IST 190
LINUX ESSENTIALS

COURSE DESCRIPTION

This course provides students with insights into the Linux operating system and reviews core skills in configuration and installation of the operating system from the desktop perspective.

3.0 Cr (3 lect/pres, 0 lab, 0 other)

COURSE FOCUS

This course will provide students with the fundamental knowledge and concepts of the Linux operating system, including command line functions, file systems, user and group administration, process management, text editors, and network applications.

TEXT AND REFERENCES

Recommended: TestOut Linux Pro English 4.2.1, ISBN: 978-1-935080-38-1

COURSE OBJECTIVES

This course is intended for students who want to learn about the Linux operating system and prepare to pass the Linux+ certification exam from CompTIA (Powered by LPI). It does not assume any prior knowledge of Linux and is geared toward those interested in systems administration as well as those who will use or develop programs for Linux systems. The course provides comprehensive coverage of topics related to Linux certification, including Linux distributions, installation, administration, X-Windows, networking, and security.

Specific topic coverage includes:

- Introduction to Linux
- Linux Installation and Usage
- Exploring Linux Filesystems
- Linux Filesystem Management
- Linux Filesystem Administration
- Linux Server Deployment
- Working with the BASH Shell
- System Initialization and X Windows
- Managing Linux Processes
- Common Administrative Tasks
• Compression, System Backup, and Software Installation
• Network Configuration
• Configuring Network Services
• Troubleshooting, Performance, and Security

STUDENT CONTRIBUTIONS

Attendance is critical in this class. Students are expected to be prepared for each class by completing reading assignments. Students are expected to demonstrate their knowledge on exams.

EXPECTATIONS FOR SUCCESSFUL FULFILLMENT OF THIS COURSE:

• Electronic devices: All cell phones must be in silent mode during class. Recording lectures is not permitted unless stipulated as an ADA accommodation.
• Attendance: Students are required to promptly attend all class sessions.
• Preparedness: Students are required to complete assigned readings and other assignment preparations before class periods and demonstrate knowledge of course content in their journal entries, MindTap video assignments and chapter quizzes, research project, and exams. No coursework (e.g., chapter quizzes, journal entries, research paper, video assignments, or exams) will be accepted after their deadlines, unless arrangements are made before the date on which the assignment or exam is due, and only if the instructor grants an extension due to an extenuating circumstance.
• Lectures: Students should remain attentive during lectures and class discussions. Note taking is strongly recommended.
• MindTap: All MindTap coursework (chapter quizzes and video assignments) must be completed and/or submitted before their deadlines (See Course Schedule and MindTap Calendar). (Register: Instructions on Bb Announcements).
• Exams: Students are required to complete the midterm and final exams. These exams may be composed of fill-in-the-blank, multiple-choice and true-or-false questions related to ALL covered course-related material. Exams must be taken as scheduled. Students must complete the midterm exam through Bb before the posted deadline.

COURSE EVALUATION

Your final grade for the course will be determined by the average of all exam/test/quiz scores and completion of all required assignments. See CLASS INFORMATION Section for specific details about scoring procedures and due dates.

TCL's grading scale is:
90 - 100 = A
80 - 89 = B
70 - 79 = C
60 - 69 = D
Below 60 = F

COURSE SCHEDULE

The class meets for 3.0 lecture/presentation hours per week. Content goals will be covered in the chronological order they are presented on the syllabus.

Students are responsible for completing reading assignments before the class session on which they are listed. MindTap coursework (chapter quizzes and video assignments) are always due by 5:30 p.m. on the Wednesdays listed below; however, working ahead is encouraged.

<table>
<thead>
<tr>
<th>Dates</th>
<th>Covered During Class Session</th>
<th>Assignments Wednesday 5:30 p.m. Deadlines</th>
</tr>
</thead>
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<tr>
<td>08/23</td>
<td>Introduction to Course</td>
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<tr>
<td>Date</td>
<td>Chapter and Section</td>
<td>Due Date</td>
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<tr>
<td>08/30</td>
<td>Ch. 2: Linux Installation and Usage</td>
<td>Ch. 2 MindTap due 8/30</td>
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<td>09/06</td>
<td>Ch. 3: Exploring Linux Filesystems</td>
<td>Ch. 3 MindTap due 9/06</td>
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<tr>
<td>09/13</td>
<td>Ch. 4: Linux Filesystem Management</td>
<td>Ch. 4 MindTap due 9/13</td>
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<tr>
<td>09/20</td>
<td>Ch. 5: Linux Filesystem Administration</td>
<td>Ch. 5 MindTap due 9/20</td>
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<tr>
<td>09/27</td>
<td>Ch. 6: Linux Server Deployment</td>
<td>Ch. 6 MindTap due 9/27</td>
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<td>10/04</td>
<td>Ch. 7: Working with the BASH Shell</td>
<td>Ch. 7 MindTap due 10/04</td>
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<td>10/11</td>
<td>Ch. 8: System Initialization and X Windows</td>
<td>Ch. 8 MindTap due 10/11</td>
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<td>10/18</td>
<td>Ch. 9: Managing Linux Processes</td>
<td>Ch. 9 MindTap due 10/18</td>
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<td>10/25</td>
<td>Ch. 10: Common Administrative Tasks</td>
<td>Ch. 10 MindTap due 10/25</td>
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<td>11/01</td>
<td>Ch. 11: Compression, System Backup, and Software Installation</td>
<td>Ch. 11 MindTap due 11/01</td>
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<td>11/08</td>
<td>Ch. 12: Network Configuration</td>
<td>Ch. 12 MindTap 11/08</td>
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<td>11/15</td>
<td>Ch. 13: Configuring Network Services</td>
<td>Ch. 13 MindTap due 11/15</td>
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<tr>
<td>11/22</td>
<td>TCL Closed 11/22– 11/24 – Thanksgiving</td>
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<tr>
<td><strong>11/29</strong></td>
<td>Ch. 14: Troubleshooting, Performance, and Security</td>
<td>Ch. 14 MindTap due 11/29</td>
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<tr>
<td>12/06</td>
<td>Final Exam</td>
<td>Students must take the final exam. Failure to do so will result in a grade of “W” for the course.</td>
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</tbody>
</table>

**GRADING METHODOLOGY**

The final grade must be 70 or more in order to pass the course and progress in the program. Students absent from an examination or presentation will receive a “0” grade for the examination unless other arrangements are made with the individual instructor prior to the examination or presentation day or on the examination or presentation day before the test/presentation is scheduled to be given.

The student is responsible for notifying the instructor for the reason of the absence. It is also the responsibility of the student to contact the appropriate instructor to arrange to make up the examination. Arrangements may be completed by telephone.

If the instructor is not available, a message should be left on the instructor’s voice mail **AND** with another member of the faculty or administrative assistant. The make-up exam will be scheduled and the instructor will decide the method of examination. Messages sent by other students are unacceptable.
ADA STATEMENT

The Technical College of the Lowcountry provides access, equal opportunity and reasonable accommodation in its services, programs, activities, education and employment for individuals with disabilities. To request disability accommodation, contact the counselor for students with disabilities at (843) 525-8219 or (843) 525-8242 during the first ten business days of the academic term.

ACADEMIC MISCONDUCT

There is no tolerance at TCL for academic dishonesty and misconduct. The College expects all students to conduct themselves with dignity and to maintain high standards of responsible citizenship.

It is the student’s responsibility to address any questions regarding what might constitute academic misconduct to the course instructor for further clarification.

The College adheres to the Student Code for the South Carolina Technical College System. Copies of the Student Code and Grievance Procedure are provided in the TCL Student Handbook, the Division Office, and the Learning Resources Center.

ATTENDANCE

The College’s statement of policy indicates that students must attend ninety percent of total class hours or they will be in violation of the attendance policy.

- Students not physically attending class during the first ten calendar days from the start of the semester must be dropped from the class for NOT ATTENDING.
- Students taking an online/internet class must sign in and complete and assignment designated by the instructor within the first ten calendar days from the start of the semester to indicate attendance in the class. Students not attending class during the first ten calendar days from the start of the semester must be dropped from the class for NOT ATTENDING.
- Reinstatement requires the signature of the division dean.
- In the event it becomes necessary for a student to withdraw from the course OR if a student stops attending class, it is the student’s responsibility to contact the instructor via e-mail requesting to be withdrawn from the class. Withdrawing from class may have consequences associated with financial aid and time to completion. Students are strongly encouraged to consult with Financial Aid prior to withdrawing from any class, particularly if the student is currently on a warning or probation status.
- When a student exceeds the allowed absences, the student is in violation of the attendance policy. The instructor MUST withdraw the student with a grade of “W”, “WP”, or “WF” depending on the date the student exceeded the allowed absences and the student’s progress up to the last date of attendance
  
  or
- Under extenuating circumstances and at the discretion of the faculty member teaching the class, allow the student to continue in the class and make-up the work. This exception must be documented at the time the allowed absences are exceeded.
- Absences are counted from the first day of class. There are no "excused" absences. All absences are counted, regardless of the reason for the absence.
A student must take the final exam or be excused from the final exam in order to earn a non-withdrawal grade.

A copy of TCL’s STATEMENT OF POLICY NUMBER: 3-1-307 CLASS ATTENDANCE (WITHDRAWAL) is on file in the Division Office and in the Learning Resources Center.

ONLINE ATTENDANCE PROCEDURE

For all online courses, students must complete an assignment designated by the instructor during the first week of classes. The instructor will drop the student from the course if the initial assignment is not completed.

Instructors will withdraw students from the class when 90% attendance is not maintained. Attendance in an online course is defined by regular course access and by timely completion of assignments as required by the instructor. Each student will be expected to access the web class at least once a week and complete 90% of assignments on time. Additional access is encouraged and may be necessary for successful completion of classes.

Failure to log in and complete assignments will result in the student being withdrawn from the course. The instructor will assign a grade of “W,” “WP,” or “WF” based upon the student’s academic standing as the last date of attendance, which is the last login. Students are responsible for any financial matters associated with an administrative withdrawal. If a student fails to email the instructor (using the my.tcl.edu email account) requesting to be dropped from the course and has not submitted the initial assignment required during the first week of class, the instructor will assign a “Never Attended” code in the student information system (web-advisor) no later than ten calendar days after the first day of the class. Students who are dropped as a result of never attending the course are still responsible for all fees associated with the course.

HAZARDOUS WEATHER

In case weather conditions are so severe that operation of the College may clearly pose a hardship on students and staff traveling to the College, notification of closing will be made through the following radio and television stations: WYKZ 98.7, WGCO 98.3, WGZ 103.1, WFXH 106.1, WWVV 106.9, WLOW 107.9, WGZR 104.9, WFXH 1130 AM, WLW 101.1, WSO 1230 AM, WAVE 97.3, WTOC TV, WTGS TV, WJW TV, and WSAV TV. Students, faculty and staff are highly encouraged to opt in to the Emergency Text Message Alert System. http://www.tcl.edu/current-students/text-alert

EMERGENCY TEXT MESSAGE ALERT

Students, faculty and staff are highly encouraged to opt in to the Emergency Text Message Alert System. Participants receive immediate notification of emergency events and weather cancelations via text messaging on their cell phones. Participants can also opt in to receive non-emergency news and announcements. Go to www.tcl.edu. On the homepage, click on “emergency TextAlert at TCL” and fill out the form or go to http://www.tcl.edu/current-students/text-alert

SAFETY ADDENDUM

Purpose
The purpose of this safety addendum is to provide each student with safety guidelines during an incident, emergency, or disaster at TCL. In addition, it provides students guidelines for lockdown procedures, evacuation procedures, and active shooter.

Definitions
An incident is any event, potential or actual, that may impact normal operations but has no immediate health or life threatening consideration or serious effect on the overall functional capacity of the College. An event of this nature should be reported to the Office of the Vice President for Administrative Services. Also notify the off-site campus administrator if applicable.

An emergency is any incident, potential or actual, which may endanger life or health or which affects an entire building or buildings, and will disrupt the overall operations of the College. Outside emergency services will probably be required,
as well as major efforts from campus support services. Major policy considerations and decisions will usually be required from the college administration during times of crises. An emergency should be reported immediately by directly using 911 if life or health/injury considerations exist and then to the Office of the President or Vice President for Administrative Services as quickly as possible. Also notify the off-site campus administrator if applicable.

**A disaster** is any event or occurrence that has taken place and has seriously impaired or halted the operations of the College. In some cases, mass personnel casualties and severe property damage may be sustained. A coordinated effort of all campus-wide resources is required to effectively control the situation. Outside emergency services will be essential. In all cases of disaster, an Emergency Control Center will be activated, and the appropriate support and operational plans will be executed. The disaster should be immediately reported, first by calling 911 and then to the Office of the President or Vice President for Administrative Services. Also notify the off-site campus administrator if applicable.

**Types of Emergencies**
- Hurricane
- Tornado
- Fire
- Biochemical or Radiation Spill
- Explosion/Bomb
- Downed Aircraft (crash which directly impacts campus operations)
- Utility Failures
- Violent or criminal behavior
- Psychological Crisis

**Procedures:**

**Active Shooter**

**Building Evacuation**
1. Building evacuations occur when an alarm sounds and/or upon notification by Security or the Emergency Director.
2. When the building evacuation alarm is activated during an emergency, individuals should exit according to the building evacuation plan and alert others to do the same.
3. Once outside, individuals should proceed to a clear area that is at least 500 feet away from the affected building. Streets, fire lanes, hydrant areas and walkways should be kept clear for emergency vehicles and personnel.
4. Individuals should not return to an evacuated building unless told to do so by Security or the Emergency Director.
5. Individuals should assist persons with disabilities in exiting the building. Elevators are reserved for disabled persons.

**Campus Evacuation**
1. A uniformed Security Guard, the Emergency Director, or an Emergency Resource Team member will announce evacuation of all or part of the campus grounds.
2. All persons (students and staff) are to immediately vacate the campus, or in the case of a partial evacuation relocate to another part of the campus grounds as directed.

**Lockdown**
1. Clear the halls
2. Report to the nearest classroom/office
3. Assist those needing special assistance
4. Ensure classroom/office doors are closed and locked
5. Turn off lights
6. Stay away from doors and windows (out of the line of sight)
7. BE QUIET and follow instructor’s directions
8. Silence cell phones
9. Wait for the “All Clear” before leaving