

Course Information

Course Name	Foundations of Linux and Version Control
Course Number	SE 102
Credits	3
Pre-Requisites	None
Proctoring	Some exams in this course will be proctored to uphold academic standards and ensure fairness and integrity in the assessment processes.

Description

This course provides comprehensive training in Linux command-line interfaces, shell scripting, and Git version control systems, emphasizing efficient system navigation, task automation, and project management while ensuring data integrity and security. Students apply Linux command-line operations, file permissions, and security mechanisms before advancing to Git version control, where they learn repository management and collaboration techniques. Practical exercises reinforce skills in project tracking, team collaboration, and code quality maintenance through advanced Git features and workflows.

Faculty

Julien Barbier
Contact: through the LMS or jbarbier@patten.edu



Course Objectives

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

1. Apply knowledge of Linux command-line interfaces and shell scripting to perform various tasks such as file navigation, manipulation, task automation, and system process management effectively.
2. Demonstrate an understanding of Linux file permissions and security mechanisms, enabling them to protect data and manage access control within a Linux environment effectively.
3. Apply knowledge of Git version control to initialize repositories, track changes, and collaborate on software projects, effectively managing version history.

4. Apply knowledge of Git and GitHub to work collaboratively on projects, employing best practices for branching, merging, resolving merge conflicts, and contributing through pull requests and code reviews.
5. Evaluate and apply advanced Git features and workflows, including branching strategies, rebasing, and working with remote repositories, to effectively manage complex software development projects.

Course Outline

Module #	Description
1	Version Control
2 - 0x00	Shell, Basics
3 - 0x01	Shell, Permissions
4 - 0x02	Shell, I/O Redirections and filters
5 - 0x03	Shell, init files, variables and expansions
6 - 0x04	Loops, Conditions and parsing
7 - 0x05	Processes and signals

Assessments

Component	Description	Weightage
Practical	GIT	15%
Practical	Shell, Basics	12,5%
Practical	Shell, Permissions	12,5%
Practical	Shell, I/O Redirections and filters	12,5%
Practical	Shell, init files, variables and expansions	12,5%
Practical	Loops, Conditions and parsing	12,5%
Practical	Processes and signals	12,5%
Exam*	End of Course Assessment	20%
Total		100.00%

*Proctored

Proctoring

- This course requires proctoring. Key examinations will only be released through Patten's proctoring process. In order to complete these exams, you must identify a proctor who adheres to the requirements of Patten University's Proctor Policy:
 - Your proctor must not be a past or present family member, a work subordinate, or a current/previous student of Patten University.
 - Your proctor must not be related to a current/previous student of Patten University.

- Your proctor must not have a relationship with you which would call into question his or her impartiality.
- Once you have selected your proctor, please fill out [**this form**](#).
- Upon completion of this form, your proctor will immediately receive an email from the Patten University registrar, with details on how to complete and submit the exam in the presence of your proctor. Your proctor will also receive a set of instructions on how to access and proctor the examination to ensure academic integrity, along with details of how to submit the completed exam on your behalf.
- The approval process and examination can take up to 2 business days, so please ensure there is sufficient time to complete the process, conduct the exam, and have it submitted prior to the deadline.