

topic#	date	topic / <i>Lecture Notes</i>	assignments
1.	8/22	Class Introduction and Orientation Review and Extension of Basic Unix scp/sftp permissions grep/sed substrings shell scripting constructs Basic Admin Commands part one: inodes, compression, diff, od, dd (this week only: the online quiz is not due until NEXT week (Aug 28))	Read: <i>Lecture Notes Module 0</i> (review material from cs160b) and <i>Module 1</i> (each week reads the corresponding module in the Lecture Notes) <i>Student Information for Linux Machines</i> Read <i>Assignment One</i> <i>Exercises-AdminBasics1</i> Lecture Notes <i>Class Google Group</i>
2.	8/29	Basic Administrative Commands part two Using the Unix manual and other documentation sources. the find utility (the online quiz for week 1 and 2 are BOTH due at 6pm tonight, Aug 28, before class)	<i>Exercises-Man</i> <i>Exercises-Find</i> (first part required, rest optional)
3.	9/5	Becoming Root and Using Virtual Machines becoming root SUID/SGID/sticky permissions Creating and using virtual machines Accessing and Controlling VMs remotely	<i>Virtual Machine Basics</i> <i>Exercises: Root</i> <i>Exercises-VirtualMachines</i>
4.	9/12	ssh: operation, keys, X11 forwarding Essential privileged administration commands basics of ssh configuration	<i>Assignment One is due</i> <i>Exercises-ssh</i> <i>Exercises-EssentialCommands</i>
5.	9/19	Restricting Privileges and System Logging sudo access control lists and attributes System log files	<i>Exercises-ACLs</i> <i>Exercises-sudo</i> <i>Exercises-rsyslog</i>
6.	9/26	Processes	Assignment One corrections due this week <i>Exercises-ProcessControl1</i> <i>Exercises-ProcessControl2</i> Midterm #1 (thru topic 4) <i>Assignment Two</i> handed out
7.	10/3	Authentication Adding and modifying users and groups Password and Account Aging Non-Local Accounts	<i>Exercises-ManagingUsers1</i> <i>Exercises-ManagingUsers2</i>
8.	10/10	Startup and Shutdown part One system5 init scripts; optional: upstart	<i>Exercises-StartupShutdown1</i> <i>Assignment Three</i> handed out
9.	10/17	Startup and Shutdown part Two protecting the boot process; grub1 common problems	<i>Exercises-StartupShutdown2</i>
10.	10/24	Startup and Shutdown part Three: Redhat 7 systemd and control groups; grub2 other changes to startup and shutdown	<i>Exercises-StartupShutdown3</i> <i>Assignment Two due in-class</i>
11.	10/31	Filesystems-Part One Filesystem Basics and Physical Filesystems partitioning ext3, ext4 and xfs filesystems	<i>Exercises-Filesystems1</i> Midterm #2 will be given (thru topic 10) <i>Assignment Three due in-class</i>

12.	11/7	Filesystems-Part Two Swapping Logical Volumes Resizing Filesystems	<u>Exercises-Filesystems2</u> <u>Assignment Four</u> handed out
13.	11/14	Filesystems-Part Three Non-local Filesystems The automounter	<u>Exercises-Filesystems3</u> (most is optional) <u>Exercises-automount</u> <u>Assignment Five</u> handed out
14.	11/21	Archiving Advanced Topics (time-permitting)	<u>Exercises-rsync</u> <u>Exercises:Backups</u>
15.	11/28	Periodic Processes Advanced Topics (time-permitting)	<u>Midterm #3 will be given (thru topic 14) OR</u> <u>Sample Quiz3 and Information Sheet</u> <u>Exercises:PeriodicProcesses</u> <u>Assignment Four due in class</u>
16.	12/5	Default Servers and the Firewall httpd, nfs, vsftpd	<u>Exercises-BasicServers</u>
17.	12/12	Review for the Final	Assignment Five due
18.	12/19	Final Exam	

STUDENT LEARNING OUTCOMES

On completion of this course, you will be able to

- A. Configure basic networking, and install and configure default NFS, http and anonymous ftp servers.
- B. Analyze and control basic system security by use of specialized permissions, restricting access to privileges and the configuration and monitoring of system log information.
- C. Add, remove, configure and monitor services controlled by systemd and demonstrate the parallel configuration using legacy init.
- D. Design and implement filesystem divisions using hard partitions and logical volumes and demonstrate the archiving and restoration of data to them.
- E. Create, modify, and configure user accounts and configure remote access using key-based authentication.

(Actually, you will be able to do a lot more than this, but I am required to post the course SLOs and to give them to you.) My intention is to cover the great majority of the topics for the RHCSA exam as listed on [Redhat's Website](#)