



BIRZEIT UNIVERSITY
Computer Science Dept.

COMP311 (Linux OS Lab) Course Outline
Second Semester 2023/2034

Course Description:

This course provides hands-on experience to teach students the fundamentals of the Linux operating system. The lab experiments in this course are designed to introduce the students to the Linux environment and how to do text editing. They will also familiarize themselves with the Linux file system structure, including file types and file metadata, shell usage and configuration, and the basics of job and process management. The students will also practice text processing using filters and regular expressions. Training students to write shell scripts using programming constructs is a key part of this course. Finally, students will touch on some Linux security and networking concepts.

Course Prerequisites: *Comp133*

Faculties:

Dr. Ahmed Abusnaina

Dr. Anas Arram

Mr. Nael Qaraeen

Mr. Murad Njourn (Coordinator)

Placement:

Second Year Students, First Semester

Reference:

- Linux OS Laboratory Manual COMP311 (version 1.2), Nael I. Qaraeen.

Special Regulations:

- Late Assignments/Projects will NOT be accepted for any reason.
- There will be NO makeup Exams/Quizzes.

Course Objectives:

Upon completion of this course the students will understand the fundamental concepts behind the Linux OS. The students will also be able to:

1. Navigate and manipulate the Linux file system comfortably using the Red Hat Linux OS.
2. Customize and manage their own Linux shell environment.

3. Write shell programs to automate and facilitate different tasks.
4. Contribute individually or as group members to creating a shell programming project.

Grading Criteria

Labs Work	10%
Quizzes	15%
Projects	35%
Final Exam (Written and Practical)	40%

Lab content

Lab. #	<u>Title of Experiment</u>	<u>Quizzes</u>
1	Introduction to Linux environment	
2	Text editing (vi editor)	
3	File Systems (I) (Structure and File Types)	Quiz#1
4	File Systems (II) (File Metadata)	
5	Shell Usage and Configuration (I)	Quiz#2
6	Shell Usage and Configuration (II)	
7	Job and Process Management	Quiz#3
8	Text Processing Tools and Regular Expressions	
9	Shell Scripts (I) –Introduction	Quiz#4
10	Shell Scripts (II)- Programming (Selection Constructs)	
11	Shell Scripts (III)- Programming (Looping Constructs)	Quiz#5
12	Security and Networking Concepts	
13	Final Practical Exam	