

Course Syllabus

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Valencia College, Division of Engineering, Computer Programming & Technology
Department of Network Engineering Technology
DHS/NSA National Center of Academic Excellence in Cyber Defense Education

Welcome to CET 2660C--Linux Networking & Security

Red Hat System Administration I (RH124)

Red Hat Enterprise Linux 9 (RHEL)

Lecturer:

Dr. Wael K. Yousif (<http://frontdoor.valenciacollege.edu/faculty.cfm?uid=wyouysif&CFID=9360377&CFTOKEN=a8d5f2919cabe031-C720BFB3-F9D8-BFB0-BAC30EDB7241D727>), CJEH, GCFW, CCDA, CCAI, VCA, Net+, CCNP (Routing), C|E|, Red Hat Certified System Administrator (RHCSA), CompTIA Linux+, AWS Certified Cloud Practitioner.

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[Faculty Front Page \(http://frontdoor.valenciacollege.edu/?wyouysif\)](http://frontdoor.valenciacollege.edu/?wyouysif)



Class Meeting Times:

This is an online class with no scheduled face to face meetings. All lectures have been recorded and placed under the corresponding modules.

Orientation Meeting--Optional but highly recommended. Please be sure to watch the recording if you are not able to attend live.

Tuesday, August 22, 6:00 PM to 7:30 PM. Follow this link to the orientation Zoom meeting: <https://valenciacollege.zoom.us/j/97515659424>  (<https://valenciacollege.zoom.us/j/97515659424>)

Virtual Office Hours ([Link to Microsoft Team](#));  (<https://teams.microsoft.com/l/team/19%3Al0ram6a6DpOhe5VVeqvXA9c0VZsQ6pFNkKv32fYHk1%40thread.tacv2/conversations?groupId=fff0f9ba-38e3-4f6d-a540-1c1bec42c832&tenantId=0e886695-3d17-41a8-8544-135b0a92a47c>).

Monday 9:00 AM to 11:00 AM

Tuesday 7:00 PM - 9:00 PM

Wednesday 11:00 AM - 2:00 PM

Thursday 9:30 AM - 10:30 AM

Friday 10:00 AM - 12:00 Noon

Open Lab ([Link to Team](#))  (<https://teams.microsoft.com/l/channel/19%3ae6df22d440e74116920d7674c452bfe9%40thread.tacv2/General?groupId=986d46b5-7034-4721-8922-f784a57cac2f&tenantId=0e886695-3d17-41a8-8544-135b0a92a47c>):

M-(1:00-5:00)

T-(1:00-5:00)

W-(1:00-5:00)

R-(1:00-5:00)

And Hours by appointment: M-F 6:00 pm to 8:00 pm and Saturday 12:00 pm to 6:00 pm

Catalog Description:

Red Hat System Administration I (RH124) is designed for IT professionals without previous Linux system administration experience. The course is intended to provide students with Linux administration "survival skills" by focusing on core administration tasks. Red Hat System Administration I also provides a foundation for students planning to become full-time Linux system administrators by introducing key command-line concepts and Enterprise-level tools. These concepts are further developed in the follow-on course, Red Hat System Administration II (RH134)-CTS 2322C.

Required Material:

1) Access to the Remote Lab Environment--NDG Netlab Access Code for Equipment Pod: RHEL9 System Administration I

Linux Networking and Security



Red Hat 9 System Administration I
(RHSA) 6 months Access Code

You can buy the access code from the bookstore which can take up to two weeks to arrive in the mail or you can buy directly from the vendor, using the link below where you can immediately get your access code delivered to your email address:


<https://www.netdevgroup.com/online/courses/all/rhel9-system-administration-i>  (<https://www.netdevgroup.com/online/courses/all/rhel9-system-administration-i>)

When you have received your access code from the bookstore, you can then gain access to your equipment pod on NDG Netlab using the steps below:

Enroll at the following website: <https://portal.netdevgroup.com/learn/rh124-rhel9/enroll>  (<https://portal.netdevgroup.com/learn/rh124-rhel9/enroll>). Create an account with NDG and redeem the code you purchased from the book store. You can also use same link to buy directly from NDG. Be sure to buy the 6 months subscription. Watch [this video demo](https://valenciacollege.zoom.us/rec/share/nvOib-wXxd19dVYwXWfdkvvhg9d4ORHnFEiaKLTcya38ln1APV0ie01mAt8aZEG_Hjxwh3agjOS4u2Lm)  (https://valenciacollege.zoom.us/rec/share/nvOib-wXxd19dVYwXWfdkvvhg9d4ORHnFEiaKLTcya38ln1APV0ie01mAt8aZEG_Hjxwh3agjOS4u2Lm), about purchasing and using the NDG Netlab.

Instructions: https://www.netdevgroup.com/online/support/labs/documentation/enrollment_guide_labs.pdf  (https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.netdevgroup.com%2Fonline%2Fsupport%2Flabs%2Fdocumentation%2Fenrollment_guide_labs.pdf&data=05%7C01%7Cwyouysif%40valenciacollege.edu%7C85e01d684b994e9052f308da7b87185e%7C0e8866953d1741a88544135b0a92a47c%7C1%7C0%7C637958117398812337%7CUnknown%7CTWFpbGZsb3d8eWJlZjQtc29udm91cnQ%3D%3D&reserved=0)

For assistance with logging into the lab, scheduling lab time or passwords, reference NDG website: <https://www.netdevgroup.com/online/support/labs/>  (https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.netdevgroup.com%2Fonline%2Fsupport%2Flabs%2Fdocumentation%2Fenrollment_guide_labs.pdf&data=05%7C01%7Cwyouysif%40valenciacollege.edu%7C85e01d684b994e9052f308da7b87185e%7C0e8866953d1741a88544135b0a92a47c%7C1%7C0%7C637958117398812337%7CUnknown%7CTWFpbGZsb3d8eWJlZjQtc29udm91cnQ%3D%3D&reserved=0)

2) Access to the Red Hat Academy  (<https://rha.ole.redhat.com/rha/app/summary>) (Must complete the registration requirements under Module 0 before you can access the online curriculum on the Red Hat Academy).

3) Access to Kaltura Screen Recording -- All Lab Reports are done using Screen Recording with Audio Explanation:

Use the instructions in this PDF file to learn how to download, install, and use Kaltura. [Kaltura Capture-1.pdf \(https://online.valenciacollege.edu/courses/184114/files/44367586?wrap=1\)](https://online.valenciacollege.edu/courses/184114/files/44367586?wrap=1) ↓ (https://online.valenciacollege.edu/courses/184114/files/44367586/download?download_frd=1)

(https://online.valenciacollege.edu/courses/183448/files/44311283/download?download_frd=1) 4) Access to VMWare Workstation --This is optional. Use the steps below to redeem your access code and use it to download & license your VMWare Workstation.

- VMware IT Academy Web Store: <https://itacademy.vmware.com/> (<https://itacademy.vmware.com/>)

- Check your Valencia email for an e-mail from info@itacademy.brightspace.com with the subject:
 - **"Welcome! Please redeem your VMware subscription"**
- If you don't see this e-mail, then [check Your SPAM filter, following the directions in FAQ #16](#), (https://teams.microsoft.com/l/message/19:a444e767e2de4dd7a1c45a9a8fcd525@thread.tacv2/1641936188510?tenantid=0e886695-3d17-41a8-8544-135b0a9247c6&groupoid=13a5a831-04d6-428f-8da4-9a2c7ea134a9&parentMessageId=1641936188510&teamName=NET_OpenLab&channelName=-NETLab%20FAQ%20and%20Instructions&createdTime=1641936188510)
 - If the e-mail is still not found, email amendez@valenciacollege.edu (<mailto:amendez@valenciacollege.edu>) with your name, VID and email. The email subject should be: VMware Subscription. Please copy wyouusif@valenciacollege.edu (<mailto:wyouusif@valenciacollege.edu>) on your email. Thank You!
 - If you **do** find the e-mail, have the students follow the directions for registration within the body of the e-mail
 - Here is a direct link to the VMWare software download and license key page: <https://itacademy.brightspace.com/d2/home/6715> (<https://itacademy.brightspace.com/d2/home/6715>)

Important Dates

- <https://valenciacollege.edu/academics/calendar/> (<https://valenciacollege.edu/academics/calendar/>)

Disclaimer: Any Changes in the policy and/or schedule of this syllabus may be made at any time during the semester at the discretion of the instructor.

Course Learning Outcomes

On course completion, students will be able to:

- Navigate the Linux command line interface
- Managing files and users
- Employ proper file system navigation and manipulation techniques
- Control processes and services
- Access and control systems remotely
- Manage Linux networking and utilize related tools
- Install and manage software
- Manage Virtual hosts

Lab Procedures

Late submissions will not be accepted without prior written agreement. All Labs are individual assignments unless explicitly told differently at the beginning of the lab. Any student caught copying another student's answers will be given a '0' for the assignment. Any further violation will result in the student being withdrawn from the course.

Grading System		Scale	
Module 0 Assignments:	5%	A	90-100
Laboratory Assignments:	45%	B	80-89
End of Chapter, Comprehensive Labs	25%	C	70-79
Final Exam	25%	D	60-69

Quizzes and Exams

- **No late submission of assignment without prior written agreement.** Failure to submit a lab report on time will result in a zero. It is the student's responsibility to notify the professor prior to the due date in order to receive special consideration.
- **Cheating is prohibited.** Any student caught cheating, the instructor, has the right to withdraw the student from the class and recommend expulsion from the program.
- Each student is required to follow Valencia policy regarding academic honesty. All work submitted by students is expected to be the result of the student's individual thoughts, research, and self-expression unless the assignment specifically states "group project."
- All exams are individual assignments. If anyone else turns in your work, all involved will be withdrawn from the course and reported for academic misconduct.

Miscellaneous Rules

- This is an online class with no required face to face meetings.
- It is the student's responsibility to withdraw from the course. Any withdrawal after the withdrawal deadline could result in WF.
- No make-up labs, quizzes, homework, or exams are permitted unless prior arrangement with the instructor has been made.
- You must satisfactorily complete all the course requirements to receive a passing grade.

Course Summary:

Date	Details	Due
	Introduction (Discussion)-Required Attendance Activity (https://online.valenciacollege.edu/courses/184114/assignments/4919696)	due by 11:59pm
	Microsoft Teams-Proof of Accessing The Course Channel on Microsoft Teams (https://online.valenciacollege.edu/courses/184114/assignments/4919720)	due by 11:59pm
Thu Aug 24, 2023	Registering with the Red Hat Linux Academy-Required Attendance Activity (https://online.valenciacollege.edu/courses/184114/assignments/4919722)	due by 11:59pm
	The NDG Netlab Server-Proof of Accessing Your Linux Equipment Pod (https://online.valenciacollege.edu/courses/184114/assignments/4919723)	due by 11:59pm
	The Red Hat Linux Academy-Proof of Accessing the Web-Based Curriculum (https://online.valenciacollege.edu/courses/184114/assignments/4919724)	due by 11:59pm
Thu Aug 31, 2023	Chapter 2 Labs-End-of-Chapter, Comprehensive Lab (https://online.valenciacollege.edu/courses/184114/assignments/4982545)	due by 11:59pm
	Chapter 2 Labs-Guided Exercise: Access the Command Line with the Desktop (https://online.valenciacollege.edu/courses/184114/assignments/4919736)	due by 11:59pm
Thu Sep 7, 2023	Chapter 3 Labs-End-of-Chapter, Comprehensive Lab (https://online.valenciacollege.edu/courses/184114/assignments/4982726)	due by 11:59pm
	Chapter 3 Labs-Guided Exercise: Make Links Between Files (https://online.valenciacollege.edu/courses/184114/assignments/4982724)	due by 11:59pm
	Chapter 3 Labs-Guided Exercise: Manage Files with Command-Line Tools (https://online.valenciacollege.edu/courses/184114/assignments/4982636)	due by 11:59pm
Thu Sep 14, 2023	Chapter 5 Labs-End-of-Chapter, Comprehensive Lab (https://online.valenciacollege.edu/courses/184114/assignments/4983294)	due by 11:59pm
	Chapter 5 Labs-Guided Exercises: Change the Shell Environment (https://online.valenciacollege.edu/courses/184114/assignments/4983124)	due by 11:59pm
	Chapter 5 Labs-Guided Exercise: Edit Text Files From the Shell Prompt (https://online.valenciacollege.edu/courses/184114/assignments/4982864)	due by 11:59pm
Thu Sep 21, 2023	Chapter 6 Labs-End-of-Chapter, Comprehensive Lab (https://online.valenciacollege.edu/courses/184114/assignments/4984975)	due by 11:59pm
	Chapter 6 Labs-Guided Exercises: Gain Superuser Access (https://online.valenciacollege.edu/courses/184114/assignments/4984914)	due by 11:59pm
	Chapter 6 Labs-Guided Exercises: Manage Local Group Accounts (https://online.valenciacollege.edu/courses/184114/assignments/4984970)	due by 11:59pm
	Chapter 6 Labs-Guided Exercises: Manage Local User Accounts (https://online.valenciacollege.edu/courses/184114/assignments/4984968)	due by 11:59pm

Date	Details	Due
	Chapter 6 Labs-Guided Exercis: Manage User Passwords (https://online.valenciacollege.edu/courses/184114/assignments/4984972)	due by 11:59pm
	Chapter 7 Labs-End-of-Chapter, Comprehensive Lab (https://online.valenciacollege.edu/courses/184114/assignments/4986720)	due by 11:59pm
Thu Sep 28, 2023	Chapter 7 Labs-Manage Default Permissions and File Access (https://online.valenciacollege.edu/courses/184114/assignments/4986558)	due by 11:59pm
	Chapter 7 Labs-Manage File System Permissions from the Command Line. (https://online.valenciacollege.edu/courses/184114/assignments/4985860)	due by 11:59pm
Thu Oct 5, 2023	File Permissions Practice Exercise (https://online.valenciacollege.edu/courses/184114/assignments/4919719)	due by 11:59pm
	Chapter 8 Labs-End-of-Chapter, Comprehensive Lab (https://online.valenciacollege.edu/courses/184114/assignments/4987128)	due by 11:59pm
	Chapter 8 Labs-Guided Exercis: Monitor Process Activity (https://online.valenciacollege.edu/courses/184114/assignments/4987126)	due by 11:59pm
Thu Oct 12, 2023	Chapter 8 Labs-Guided Exercise: Control Jobs (https://online.valenciacollege.edu/courses/184114/assignments/4986732)	due by 11:59pm
	Chapter 8 Labs-Guided Exercise: Kill Processes (https://online.valenciacollege.edu/courses/184114/assignments/4987081)	due by 11:59pm
	Chapter 9 Labs-End-of-Chapter, Comprehensive Lab (https://online.valenciacollege.edu/courses/184114/assignments/4993067)	due by 11:59pm
Thu Oct 19, 2023	Chapter 9 Labs-Guided Exercis: Control System Services (https://online.valenciacollege.edu/courses/184114/assignments/4989066)	due by 11:59pm
	Chapter 9 Labs-Guided Exercise: Identify Automatically Started System Processes (https://online.valenciacollege.edu/courses/184114/assignments/4989058)	due by 11:59pm
	Chapter 10 Labs-End-of-Chapter, Comprehensive Lab (https://online.valenciacollege.edu/courses/184114/assignments/4989073)	due by 11:59pm
	Chapter 10 Labs-Guided Exercis: Configure and Secure SSH (https://online.valenciacollege.edu/courses/184114/assignments/4989068)	due by 11:59pm
Thu Oct 26, 2023	Chapter 10 Labs-Guided Exercis: Configure SSH Key-based Authentication (https://online.valenciacollege.edu/courses/184114/assignments/4989069)	due by 11:59pm
	Chapter 10 Labs-Guided Exercis: Customize OpenSSH Service Configuration (https://online.valenciacollege.edu/courses/184114/assignments/4989070)	due by 11:59pm
	Chapter 11 Labs-End-of-Chapter, Comprehensive Lab (https://online.valenciacollege.edu/courses/184114/assignments/4990116)	due by 11:59pm
	Chapter 11 Labs-Guided Exercis: Configure Hostname and Name Resolution (https://online.valenciacollege.edu/courses/184114/assignments/4990108)	due by 11:59pm
Thu Nov 2, 2023	Chapter 11 Labs-Guided Exercis: Configure Networking from the Command Line (https://online.valenciacollege.edu/courses/184114/assignments/4990101)	due by 11:59pm
	Chapter 11 Labs-Guided Exercis: Edit Network Configuration Files (https://online.valenciacollege.edu/courses/184114/assignments/4990105)	due by 11:59pm
	Chapter 11 Labs-Guided Exercis: Validate Network Configuration (https://online.valenciacollege.edu/courses/184114/assignments/4990100)	due by 11:59pm
	Chapter 12 Labs-End-of-Chapter, Comprehensive Lab (https://online.valenciacollege.edu/courses/184114/assignments/4992520)	due by 11:59pm
Thu Nov 9, 2023	Chapter 12 Labs-Guided Exercis: Enable DNF Software Repositories (https://online.valenciacollege.edu/courses/184114/assignments/4992584)	due by 11:59pm
	Chapter 12 Labs-Guided Exercis: Explain and Investigate RPM Software Packages (https://online.valenciacollege.edu/courses/184114/assignments/4991354)	due by 11:59pm
	Chapter 12 Labs-Guided Exercis: Install and Update Software Packages with DNF (https://online.valenciacollege.edu/courses/184114/assignments/4992541)	due by 11:59pm
	Chapter 13 Labs-End-of-Chapter, Comprehensive Lab (https://online.valenciacollege.edu/courses/184114/assignments/4993668)	due by 11:59pm
Thu Nov 16, 2023	Chapter 13 Labs-Guided Exercis: Locate Files on a System (https://online.valenciacollege.edu/courses/184114/assignments/4993659)	due by 11:59pm
	Chapter 13 Labs-Guided Exercis: Mount and Unmount File Systems (https://online.valenciacollege.edu/courses/184114/assignments/4992871)	due by 11:59pm
	Chapter 14 Labs-Guided Exercis: Analyze and Manage Remote Servers (https://online.valenciacollege.edu/courses/184114/assignments/4993669)	due by 11:59pm
Thu Nov 30, 2023	Chapter 14 Labs-Guided Exercis: Create a Diagnostic Report (https://online.valenciacollege.edu/courses/184114/assignments/4994536)	due by 11:59pm
	Optional Lab: Getting Started with Red Hat Enterprise Linux (Building your own RHEL 9 Virtual Machine) (https://online.valenciacollege.edu/courses/184114/assignments/4919721)	due by 11:59pm
	Outroduction (https://online.valenciacollege.edu/courses/184114/assignments/4919695)	due by 11:59pm
	Chapter 15 Comprehensive Review-Final Exam, Lab1: Manage Files from the Command Line (https://online.valenciacollege.edu/courses/184114/assignments/4987130)	due by 11:59pm
Thu Dec 7, 2023	Chapter 15 Comprehensive Review-Final Exam, Lab2: Manage Users and Groups, Permissions, and Processes (https://online.valenciacollege.edu/courses/184114/assignments/4987528)	due by 11:59pm
	Chapter 15 Comprehensive Review-Final Exam, Lab3: Configure and Manage a Server (https://online.valenciacollege.edu/courses/184114/assignments/4987529)	due by 11:59pm
	Chapter 15 Comprehensive Review-Final Exam, Lab4: Manage Networks (https://online.valenciacollege.edu/courses/184114/assignments/4987530)	due by 11:59pm
	Chapter 15 Comprehensive Review-Final Exam, Lab5: Mount File Systems and Find Files (https://online.valenciacollege.edu/courses/184114/assignments/4987531)	due by 11:59pm