TIFFIN UNIVERSITY

ITS215 Open Source Computing
(3 credit hours)
Syllabus

Course Description
This course is designed to develop students' knowledge and aptitude in UNIX and Linux Operating Systems at a command line level.

Course Learning Outcomes (CLOs):
By the end of this course, the student will be able to do the following:
1. Describe open source software theory.
2. Apply knowledge of UNIX/LINUX server operating systems to optimize performance and solve problems.
3. Apply knowledge and skills to configure and repair UNIX/LINUX server operating systems.
4. Apply relevant knowledge regarding Linux Operating Systems.
5. Compare and contrast Linux operating systems and Microsoft operating systems.
6. Analyze Linux concepts and configurations through undergraduate-level, discipline-specific written discourse.

Course Topics
Introduction to UNIX and Linux
- Linux history
- Linux shell
- Linux help
- Linux environment variables
- Text editor

UNIX basic commands (Man, passwd, uname, who, date, echo)
File System commands (pwd, cd, mkdir, rmdir, ls, cp, mv, rm, cat, more, wc, lp, tar, zip)
- Directory structure
- Using commands, redirectors, pipes, files, links, and aliases in linux

File Attribute commands (chmod, umask, ln, chown, chgrp, find)
- File attributes
- User interfaces and desktops
- Software installation

Using Vim
- File editors
- Users and groups
- Disk and file system management

Bash

Course Prerequisites/Corequisites
ITS120 Current Trends in Virtual Computing

Required Textbook(s) and Resources
These are the materials you will need to purchase for the course:

Das, Sumitabha. (2013). *Your UNIX/Linux: The ultimate guide.* (3rd ed.) McGraw Hill. ISBN: 9780073376202.

TestOut LabSim: ITS215 Open Source Computing: Linux+ Powered by LPI LX0-101 and LX0-102. (This item must be purchased through the Tiffin University Bookstore.)

Some lectures/activities may contain additional resources. See individual lectures/activities for those requirements. Where applicable, Tiffin University has obtained permission to use copyrighted material.

Minimum Student Technology Requirements
In order to have a quality learning experience in your online courses, the University requires that your primary computer (the computer used to access course materials and on which you will be required to install course-specific software) meets or exceeds certain specifications. Click on the following link to view the specifications:

- PC Recommendations

Time Management
Time management is an important part of academic success. Please refer to the approximate (average) times noted below for readings and assignments to help plan your time accordingly.

Course Content
Please refer to individual activities for assessment guidelines.

WEEK 1				
Course Topics	Linux history Linux shell Linux help Linux environment variables Text editor Directory structure Using commands, redirectors, pipes, files, links, and aliases in linux			
Read/Review				**Approx. Time**
Textbook, Lectures, and Other Resources	Textbook: Chapter 1 Lecture			1.00 hrs. 0.25 hrs.
Activity Type		**Course Learning Outcomes**	**Due**	**Approx. Time**
Introductory Discussion: Initial Post		CLO(s): n/a	Monday	0.75 hrs.

Discussion: Initial Post	CLO(s): 1, 4, 6	Wednesday	1.25 hrs.
All Discussions: Secondary Posts	CLO(s): as noted	Saturday	1.00 hrs.
Assignment 1: Essay	CLO(s): 1, 4, 5	Wednesday	4.00 hrs.
Assignment 2: Testout Lab	CLO(s): 1, 4, 5, 6	Sunday	12.00 hrs.
Approximate Weekly Time on Task (includes resources and activities)			**20.25 hrs.**

WEEK 2			
Course Topics	Linux installation design Linux installation Linux installation localization		
Read/Review			**Approx. Time**
Textbook, Lectures, and Other Resources	Textbook: Chapter 2 Lecture		1.50 hrs. 0.25 hrs.
Activity Type	**Course Learning Outcomes**	**Due**	**Approx. Time**
Discussion: Initial Post	CLO(s): 2, 4, 6	Wednesday	1.00 hrs.
Discussion: Secondary Posts	CLO(s): as noted	Saturday	1.00 hrs.
Assignment 1: Essay	CLO(s): 2, 3	Wednesday	4.00 hrs.
Assignment 2: Testout Lab	CLO(s): 4, 6	Sunday	12.00 hrs.
Approximate Weekly Time on Task (includes resources and activities)			**19.75 hrs.**

WEEK 3			
Course Topics	Linux boot up and shutdown Linux file system and structure		
Read/Review			**Approx. Time**
Textbook, Lectures, and Other Resources	Textbook: Chapter 2 Lecture		1.50 hrs. 0.25 hrs.
Activity Type	**Course Learning Outcomes**	**Due**	**Approx. Time**
Discussion: Initial Post	CLO(s): 2, 3, 6	Wednesday	1.00 hrs.
Discussion: Secondary Posts	CLO(s): as noted	Saturday	1.00 hrs.
Assignment 1: Testout Lab	CLO(s): 2, 3	Wednesday	4.00 hrs.
Assignment 2: Essay	CLO(s): 1, 4, 6	Sunday	12.00 hrs.
Approximate Weekly Time on Task (includes resources and activities)			**19.75 hrs.**

WEEK 4			
Course Topics	File attributes User interfaces and desktops Software installation		
Read/Review			**Approx. Time**
Textbook, Lectures, and Other Resources	Textbook: Chapter 4 Lecture		1.50 hrs. 0.25 hrs.
Activity Type	**Course Learning Outcomes**	**Due**	**Approx. Time**
Discussion: Initial Post	CLO(s): 2, 3, 6	Wednesday	1.00 hrs.
Discussion: Secondary Posts	CLO(s): as noted	Saturday	1.00 hrs.
Assignment 1: Testout Lab	CLO(s): 2, 3	Wednesday	4.00 hrs.

Assignment 2: Essay	CLO(s): 1, 4, 6	Sunday	12.00 hrs.
Approximate Weekly Time on Task (includes resources and activities)			**19.75 hrs.**

WEEK 5			
Course Topics	File editors Users and groups Disk and file system management		
Read/Review			**Approx. Time**
Textbook, Lectures, and Other Resources	Textbook: Chapter 5, 6 Lecture		3.00 hrs. 0.25 hrs.
Activity Type	**Course Learning Outcomes**	**Due**	**Approx. Time**
Discussion: Initial Post	CLO(s): 4, 5, 6	Wednesday	1.00 hrs.
Discussion: Secondary Posts	CLO(s): as noted	Saturday	1.00 hrs.
Assignment 1: Testout Lab	CLO(s): 2, 3	Wednesday	4.00 hrs.
Assignment 2: Essay	CLO(s): 4, 5, 6	Sunday	12.00 hrs.
Approximate Weekly Time on Task (includes resources and activities)			**21.25 hrs.**

WEEK 6			
Course Topics	Processes System services Linux shell		
Read/Review			**Approx. Time**
Textbook, Lectures, and Other Resources	Textbook: Chapter 7, 9 Lecture		2.50 hrs. 0.25 hrs.
Activity Type	**Course Learning Outcomes**	**Due**	**Approx. Time**
Discussion: Initial Post	CLO(s): 1, 6	Wednesday	1.00 hrs.
Discussion: Secondary Posts	CLO(s): as noted	Saturday	1.00 hrs.
Assignment 1: Testout Lab	CLO(s): 2, 3	Wednesday	4.00 hrs.
Assignment 2: Essay	CLO(s): 1, 4, 6	Sunday	12.00 hrs.
Approximate Weekly Time on Task (includes resources and activities)			**20.75 hrs.**

WEEK 7			
Course Topics	Processes System monitoring Linux exam		
Read/Review			**Approx. Time**
Textbook, Lectures, and Other Resources	Textbook: Chapter 8 Lecture		1.50 hrs. 0.25 hrs.
Activity Type	**Course Learning Outcomes**	**Due**	**Approx. Time**
Discussion: Initial Post	CLO(s): 4, 5, 6	Wednesday	1.00 hrs.
Assignment 1: Testout Lab	CLO(s): 2, 3	Wednesday	4.00 hrs.
Assignment 2: Testout Exam	CLO(s): 1, 2, 3, 4	Saturday	4.00 hrs.
Discussion: Secondary Posts	CLO(s): as noted	Saturday	1.00 hrs.
Approximate Weekly Time on Task (includes resources and activities)			**11.75 hrs.**

Approximate Time on Task for Entire Course	133.25 hrs.

Grading Structure

Activity	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Total
Introductory Discussion	n/a							**0**
Discussion	25	25	25	25	25	25	25	**175**
Assignment 1	50	50	50	50	50	50	75	**375**
Assignment 2	50	50	50	50	75	75	100	**450**
Total	**150**	**125**	**125**	**125**	**150**	**125**	**200**	**1000**

Activity Categories	Percentage of Total Points
Discussions	20%
Assignments	80%
Total	**100%**

Grading Scale	
Grade	**Percentage**
A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	<60%

Please see the Academic Bulletin for grade appeal information.

FERPA

The Family Educational Rights and Privacy Act (FERPA) protects student information. Other than directory information, such as name, address, phone number, etc., students must give consent for individuals to gain access to a student's educational record, including grades, transcripts, and behavior reports (unless the student is under the age of 18). Students also have the right to review their educational records. For a more detailed explanation, please see the Student Handbook.

Office for Student Accessibility Services

Please refer to your Moodle Home page for Office for Student Accessibility Services contact information to coordinate reasonable accommodations for students with documented disabilities.

Veterans

Please refer to your Moodle Home page for services for veterans, service members, and their families.

Moodle and Non-Moodle Technical Support

Blackboard Student Services will provide 24x7 Moodle helpdesk support for all Tiffin University students and faculty. Locate contact information for Blackboard Student Services (Moodle-related issues) and for Tiffin University ITS helpdesk (non-Moodle related issues) on your Moodle Home page.