiz, which is worth 50 points toward each student's final grade. This quiz is located on the course Desire2Learn web site and covers all of the material contained in the course outline and instructional materials on the course Desire2Learn web site. To prepare for this quiz students should perform the following steps:

1. Visit the web site shown below, which contains all of the steps necessary to complete the all of the requirements as shown under the Online Course Orientation Requirements:

http://www.re-professor.com/?page_id=285

2. Watch the course overview video located on the top left side of the page. In this video, I provide an overview and cover the requirements for the course.

3. Navigate thru the course Desire2Learn web site and review all the instructional materials.

4. Finally, in Desire2Learn click on the Quizzes Link and take the orientation quiz. The quiz covers all materials covered in steps 1 – 3 shown above.

Sacramento City College Linux Server Internet Address: cis.scc.losrios.edu

Desire2Learn: In this course, we will be using a course management tool called Desire2Learn. To connect to the Desire2Learn web site you will need to use a web browser like Microsoft Internet Explorer. The Uniform Resource Locator (URL) for the web site is shown below:

<http://www.scc.losrios.edu>

Using the Quick Link Drop Down Box Select the **Desire2Learn (D2L)**. After a few seconds, you should see a logon screen for the Desire2Learn Course Management System with a logon screen for your username and password.

Desire2Learn Logon Instructions: You will be asked for a **username** and **password**. Your username will consist of your student number and your password will be the same password you used in the eServices system to register for your classes.

The Desire2Learn web site will be where you will take online quizzes, obtain copies of lab assignments, a copy of the course outline, etc.

Desire2Learn Email Account: We will be using email to communicate during the course. The email address that Desire2Learn uses is the same email address that students have in the **eServices** system. **Special Note:** The Online Course Orientation has a demonstration video showing students how to both check and update their email address. This is the second demonstration and is titled "How To Change Your Email Address in Desire2Learn".

Desire2Learn Class Discussion Board: This class will have a Discussion Board called **Students Helping Students**. The Purpose of this discussion board is to provide a space for students to post questions and for other students to help them find answers and share knowledge and experience. Each student in this class will be required to log onto the Discussion Board and introduce themselves.

Academic Dishonesty (cheating): Any indication of academic dishonesty (cheating) will result in a zero for the quiz, exam, assignment, etc. The matter will be referred to the Business Division Dean and Campus Discipline Officer for appropriate action.

Class Attendance and Participation Policy: In this online class, attendance is measured by student participation. Students who decide to complete the Mandatory Course Orientation online must have the Course Orientation quiz located in Desire2Learn completed before 12:00 noon the day before the Mandatory on campus orientation. Students who have not completed the online course orientation or have not attended the Mandatory Course Orientation will be dropped from the class and their slots will be given to students on waiting lists. All students are expected to complete class assignments, quizzes, and examinations by the date shown in this Course Outline (Syllabus). Students, who do not complete two quizzes on or before the date shown in the course schedule, located on the last pages of this document, may be dropped from the class.

Student Drop Policy: In the event, a student decides to drop the class it is the student's responsibility to notify and complete all the necessary documentation with the admissions and records office.

Accommodations For Students With Disabilities: If you have a learning disability or a physical disability that requires accommodation, please let me know as soon as possible. All needs that have been verified through the Disability Resource Center will be accommodated.

Computer Hardware Requirements: To complete this course, students will need to remotely login to the Sacramento City College Linux server from home, work or school to complete their Mandatory computer laboratory exercises for the course. Additionally, students will need the ability to watch and listen to the Video Screencast Tutorials and Demonstrations. This means that the computer students use at home or work must have speakers or the ability to use a headset. If students are going to watch the Video Screencast Tutorials and Demonstrations in the computer laboratory on campus then they should bring their own headset. This headset can be the type that covers the ear or earbuds like those used for portable media devices like the iPod.

Additionally, the headset cable should be long enough so that it can be plugged into the computer while watching the Video Screencast Tutorials and Demonstrations.

Since all computer lab laboratory exercises are completed remotely and the Video Screencast Tutorials and Demonstrations are hosted on the Internet, students will be able to use a computer with the Microsoft Windows®, Apple, Linux or UNIX operating installed. All computers must have a current copy of the Adobe Flash Player. Students can download a free copy of the program from the Adobe Web Site:

http://www.adobe.com/shockwave/download/download.cgi?P1_Prod_Version=ShockwaveFlash

Online Computer Based Training: This course uses video tutorials and demonstrations created by the instructor to deliver course lectures. These videos show the student how the instructor performed required course lab exercises. The videos are available online 24 hours a day 7 days a week. To watch the videos, students will need to have the latest version of the Adobe Flash player installed on their Microsoft Windows®, Apple, Linux or UNIX computer and a high speed DSL or Cable Modem. Additionally, student's computer screen resolution should be at least 1024 pixels wide and 768 pixels high. Shown below is a link to the online course orientation page, which contains a link to these video tutorials and demonstrations:

http://www.re-professor.com/?page_id=285

Special Note: Students will be responsible for all materials covered on the tutorials and demonstrations.

Virtualbox Software: During this semester, the class will be using a computer software program called Virtualbox. This Virtualbox software will enable students to run the Ubuntu Linux 10.04 operating system at the same time they are using either their Windows or the Apple Macintosh Operating system. By using Virtualbox, students will be able to gain hands-on-experience and knowledge on how the Linux Graphical User Interface (GUI) works. To accomplish this task, students will be asked to

download and install the Virtualbox Player and a Virtualbox Appliance, which contains the Ubutu Linux 10.04 operating system. Following are the technical specifications for Virtualbox:

1. Students will need to have a USB Thumb drive with at least 4 gigabyte of storage capacity to store the Linux Appliance after the file is downloaded and unzipped. **Special Note:** The initial file is about 2.7 gigabyte in size.
2. Your host computer should have at least 1 gigabyte preferably 2 gigabyte of memory.
3. The host computer should be running Windows XP, Vista, or Windows 7. **Special Note:** Students using the Apple Macintosh operating system should be using OS 10 or above. There is a different Virtualbox player for the Apple Macintosh operating system.

Detailed Course Schedule: On the following page is a detailed course outline showing all of the topics covered during the lectures, quizzes, and homework and classroom lab exercises. All work that the student is required to accomplish must be turned in on the dates shown in the course outline.

The final grade in this class will be based on the following				
	Mandatory Orientation Quiz		50	
	Student Discussion Board Introduction		20	
	Online Chapter Quizzes		250	
	Starting and Running a Business Video Quiz		30	
	Lab Exercises		300	
	Mid –Term Exam		100	
	Final Exam		100	
	Total Points		<u>850</u>	
Final Grade Score Ranges				
A = 765 - 850	B= 680 - 764	C = 595 - 679	D = 510 - 594	F = Below 510
Special Note: Students must complete and demonstrate all lab exercises. There is <u>no partial credit</u> for lab exercises. All exercises must be completed to receive 300 points credit.				

Detail Course Schedule

Time		Points
Mar 13 (Tue)	Mandatory On Campus Course Orientation	
Mar 13 (Tue)	Online Orientation Quiz (Special Note: This Date Only applies to On Campus Orientation Students)	50
Mar 13 (Tue)	Student Discussion Board Introduction	20
Mar 13 - 17	Course Overview Introduction Review Chapter 6 (Intro To Shell Programming)	
Mar 19 - 24	Chapter 7 Advanced Shell Programming	
	Chapter 7 online quiz	50
Mar 26 - 31	Download and Install Virtualbox, Umbutu Linux Appliance and perform lab exercises.	
	Chapter 8 Exploring The UNIX Utilities	
	Chapter 8 and Virtualbox online quiz	50
Apr 2 - 7	Spring Break School Closed	
Apr 9 - 14	Chapter 9 Perl and CGI Programming	
	Chapter 9 online quiz	50
Apr 16 - 21	Chapter 9 Perl and CGI Programming	
Apr 21	Midterm Exam Chapters 7, 8 and Virtualbox Online Midterm Exam must be completed before 12:00 midnight. After 12:00 midnight the exam will no longer be available.	100
Apr 23 - 28	Chapter 10 Developing UNIX Applications in C and C++	
	Chapter 10 online quiz	50
	How to Prepare for Your Career Video and Post to Discussion Board	30
Apr 30 – May 5	Chapter 11 The X Window System	
	Chapter 11 online quiz	50

Detail Course Schedule Continued

Time		Points
Thursday May 10	All students will come to room B 151, which is on the first floor of the Business Building. Students with last names beginning with A – L are scheduled from 3:00 – 4:00 p.m. Students with last names beginning with M – Z are scheduled from 4:00 – 5:00 p.m. All students will be demonstrating their computer programs and Virtualbox installation, which are worth 300 points. Special Note: Students must complete and demonstrate all lab exercises. There is <u>no partial credit</u> for lab exercises. All exercises must be completed to receive 300 points credit.	300
	Total Points	850