



Pre-Requisites

College Algebra transcripts
or
Math placement test available online

Outcomes

- Analyze network architecture, standards, security & protocols
- Deploy Linux/Win OS apps
- Architect cloud solutions
- Develop skills in scripting & automation

Certification Opportunities*



CSC 331: Windows Server Configuration and Management (IAM/Linux Admin LDAP/Active Directory)

- Install/config. domain controllers, AD CS, AD FS, & AD RMS
- Create/manage AD users, groups, OUs, & computers
- Configure service authentication & account policies
- Maintain Active Directory
- Understand LDAP and IAM with Linux Administration
- Configure AD in a complex enterprise environment
- Create and manage GPOs
- Config Group Policy processing, settings & preferences
- Manage certificates & Implement WAP

CSC 160: Computing Technologies (Introduction to Computer Science)

- Perform Operations using Data Type and Operators
- Control Flow with Decisions and Loops
- Perform Input and Output Operations
- Document and Structure Code
- Perform Troubleshooting and Error Handling
- Perform Operations using Modules and Tools
- Modern Application Development with Python on AWS Specialization

CSC 330: Networking and Server Fundamentals

CompTIA Network+ Exam Preparation

- Introduce the OSI Model
- Understanding; LAN, Wired & Wireless Networks, IP, & WAN
- Defining Network Infrastructure & security
- Install and configure DNS servers
- Create and configure DNS zones & records
- Install, configure and manage DHCP
- Implement: Network VPN connectivity solution
- IPv4/IPv6 addressing solutions, VLSM, subnetting
- Develop high-performance network solutions
- Identify scenarios/requirements for implementing SDN

CSC 235: Introduction to Linux

CompTIA Linux+ Exam Preparation

- Provision and maintain Linux Infrastructure
- Gain an understanding of Linux commands and architecture
- Work at the command line to install, update, and configure system components
- Learn standards and management for user and file permissions
- Understand fundamentals of system security, performance, and maintenance
- Explore the implementation of tools for automating these practices

CSC 332: Configuring Advanced Windows Server Services (Linux/Win 2022)

- Use administrative techniques and tools in WS2022 and Linux
- Implement identity Services
- Manage network infrastructure services
- Configure file servers and storage
- Manage VMs using Hyper-V virtualization & containers
- Apply security features to protect critical resources.
- Configure Remote Desktop Services
- Implement remote access and web services
- Implement service/performance monitoring & apply troubleshooting

CSC 456: Configuring and Deploying Cloud Technologies

AWS Cloud Practitioner Exam Preparation

- Create and scale virtual machines
- Implement storage solutions
- Configure virtual networking
- Back up & share data using Data Services
- Connect to the cloud & on-premises sites
- AWS CDK
- AWS Identity and Access Management
- Monitor infrastructure
- Manage network traffic
- Secure identities

* Two certification exam vouchers are included in lab fees. WAV2T reserves the right to change which certifications are included under the voucher program.



Cloud Application Development (CAD) Learning Objectives

October 3, 2023

Pre-Requisites

College Algebra transcripts
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Math placement test available online

Outcomes

- ❑ Program using Object Oriented languages
- ❑ Apply Software Development Lifecycle (SDL)
- ❑ Develop web applications
- ❑ Design & build databases

Certification Opportunities*



* Three certification exam vouchers are included in lab fees. WAV2T reserves the right to change which certifications are included under the voucher program.

CSC 160: Computing Technologies (Python/ Introduction To Programing)

- ❑ Perform operations using data type and operators
- ❑ Control flow with decisions and loops
- ❑ Perform input and output operations
- ❑ Document and structure code
- ❑ Perform troubleshooting and error handling
- ❑ Perform operations using modules and tools
- ❑ Current application development with Python on AWS specialization
- ❑ Learn to troubleshoot software problems; students provide peer feedback on code revisions

CSC 235: Introduction to Linux (Open- Source Dev)

CompTIA Linux+
Exam Preparation

- ❑ Open-source software development tools
- ❑ Working from CLI (command line interface)
- ❑ Filesystem layout, partitions
- ❑ Monitoring utilities
- ❑ Linux tools for developers
- ❑ Building packages out of software in Linux
- ❑ Using Git for distributed development
- ❑ Make changes in repositories; root and user
- ❑ Installing and securing NoSQL on Linux distributions
- ❑ Control changes made by other individuals
- ❑ Discover errors in your work and go back to earlier project states
- ❑ Manage making commits, diffs, merges, rebases

CSC 230: Introduction to Web Development (HTML5, CSS3 and JavaScript)

- ❑ Describe HTML5 features & create/style HTML5 pages
- ❑ Add interactivity to an HTML5 page using JavaScript
- ❑ Create HTML5 forms with input types/validate user input
- ❑ Send/receive data using XMLHttpRequest/ Fetch API
- ❑ Build web-based application with NoSQL backend
- ❑ Create well-structured JavaScript code
- ❑ Identify and use current JavaScript version compatible with web browsers
- ❑ Use HTML5 APIs
- ❑ Create Web applications that support offline operations
- ❑ Style HTML5 pages using CSS3, vector graphics, and animation
- ❑ Use web sockets to send data to web apps & servers
- ❑ Use WebPack to package web apps for production

CSC 205: Cloud Application Development (Java/Object Oriented Programming)

- ❑ Introduction to Java syntax and variables
- ❑ Define classes and instantiate objects. Use of fields and methods.
- ❑ Use instance, static, and overloaded methods Introduction to access modifiers and constructors
- ❑ Understand variable scope, encapsulation, immutable objects, class inheritance (subclasses and super classes)
- ❑ Understand four pillars of object-oriented programming, abstraction, encapsulation, inheritance and polymorphism
- ❑ Define and use enumerations. Understand reference vs value type. Understand object vs reference type
- ❑ Understand exception handling, create custom exceptions, work with arrays, and collections (including list, set, map and deque collections). Introduction to generics.
- ❑ Read and write file data using I/O streams. lambda expressions
- ❑ Composing code using Java Spring Framework

CSC 295: Introduction to Algorithms & Data Structures

- ❑ Analyze and compare code using the asymptotic analysis (Big-O)
- ❑ Implement sequential and interval search algorithms
- ❑ Implement sorting algorithms, such as: bubble sort, selection sort, insertion sort, merge sort, and quicksort
- ❑ Implement data structures such as: array lists, linked lists, stack, queues, and binary search trees graphs
- ❑ Make use of generic programming
- ❑ Acquire skillsets on troubleshooting code revisions

CSC 457: Developing Cloud Solutions (in AWS)

AWS Certified
Developer Associate
Exam Preparation

- ❑ Develop & implement AWS compute solutions using VMs, batch jobs, and by using batch services
- ❑ Create containerized solutions using Docker and Kubernetes
- ❑ Implement AWS functions, storage solutions, relational and NoSQL DB solutions
- ❑ Implement AWS security using authentication, access control & secure data solutions
- ❑ Program a solution to support scalability of apps & services
- ❑ Implement AWS monitoring & logging solutions
- ❑ Develop app service logic apps, integrate AWS search within solutions, and add-in third-party services
- ❑ Understand event-based and message-based solutions



Cybersecurity Administration – Learning Objectives

May 25, 2023

Pre-Requisites

College Algebra transcripts
or
Math placement test available online

Outcomes

- ❑ Understand physical security principles, Internet & wireless security
- ❑ Analyze user authentication, permissions, password & audit policies, encryption & malware
- ❑ Create dedicated firewalls, network isolation & protocol security
- ❑ Configure & protect cloud data stores & local databases
- ❑ Conduct security & risk assessments & system audits
- ❑ Create an incident response report
- ❑ Create a risk assessment report on a real-world business

Certification Opportunities*



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Core

CSC 160: Computing Technologies

Python/PHP

- ❑ Develop skills in Python/PHP/Bash scripting
- ❑ Develop basic programming logic
- ❑ Learn basics of Linux CLI – using Kali Distribution
- ❑ Key topics: conditionals, strings/int/float; tuples, dictionaries, lists, methods, sets, classes, binary/hex
- ❑ Understand key data structures and algorithms
- ❑ Web programming basics
- ❑ Install Git & create a GitHub account

CSC 325: Computer Security

- ❑ Analyze security requirements
- ❑ Understand CIA/DAD triad
- ❑ Relate national security implications of cybersecurity & info. Infrastructure; protection to individual/private
- ❑ Understand how OS, Apps and websites work, how to discover & exploit their vulnerabilities
- ❑ Apply Kali Linux tools: Maltego, Burp Suite, Sqlmap, Metasploit
- ❑ Intro to cryptography: monitor crypto systems
- ❑ Octal and permission settings in Linux
- ❑ Linux CLI core commands

CSC330: Network and Server Fundamentals

CompTIA Network+ Exam Preparation

- ❑ Explain the concepts of computer networking, the protocols: TCP/IP & DHCP & NPS
- ❑ Understand Windows active directory
- ❑ Implement security configuration on network devices & other technologies;
- ❑ Explain the basic concepts of virtualization, virtual machines, and software defined networks
- ❑ Intercept & analyze network traffic
- ❑ Learn how to harden OS/Apps and secure networks from attacks
- ❑ Identify adversary threat vectors (tactics & against / using OSI level protocols)
- ❑ Understand Wireshark. Metasploit, Aircrack-ng, Nmap,

Advanced

CSC 455 Cloud Technologies

AWS Solutions Architect Exam Preparation

- ❑ Explain concepts of Identity Management, the Control Plane, Access Control to cloud/server architectures
- ❑ AAA: Authentication, Authorization, Accounting
- ❑ Cloud security/cloud service models/backup & log analytics
- ❑ Cloud gateways, Web App security, Firewalls & dealing with DDoS threats
- ❑ Cloud Disk & Storage Encryption
- ❑ Identify key legal/ethical/regulatory elements that underpin identity management, AC, & accountability

CSC 364: Cybersecurity Threat Intelligence

CompTIA Sec+ Exam Preparation

- ❑ Monitor use of data files and regulate access to safeguard information in computer files
- ❑ Demonstrate how NIST Cybersecurity Framework is used in planning/assessing info. sys. security plans/ programs
- ❑ Autopsy tools – digital forensics
- ❑ Monitor current report of viruses/understand when to update virus protection systems
- ❑ Reverse engineering (Ghidra)
- ❑ Research top 10 vulnerabilities according to OWASP
- ❑ Shodan.io, OSINT

CSC 426: Vulnerability Assessment:

- ❑ Relate organizational risk management to vulnerability assessment and risk mitigation
- ❑ Apply the concepts of threat modeling & threat surfaces to IT systems, public, private and hybrid cloud environments
- ❑ Explain architectural security elements OSI
- ❑ Monitor current report of viruses/understand when to update virus protection systems
- ❑ Conduct vulnerability assessments using CVE: Common Vulnerabilities and Exposure data, in conjunction with situation-specific threat modeling
- ❑ Develop and implement risk mitigation solutions to contain, eliminate or otherwise mitigate risks found in IT systems



Professional Development

- The Career Development Managers (CDM) for the Washington Veterans to Tech (WaV2T) program are responsible for the job placement function for a cohort of WaV2T students.
- Our CDMs also maintain relationships with employers, and graduates of the WaV2T program, managing the social network of this specialized community.



Resumes

- Translating military experience
- Personal assessment
- Target Resumes



Cover Letters

- Personalization
- Selling yourself



Virtual Presence

- LinkedIn
- Personal branding
- Social Media



Job Search

- Target job market
- Hiring managers
- Recruiters



Interview skills

- Research Company
- Mock Interviews
- Negotiations
- Job offers