**Lincoln University**

**Department of** **Computer Science**

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| **Course Title:** | Introduction to Linux | **Course number:** | CSC222 |
| **Credit Hours** | 3 | **Prerequisite (s):** | CSC159 |
| **Term:** |  | **Co-Requisite (s)** | **n/a** |
| **Course Method** |  | **Meeting day and Time:** |  |
| **Instructor:** |  | **Classroom/lab/Studio Location:** |  |
| **Office location:** |  | **e-mail:** |  |
| **Office Hours:** |  | **Phone Extension:** |  |

**COURSE DESCRIPTION:** This course is intended for students who want to learn Linux and will cover the command, desktop, and programming features built into Linux. It provides a solid beginning for general Linux users, programmers, and system administrators. Topics included: utilities, how to work in a command-line environment, how to use the vi editor, how to write shell scripts and the Linux file system, and how to install and administer common Linux features.

**REQUIRED TEXT:**

Mark G. Sobell, “Practical Guide to Linux® Commands, Editors, and Shell Programming”, Prentice Hall, 2005. **ISBN-10:** 0131478230, **ISBN-13:** 978-0131478237

**REQUIRED MATERIALS:**

* “Linux+ Guide to Linux Certification” by Jason W. Eckert, Cengage Learning, 2012, ISBN-13 978-1-4188-3721-1.
* Todd Meadors, “Linux Shell Script Programming”, Thomson Course Technologies,

2003, ISBN 0-619-15920-0

**Assessment Criteria & Alignment**

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| --- | --- | --- | --- |
| Course SLO | PSLOs | ILOs | Direct and Indirect Assessment Methods |
| CSLO 1 | PSLO #4 | ILO 2 | 1) PSLO specific rubric to assess in-class computer lab work on command line  2) PSLO specific tests questions on command line |
| CSLO 2 | PSLO #1 | ILO 5 | 1) PSLO specific rubric to assess in-class computer lab work on bash programming  2) PSLO specific tests questions on writing programs  3) PSLO specific rubric to assess projects on writing programs |
| CSLO 3 | PSLO #2 | ILO 2 | 1) PSLO specific rubric to assess in-class computer lab work using vi  2) PSLO specific rubric to assess projects on writing programs using vi editor |
| CSLO 4 | PSLO #6a | ILO 7 | 1) PSLO specific rubric to assess in-class computer lab work on virtual software  2) PSLO specific rubric to assess projects on installing virtual software |

**Course Student Learning Outcomes (CSLO):**

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

CSLO #1: Apply basic Linux commands to accomplish system tasks.

CSLO #2: Write a complete program in Shell Programming.

CSLO #3: Write program with different editors

CSLO #4: Install and configure virtualization software

**Program Student Learning Outcomes (PSLO):**

CSLOs will address following PSLOs:

PSLO 1: Demonstrate mastery of a minimum of three programming languages

PSLO 2: Solve problems and analyze algorithms and be able to apply and implement the theories of computation in computers.

PSLO 4: Demonstrate mastery of the fundamental concepts of computer organization and fundamentals of computer architecture.

PSLO 6a: Demonstrate skills in advanced features of commercial computer application software.

**Institutional Learning Outcomes (ILO):**

PSLOs will address following ILOs:

* **ILO#2:** Technology and information literacy
* **ILO#5**: Critical thinking
* **ILO#7:** Quantitative literacy

**Calculation of Final Grades**:

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| --- |
| Tests and assignments will be graded using percentage distributed as follows:  Final semester grade will be determined by the average of the student performance on the home-work, in-class projects, projects, midterm, and the final exam as follows: |
| |  |  | | --- | --- | | In class Assignments | 15% | | Project & Homework | 15% | | Tests (3) | 30% | | Quizzes | 15% | | Final | 25% | | Total | 100% | |

**GRADING SCALE:** (Should follow Department and/or College Template)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Grade | A | A- | B+ | B | B- | C+ | C | C- | D+ | D | F |
| GPA Points | 4.0 | 3.7 | 3.3 | 3.0 | 2.7 | 2.3 | 2.0 | 1.7 | 1.3 | 1.0 | 0.0 |
| % | 100-93 | 92.9-90 | 89.9-88 | 87.9-82 | 81.9-80 | 79.9-78 | 77.9-72 | 71.9-70 | 69.9-67 | 66.9-60.1 | 60 and under |

**SCHEDULE OF LEARNING topics covered**

|  |  |  |
| --- | --- | --- |
| **Class Meets:**  **•ASSIGNMENT SELECTION & SCHEDULE MAY BE SUBJECT TO CHANGE•** | | |
| **Week 01: 1/13** | **Topics** | **Assignments/Exams** |
| **Week 02: 1/18** | Introduction to Linux |  |
| **Week 03: 1/25** | basic Linux commands | Quiz 1 |
| **Week 04: 2/1** | Linux Editor: Vi Editor | Quiz 2 |
| **Week 05: 2/8** | VI Editor | Test 1 |
| **Week 06: 2/15** | VI Editor | Project Phase I |
| **Week 07: 2/22** | VI Editor, Bash Programming: export, single/double quote, environmental variables, exit command, read command | Quiz 3 |
| **Week 08: 2/29** | Mid Term Exam | Quiz 4 |
| **Week 09: 3/7** | Spring Break | Test 2 |
| **Week 10: 3/14** | Bash Programming: Command substitution, arithmetic operator, arithmetic evaluation | Project Phase II |
| **Week 11: 3/21** | Installing Software Packages/ Networking in Linux Environment | Quiz 5 |
| **Week 12: 3/28** | Linux File System Management and Administration | Quiz 6 |
| **Week 13: 4/4** | How to manage device of printers and the | Test 3 |
| **Week 14: 4/11** | Management user and group accounts | Project Phase III / Quiz 7 |
| **Week 15: 4/18** |  | Research Paper Due |
| **4/23 – 4/25** |  |  |
| **4/26 – 4/29** | **End Term Exam** | Final Exam |

#### **University ATTENDANCE POLICY:**

Lincoln University uses the class method of teaching, which assumes that each student has something to contribute and something to gain by attending class. It further assumes that there is much more instruction absorbed in the classroom than can be tested on examinations. Therefore, students are expected to attend all regularly scheduled class meetings and should exhibit good faith in this regard.

Please note the following (click the link below for more detailed information):

1. **Four** absences may result in an automatic failure in the course.
2. **Three** tardy arrivals may be counted as one absence.
3. Absences will be counted starting **January 25, 2016**
4. In case of illness, death in the family, or other extenuating circumstances, the student must present documented evidence of inability to attend classes to the instructor, Vice President for Student Affairs and Enrollment Management. However, in such cases the student is responsible for all work missed during those absences.

More detailed information available at the following link: <http://www.lincoln.edu/registrar/2014Catalog.pdf>

**STUDENTS WITH DISABILITIES STATEMENT:**

Lincoln University is committed to non-discrimination of students with disabilities and therefore ensures that they have equal access to higher education, programs, activities, and services in order to achieve full participation and integration into the University.  In keeping with the philosophies of the mission and vision of the University, the Office of Student Support Services, through the Services for Students with Disabilities (SSD) Program, provides an array of support services and reasonable accommodations for students with special needs and/or disabilities as defined by Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990.  The Services for Students with Disabilities Program seeks to promote awareness and a campus environment in which accommodating students with special needs and/or disabilities is natural extension of the University’s goal.

Any student with a documented disability should contact the Office of Student Support Services.

<http://www.lincoln.edu/studentservices/index.html>

**UNIVERSITY ACADEMIC INTEGRITY STATEMENT:**

Students are responsible for proper conduct and integrity in all of their scholastic work. They must follow a professor's instructions when completing tests, homework, and laboratory reports, and must ask for clarification if the instructions are not clear. In general, students should not give or receive aid when taking exams, or exceed the time limitations specified by the professor. In seeking the truth, in learning to think critically, and in preparing for a life of constructive service, honesty is imperative. Honesty in the classroom and in the preparation of papers is therefore expected of all students. Each student has the responsibility to submit work that is uniquely his or her own. All of this work must be done in accordance with established principles of academic integrity.

<http://www.lincoln.edu/registrar/2014Catalog.pdf>

**POLICY ON ELECTRONIC DEVICES IN CLASSROOM:**

Cellphone and other electronic devices use is not permitted at any time during class (unless instructed to do so by the instructor). Cellphones and other electronic device must be put away out of sight during the entire class. Failure to put away phones completely out of sight will lead to immediate dismissal from class and you will be marked absent for the day.

Missed exams/quizzes without prior notice **WILL NOT be made up (i.e., zero grade)**. It is the responsibility of the student to make an appointment with the instructor to take an exam prior to the date of the test in anticipation of a missed class or within one week in extenuating circumstances (with proper documentation and prior notice).