

Course Syllabus

[Jump to Today](#) [Edit](#)

COURSE INFORMATION

Course Name: Computer Virtualization Technology
 Course ID/Section: CET 2544C
 Term/Year: Fall Term, 2023-2024
 Modality: Online
 Length of Term: 16 Weeks
 Credit Hours: Three Credit Hours
 Campus/Building/Room: Online

INSTRUCTOR CONTACT INFORMATION

Instructor: Dr. Wael Yousif, CompTIA Linux+, CCNA, CCDA, CCAI, C|EH, C|EI, GCFW, VCA, CRFS
 Red Hat Certified System Administrator, AWS Certified Cloud Practitioner.

Email: wyouisif@valenciacollege.edu (<mailto:wyouisif@valenciacollege.edu>)

Phone: 407-582-1064

Office Location: 11-260, West Campus

[Virtual Office Hours in Microsoft Teams:](#)

<https://teams.microsoft.com/j/team/19%3axcEIVujgwx4eDldJHq5yyhNa2JfvAe1dtYUjCfVzVLS1%40thread.tacv2/conversations?groupId=274ab665-02a4-407a-97b2-aa9d3d03ea7a&tenantId=0e886695-3d17-41a8-8544-135b0a92a47c>

Monday 9:00 AM to 11:30 AM

Tuesday 7:00 PM - 9:00 PM

Wednesday 9:00 AM - 11:30 AM

Thursday 9:30 AM - 10:30 AM

Friday 10:00 AM – 12:00 Noon



COURSE DESCRIPTION

Prerequisites: CET 2178C and CET 2486C

This course is designed to provide students with a working knowledge of VMware vSphere as a leading virtualization product. In addition to learning how to install and manage VMware vSphere, students will learn how to apply virtualization technology to set up virtual networks, provide for disaster recovery, storage solutions, create high-availability solutions with clustering, improve security and performance, and use management software to administer the virtual data center.

This course aligns to the [vmWare Certified Technical Associate \(https://www.vmware.com/learning/certification/vcta-dcv.html\)](https://www.vmware.com/learning/certification/vcta-dcv.html) | Data Center Virtualization Industry certification.

COURSE OUTCOMES

What You'll Learn:

1. Install and configure ESXi hosts
2. Deploy and configure vCenter
3. Use the vSphere Client to create the vCenter inventory and assign roles to vCenter users
4. Create and configure virtual networks using vSphere standard switches and distributed switches
5. Create and configure datastores using storage technologies supported by vSphere
6. Use the vSphere Client to create virtual machines, templates, clones, and snapshots
7. Create a content library for deploying virtual machines
8. Manage virtual machine resource use
9. Configure ESXi hosts to support vSphere vMotion and vSphere Storage vMotion migrations
10. Create and configure a vSphere cluster that is enabled with vSphere High Availability and vSphere Distributed Resource Scheduler
11. Manage the life cycle of vSphere to keep vCenter and ESXi hosts up to date

TEXTBOOKS & REQUIRED MATERIALS

1) eBook:

VMware vSphere: Install, Configure, Manage [V8]. Download in PDF format: [vSphere ICM 8 eBook.pdf \(https://online.valenciacollege.edu/courses/183966/files/42962320?wrap=1\)](https://online.valenciacollege.edu/courses/183966/files/42962320?wrap=1) ↓

https://online.valenciacollege.edu/courses/183966/files/42962320/download?download_frd=1

<https://online.valenciacollege.edu/courses/183966/files/42962320?wrap=1>) 2) Access to the Remote Laboratory Environment:

Computer Virtualization Tech



VMware vSphere ICM 8.0 (6-Month Access)

Purchase the Access Code for the vSphere ICM Labs 8.0 Equipment Pod.

Be Advised that You are better off buying direct from the vendor if you can. It is highly recommended that you purchase your access code directly from the NDG Vendor at the discounted price of \$60 for instantaneous access to your 6

months subscription. The bookstore sometimes takes over a week or even two weeks to deliver the access codes via mail which may set you behind in your assignments. You can [use this link](https://portal.netdevgroup.com/learn/vsphere-icm-8/enroll) (https://portal.netdevgroup.com/learn/vsphere-icm-8/enroll) to purchase directly from NDG.

If you bought your access code from the bookstore, then when you have received your access code via mail, you can Redeem it and Enroll here:

<https://portal.netdevgroup.com/learn/vw762a/enroll> (https://portal.netdevgroup.com/learn/vw762a/enroll).

Use the guidance provided in the enrollment 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%2Fdocs%2Fdocumentation%2Fenrollment_guide_labs.pdf&data=05%7C01%7Cwyousi%40valenciacollege.edu%7Cbe01d684b994e9052f308da7b87185e%7C0e8866953d1741a88544135b0a92a47c%7C1%7C0%7C63795811388812337%7CUnknown%7CTWFpbGZsb3d9eJWJiMC4wLjAwMDAilCJQIplV2luMzIlLCJBTiBlk1haWwLjXVCI6Mn0%3D%7C3000%7C%7C%7C&data=gys3ElnhUJfoAMKNAAdaPghMJeKc310v4KTKvrmxIQ%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%2Fdocs%2Fdocumentation%2Fenrollment_guide_labs.pdf&data=05%7C01%7Cwyousi%40valenciacollege.edu%7Cbe01d684b994e9052f308da7b87185e%7C0e8866953d1741a88544135b0a92a47c%7C1%7C0%7C63795811388812337%7CUnknown%7CTWFpbGZsb3d9eJWJiMC4wLjAwMDAilCJQIplV2luMzIlLCJBTiBlk1haWwLjXVCI6Mn0%3D%7C3000%7C%7C%7C&data=hpVCI%2BxUx2CKJHSIBJ54pQByCWHdlUJcgeAVhOwHQCrf%3D&reserved=0)

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/183966/files/4429872/wrap=1) (https://online.valenciacollege.edu/courses/183966/files/4429872/wrap=1). [Download](https://online.valenciacollege.edu/courses/183966/files/4429872/download?download_frd=1) (https://online.valenciacollege.edu/courses/183966/files/4429872/download?download_frd=1)

COURSE COMPETENCIES

The course seeks to strengthen students' skills applicable to Valencia's Student Core Competencies: **Think, Value, Communicate, and Act.**

IMPORTANT DATES

College Calendar: <http://valenciacollege.edu/calendar> (<http://www.valenciacollege.edu/calendar>)

COLLEGE POLICIES

No Show Policy

Class attendance is required for face-to-face classes beginning with the first class meeting. If you do not attend the first class meeting, you may be withdrawn from the class as a "no show." Class attendance is required for online classes; students who are not actively participating in an online class and/or do not submit the required attendance activity or assignment by the scheduled due date must be withdrawn by the instructor at the end of the first week as a "no show". If you are withdrawn as a "no show," you will be financially responsible for the class and a final grade of "WN" will appear on your transcript for the course."

Withdrawal Policy

Per [Valencia policy](http://catalog.valenciacollege.edu/academicpoliciesprocedures/courseattempts/coursewithdrawal/) (<http://catalog.valenciacollege.edu/academicpoliciesprocedures/courseattempts/coursewithdrawal/>), a student who withdraws from class before the established deadline for a particular term will receive a grade of "W." A student is not permitted to withdraw after the withdrawal deadline.

A faculty member **will** withdraw a student up to the withdrawal deadline for violation of the class attendance policy. A student who is withdrawn by faculty for violation of the class attendance policy will receive a grade of "W." After the withdrawal deadline, faculty will not withdraw a student and the student will receive the grade earned at the end of the course. Any student who withdraws or is withdrawn from a class during a third or subsequent attempt in the same course will be assigned a grade of "F." If you do not intend to complete the course, you must withdraw yourself prior to the withdrawal date.

College Student Conduct Policy

Valencia is dedicated not only to the advancement of knowledge and learning but also to the development of responsible personal and social conduct. As a registered student, you assume the responsibility for conducting yourself in a manner that contributes positively to Valencia's learning community and that does not impair, interfere with, or obstruct the orderly conduct, processes, and functions of the college as described in the [Student Code of Conduct](http://valenciacollege.edu/generalcounsel/policy/documents/Volume8/8-03-Student-Code-of-Conduct.pdf) (<http://valenciacollege.edu/generalcounsel/policy/documents/Volume8/8-03-Student-Code-of-Conduct.pdf>).

Academic Honesty

All forms of academic dishonesty are prohibited at Valencia College. [Academic dishonesty](http://valenciacollege.edu/generalcounsel/policy/documents/Volume8/8-11-Academic-Dishonesty.pdf) (<http://valenciacollege.edu/generalcounsel/policy/documents/Volume8/8-11-Academic-Dishonesty.pdf>), includes, but is not limited to, acts or attempted acts of plagiarism, cheating, furnishing false information, forgery, alteration or misuse of documents, misconduct during a testing situation, facilitating academic dishonesty, and misuse of identification with intent to defraud or deceive.

All work submitted by students is expected to be the result of the students' individual thoughts, research, and self-expression. Whenever a student uses ideas, wording, or organization from another source, the source shall be appropriately acknowledged. If a student is caught submitting plagiarized work a first offense will result in a zero score on the assignment, a second offense will result a class grade of F.

Students with Disabilities

Valencia is committed to ensuring that all of its programs and services are accessible to students with disabilities. [The Office for Students with Disabilities \(OSD\)](http://valenciacollege.edu/osd/) (<http://valenciacollege.edu/osd/>), determines reasonable and appropriate accommodations for qualified students with documented disabilities based upon the need and impact of the specific disability.

Any student requiring course accommodations due to physical, emotional or learning disability must contact the instructor and provide a *Notification to Instructor* form by the end of the second week of class. To obtain a letter of accommodation, contact OSD at 407-582-2229.

Baycare Student Assistance Services

Valencia College strives to ensure all our students have a rewarding and successful college experience. To that purpose, Valencia students can get immediate help with issues dealing with stress, anxiety, depression, adjustment difficulties, substance abuse, time management as well as relationship problems dealing with school, home or work. [BayCare Behavioral Health Student Assistance Program \(SAP\)](http://catalog.valenciacollege.edu/student-services/baycarestudentassistanceservices/) (<http://catalog.valenciacollege.edu/student-services/baycarestudentassistanceservices/>), services are free to all Valencia students and available 24 hours a day by calling (800) 878-5470. If needed, the counselor may refer the student to appropriate resources or to speak face-to-face with a licensed counselor.

COLLEGE LINKS

[College Catalog](http://valenciacollege.edu/catalog/) (<http://valenciacollege.edu/catalog/>)

[Valencia Policy Manual](http://valenciacollege.edu/generalcounsel/policy/) (<http://valenciacollege.edu/generalcounsel/policy/>)

[Student Handbook](http://valenciacollege.edu/pdf/student-handbook.pdf) (<http://valenciacollege.edu/pdf/student-handbook.pdf>)

[Microsoft Office Instructions for free software](http://valenciacollege.edu/support/howto/documents/Valencia_Office-ProPlus-Instructions.pdf) (http://valenciacollege.edu/support/howto/documents/Valencia_Office-ProPlus-Instructions.pdf)

Course Support: Online tutoring in Microsoft Teams

Microsoft® Teams™ - Team Name: [NET_OpenLab](https://teams.microsoft.com/j/team/19%3a09fc9cf5ebc2492592b0b1162f447b65%40thread.tacv2/conversations?groupId=13a5a831-04d6-428f-8da4-0a2c7ea134a9&tenantid=0e886695-3d17-41a8-8544-135b0a92a47c)

Microsoft® Teams™ - Web Link: [NET_OpenLab on Microsoft® Teams](https://teams.microsoft.com/j/team/19%3a09fc9cf5ebc2492592b0b1162f447b65%40thread.tacv2/conversations?groupId=13a5a831-04d6-428f-8da4-0a2c7ea134a9&tenantid=0e886695-3d17-41a8-8544-135b0a92a47c) (https://teams.microsoft.com/j/team/19%3a09fc9cf5ebc2492592b0b1162f447b65%40thread.tacv2/conversations?groupId=13a5a831-04d6-428f-8da4-0a2c7ea134a9&tenantid=0e886695-3d17-41a8-8544-135b0a92a47c)

Microsoft® Teams™ - Offline Link: [Microsoft® Teams™ App download](https://www.microsoft.com/en-us/microsoft-365/microsoft-teams/download-app) (https://www.microsoft.com/en-us/microsoft-365/microsoft-teams/download-app)

Easy assistance requests: just chat a message to [@help](https://teams.microsoft.com/j/team/19%3a09fc9cf5ebc2492592b0b1162f447b65%40thread.tacv2/conversations?groupId=13a5a831-04d6-428f-8da4-0a2c7ea134a9&tenantid=0e886695-3d17-41a8-8544-135b0a92a47c) during normal [Open Lab hours](https://teams.microsoft.com/j/team/19%3a09fc9cf5ebc2492592b0b1162f447b65%40thread.tacv2/conversations?groupId=13a5a831-04d6-428f-8da4-0a2c7ea134a9&tenantid=0e886695-3d17-41a8-8544-135b0a92a47c) (https://teams.microsoft.com/j/team/19%3a09fc9cf5ebc2492592b0b1162f447b65%40thread.tacv2/conversations?groupId=13a5a831-04d6-428f-8da4-0a2c7ea134a9&tenantid=0e886695-3d17-41a8-8544-135b0a92a47c) and the request is sent to the entire [NET_OpenLab](https://teams.microsoft.com/j/team/19%3a09fc9cf5ebc2492592b0b1162f447b65%40thread.tacv2/conversations?groupId=13a5a831-04d6-428f-8da4-0a2c7ea134a9&tenantid=0e886695-3d17-41a8-8544-135b0a92a47c) (https://teams.microsoft.com/j/team/19%3a09fc9cf5ebc2492592b0b1162f447b65%40thread.tacv2/conversations?groupId=13a5a831-04d6-428f-8da4-0a2c7ea134a9&tenantid=0e886695-3d17-41a8-8544-135b0a92a47c), support staff.

Access to tutoring via real-time team chats, one-on-one chats, phone calls, or video meetings.

DISCLAIMER STATEMENT

Changes to the course calendar may be made at the discretion of the professor, and students will be notified of any changes in class and/or via the Canvas Inbox conversations tool.

Course Summary:

Date	Details	Due
Mon Aug 21, 2023	Live Class Orientation on Zoom (https://online.valenciacollege.edu/calendar?event_id=414251&include_contexts=course_183966)	6pm to 7:15pm
Tue Aug 22, 2023	Discussion 0: Introduction Required Attendance Activity (https://online.valenciacollege.edu/courses/183966/assignments/4919021)	due by 11:59pm

Date	Details	Due
Thu Aug 24, 2023	Microsoft Teams-Proof of Accessing The Course Channel on Microsoft Teams (https://online.valenciacollege.edu/courses/183966/assignments/4919046)	due by 11:59pm
	Lab 01: Accessing the Lab Environment (https://online.valenciacollege.edu/courses/183966/assignments/4919022)	due by 11:59pm
Tue Aug 29, 2023	Discussion 01: Course Introduction (https://online.valenciacollege.edu/courses/183966/assignments/4919012)	due by 11:59pm
Thu Aug 31, 2023	Lab 02 Installing and Configuring an Exsi Host (https://online.valenciacollege.edu/courses/183966/assignments/4919023)	due by 11:59pm
Tue Sep 5, 2023	Discussion 02: vSphere and Virtualization Overview (https://online.valenciacollege.edu/courses/183966/assignments/4919011)	due by 11:59pm
Thu Sep 7, 2023	Lab 03 Deploying VMware vCenter Server (https://online.valenciacollege.edu/courses/183966/assignments/4919024)	due by 11:59pm
	Lab 04 Creating and Managing the vCenter Inventory (https://online.valenciacollege.edu/courses/183966/assignments/4919025)	due by 11:59pm
Tue Sep 12, 2023	Discussion 03: Installing and Configuring ESXi (https://online.valenciacollege.edu/courses/183966/assignments/4919013)	due by 11:59pm
Thu Sep 14, 2023	Lab 05 Adding an Identity Source (https://online.valenciacollege.edu/courses/183966/assignments/4919026)	due by 11:59pm
	Lab 06 Users, Groups and Permissions (https://online.valenciacollege.edu/courses/183966/assignments/4919027)	due by 11:59pm
Tue Sep 19, 2023	Discussion 04: Deploying and Configuring vCenter Server (https://online.valenciacollege.edu/courses/183966/assignments/4919014)	due by 11:59pm
Thu Sep 21, 2023	Lab 07 Creating Standard Switches (https://online.valenciacollege.edu/courses/183966/assignments/4919029)	due by 11:59pm
	Lab 8 Configuring vSphere Distributed Switches (https://online.valenciacollege.edu/courses/183966/assignments/4939818)	due by 11:59pm
Tue Sep 26, 2023	Discussion 05: vSphere Networking (https://online.valenciacollege.edu/courses/183966/assignments/4919015)	due by 11:59pm
Thu Sep 28, 2023	Lab 9 Accessing iSCSI Storage (https://online.valenciacollege.edu/courses/183966/assignments/4919030)	due by 11:58pm
	Lab 10 Managing VMFS Datastores (https://online.valenciacollege.edu/courses/183966/assignments/4919031)	due by 11:59pm
Thu Oct 5, 2023	Lab 11 Accessing NFS Storage (https://online.valenciacollege.edu/courses/183966/assignments/4919032)	due by 11:59pm
Tue Oct 10, 2023	Discussion 06: vSphere Storage (https://online.valenciacollege.edu/courses/183966/assignments/4919016)	due by 11:59pm
Thu Oct 12, 2023	Lab 12 Creating and Removing a Virtual Machine (https://online.valenciacollege.edu/courses/183966/assignments/4941060)	due by 11:59pm
	Lab 13 Installing VMWare Tools (https://online.valenciacollege.edu/courses/183966/assignments/4941061)	due by 11:59pm
Thu Oct 19, 2023	Lab 14 Adding Virtual Hardware (https://online.valenciacollege.edu/courses/183966/assignments/4941062)	due by 11:59pm
	Lab 16 Creating Templates and Deploying VMs (https://online.valenciacollege.edu/courses/183966/assignments/4919034)	due by 11:59pm
	Lab 15 Modifying Virtual Machines (https://online.valenciacollege.edu/courses/183966/assignments/4919035)	due by 11:59pm
Thu Oct 26, 2023	Lab 17 Using Local Content Libraries (https://online.valenciacollege.edu/courses/183966/assignments/4919035)	due by 11:59pm
	Lab 18 Using Subscribed Content Libraries (https://online.valenciacollege.edu/courses/183966/assignments/4941063)	due by 11:59pm
Tue Oct 31, 2023	Discussion 07: Deploying Virtual Machine (https://online.valenciacollege.edu/courses/183966/assignments/4919017)	due by 11:59pm
Thu Nov 2, 2023	Lab 19 Versioning VM Templates in Content Libraries (https://online.valenciacollege.edu/courses/183966/assignments/4919039)	due by 11:58pm
	Lab 20 vSphere vMotion Migration (https://online.valenciacollege.edu/courses/183966/assignments/4919037)	due by 11:59pm
Thu Nov 9, 2023	Lab 21 vSphere Storage vMotion Migration (https://online.valenciacollege.edu/courses/183966/assignments/4919040)	due by 11:59pm
Thu Nov 16, 2023	Lab 22 Working with Snapshots (https://online.valenciacollege.edu/courses/183966/assignments/4919038)	due by 11:59pm
	Lab 23 Controlling VM Resources (https://online.valenciacollege.edu/courses/183966/assignments/4919041)	due by 11:59pm
Tue Nov 21, 2023	Discussion 08: Managing Virtual Machines (https://online.valenciacollege.edu/courses/183966/assignments/4919018)	due by 11:59pm
Tue Nov 28, 2023	Discussion 09: Deploying and Configuring vSphere Clusters (https://online.valenciacollege.edu/courses/183966/assignments/4919019)	due by 11:59pm
Thu Nov 30, 2023	Lab 24 Implementing vSphere DRS Clusters (https://online.valenciacollege.edu/courses/183966/assignments/4919042)	due by 11:57pm
	Lab 25 Configuring vSphere High Availability (https://online.valenciacollege.edu/courses/183966/assignments/4919043)	due by 11:59pm
Tue Dec 5, 2023	Discussion 10: Managing the vSphere Lifecycle (https://online.valenciacollege.edu/courses/183966/assignments/4919020)	due by 11:59pm
	Discussion 11: Outroduction (https://online.valenciacollege.edu/courses/183966/assignments/4919010)	due by 11:59pm
Thu Dec 7, 2023	Lab 26 Using vSphere Lifecycle Manager (https://online.valenciacollege.edu/courses/183966/assignments/4919044)	due by 11:59pm