**Passaic County Community College**

**Master Syllabus**

**ACADEMIC YEAR:\_\_2015-2016\_\_\_\_\_\_\_**

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**Course Code: Course Title:**

CIS 106 Linux Fundamentals

**Department/Program: Semester Offered:**

CIS / Information Technology Fall and Spring (Day & Evening)

**Catalog Description/Course:**

This course introduces students to a current Linux operating system distribution. Topics include customization, managing user accounts, using operating system utilities, managing files, multitasking, installing and running applications, installing device drivers and new hardware, setting up a network, installing Linux, security, and performing basic system maintenance and troubleshooting.

**Prerequisites:**

None

**Credits:** 1

**Lecture Hours: Lab/Studio Hours: Clinical/Fieldwork Hours:**

1.5 Open Lab Assignments None

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**REQUIRED TEXTBOOK/MATERIALS**:

**Textbooks:** “Linux Operations and Administration”; A Basta/D Finamore/N Basta/S Palladino; Course Technology-Cengage Learning; 2013. ISBN-10: 1-111-03530-X

**Reference:** “Spring into Linux”; Janet Valade; AddisonWesley-Peatrson Education; 2005. ISBN-10: 0-13-185354-6

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**ADDITIONAL TIME REQUIREMENTS**:

All homework assignments are completed out of class time. Students, who don’t have a computer or don’t have the version of the operating system and Office, can use the open lab to complete homework assignments.

**Special Facilities/Equipment:**

Hardware: desktop or laptop PC.

Software: Windows xp or newer

Storage Media: At least 1 GB Flash Drive for saving lab work.

**COURSE LEARNING OUTCOMES**:

Upon completion of this course, students will be able to:

1. Demonstrate fluency in Linux terminology.
2. Install Linux and identify features of various distros.
3. Manage files in the Linux environment.
4. Administer user accounts and groups efficiently.
5. Use Linux Utilities to manage data.
6. Install software and third party utilities.
7. Using Samba for Interoperating Linux and Windows.
8. Managing Resources in Linux networking environment.

**General Education Outcomes (if applicable**)

NA

**GRADING STANDARD**:

Students will be graded on the basis of testing and an evaluation of projects assigned by the instructor.

|  |  |
| --- | --- |
| **Activity** | **Contribution** |
| Quizzes | 20% |
| Lab Projects | 30% |
| Midterm | 15% |
| Final Exam | 25% |
| Attendance/Activities/Etc. | 10% |

|  |  |  |  |
| --- | --- | --- | --- |
| **Grading Scale** | | | |
| 95+ | A | 76-79 | C+ |
| 90-94 | A- | 70-75 | C |
| 87-89 | B+ | 60-69 | D |
| 84-86 | B | < 60 | F |
| 80-83 | B- |  |  |

**EVALUATION CRITERIA:**

To assess the above student outcomes:

1. Tests will be given to measure students competencies in each of the topics covered in this course. Tests will be assessed to examine key competencies.
2. Students will design a total of 6 - 8 homework assignments of various complexities, assigned by instructor, to demonstrate abilities in each of the outcomes a, b, c, d, e, f, g, and h. these will be evaluated using standard rubrics.

**COURSE CONTENT:**

**Student Preparation for Each Class:**

* Read the text chapters assigned per the schedule.
* Review objectives from the chapters.

**LECTURE SCHEDULE**

**WEEK TOPIC Chapter**

1 ***Introduction to the Linux Operating System:*** 1

##### Overview and functions of an operating system.

##### History, architecture, features and environment.

##### Command shells.

##### 2&3 ***Installing OpenSUSE:*** 2

##### Installing VMware player with Windows host,

##### Creating a virtual machine.

##### Working with the GNOME

##### Working with KDE

##### 4&5 ***Managing files and Directories:***

##### Commands for navigating the directory structure. 3

##### Commands for managing files and directories.

##### User accounts and the Root.

##### 6&7(test-1) ***Creating and editing files with text editors:*** 4

##### Exploring the KWrite text editor,

##### Gedit text editor, and Vim

##### 8&9 ***Creating Simple Shell Scripts*:** 5

##### Creating a shell script, displaying the contents

##### of a text file, the (cat & tac),(head & tail),

##### (more & less) commands.

##### 10 ***Managing Data (using Utilities):*** 6

##### Creating full and incremental backup

##### using the Tar Utility.

##### Using the Cpio Utility.

##### Using the Gzip utility for compression

##### Using Cron Tables for scheduling backup

11(Test-2) ***Installing Software Packages:*** 9

##### Working and using the RPM utility,

##### Using the openSuSE YaST Manager,

##### Using third party software,

12 ***Managing Users and Groups:*** 7

##### the etc password and shadow files,

##### Creating, modifying, and deleting user accounts,

##### The etc group file,

**WEEK TOPIC Chapter**

##### 13 Creating, modifying, and working with groups.7

##### Managing user groups with YaSt

14 ***Network Communications (Optional)*** 8

##### Introduction to TCP/IP,

##### Working with IP addresses,

##### Configuring NICs,

15 **Final Exam (final project is Due)**

**Class Policies:**

1. Students are reminded of the College Academic Integrity policy for Passaic County Community College. Students are urged to conduct themselves accordingly.
2. Attendance required.
3. Homework and projects mandatory, collected on the due dates at the beginning of the classes. No late projects or homework will be collected, except for emergencies with valid reasons.
4. Classroom exams will be announced in advanced. No make-up exams given unless under valid emergency. Students are required to call in to inform the Professor prior to the class.
5. No eating and drinking as noted by CIS Dept. policy
6. Mobile devices turn on to vibrate or silent mode.

**COLLEGE POLICIES:**

For Information regarding the following policies consult the College Catalog and/or Website and PCCC Student Handbook

* PCCC’s Academic Integrity Code
* Student Conduct Code
* Student Grade Appeal Process
* Intensive Writing Requirements
* Panther Alert: The College will announce delayed openings, closings, and other emergency situations through the Panther Alert System. Students are encouraged to sign up for the Panther Alert Notification. Students can sign up once they log into their Campus Cruiser Portal account through the PCCC website at www.pccc.edu.
* Cell Phone Policy: Use of cellular telephones, audible pagers, or other forms of audible electronic devices in all academic learning environments (including but not limited to, laboratories, testing centers, classroom, library, learning centers, theater, and so forth) is prohibited unless previously approved by the instructor or other authorized administrator.

**Late Homework Policy:**

* Any homework that is late will lose 15% of its value for every week that its late

**Make-Up Exam Policy:**

* Make-up exams will be permitted only under extenuating circumstances and only with prior notification and original documentation.
* Exams cannot be made-up after the exam date has passed.
* The instructor reserves the right to create alternate make-up exams

**Changes to the Syllabus:**

* The instructor reserves the right to make changes to this syllabus. In the event that changes become necessary, students will be notified during the following scheduled class.

**NOTIFICATION FOR STUDENTS WITH DISABILITIES:**

If you have a disability, and believe you need accommodations in this class, please contact Disability Services staff at 973-684-6395, or email ods@pccc.edu, to make an appointment. You should do so as soon as possible at the start of each semester. If you require testing accommodations, you must remind me (the instructor) one week in advance of each test. More information @ pccc.edu/ods.