

COMPUTER NETWORK SYSTEMS ENGINEERING

Program Purpose: Students who complete Computer Network Systems Engineering courses will gain a technical understanding of computer networks which will allow these students to work in the Information Technology industry. Students who successfully complete this program will be able to understand and apply knowledge of computer networking systems, analyze and understand systems, design and implement systems, troubleshoot and solve system problems, perform computer network forensics, and apply security controls.

The Computer Network Systems Engineering (CNSE) Program provides specific technologies necessary to function effectively as a multi-platform network systems administrator or technical analyst. CNSE provides hands-on training on computer systems, networking hardware and software, and in applying computer network security. Successful program completion qualifies individuals for beginning and intermediate positions in networking administration or technical support positions.

Moorpark College Network System Engineering program is a:

- Microsoft Academy, Cisco System Local Academy
- VMware Academy, and Amazon Web Services Academy and offers Comptia courses, and both Amazon Cloud and Microsoft Azure Cloud courses.

Important Note: Industry demands seem to change almost daily in this growing field. To keep pace with this growing educational need, Moorpark College continually updates, revises and develops its CNSE curriculum. To see the most accurate listing of the courses available, consult the current semester's Schedule of Classes or explore the options listed online (www.moorparkcollege.edu/cnse (<http://www.moorparkcollege.edu/cnse/>)). The Division Office, (805) 553-4121, would also be able to provide updated information, or you can make an appointment with a counselor by calling (805) 378-1428.

Transfer Information

Students planning to transfer need to consult with a counselor, prepare a Student Education Plan, and take advantage of the support services available in the Career Transfer Center located in Fountain Hall, (805) 378-1536.

CNSE M01 Networking Fundamentals 4 Units

Formerly: CNSE M10

In-Class Hours: 35 lecture, 105 laboratory

C-ID: ITIS 150

Provides an overview of the architecture, structure, functions, components and models of the Internet and other computer networks. Covers topics such as Internet Protocol (IP) addressing, network technologies, media and topologies, protocols, the Open Systems Interconnection (OSI) Layer, Transmission Control Protocol (TCP) Layer, security, management tools, and Local Area Network (LAN) versus Wide Area Network (WAN) environments. Prepares students for CompTIA.org Network+ certification.

Grade Modes: Letter Graded, Credit by exam, license etc., Student Option-Letter/Credit, Pass/No Pass Grading

Degree Applicability: Applies to Associate Degree

AA/AS GE: None

Transfer Credit: CSU

UC Credit Limitations: None

CSU GE-Breadth: None

IGETC: None

CNSE M05 Fundamentals of Computer Networking 4 Units

In-Class Hours: 70 lecture

Introduces the current networking hardware and software skills necessary to succeed in the dynamic field of networking. Includes networking fundamentals such as the networking standards and Open Systems Interconnection (OSI) model, transmission basics, network protocols, topologies and access methods, network operating systems, and troubleshooting and network security.

Grade Modes: Letter Graded, Credit by exam, license etc., Student Option-Letter/Credit, Pass/No Pass Grading

Degree Applicability: Applies to Associate Degree

AA/AS GE: None

Transfer Credit: CSU

UC Credit Limitations: None

CSU GE-Breadth: None

IGETC: None

CNSE M06 Cisco Fundamentals of IT Essentials: PC Hardware & Software 4 Units

In-Class Hours: 35 lecture, 105 laboratory

C-ID: ITIS 110

Provides an in-depth introduction to computer hardware and operating systems. Covers the functionality of hardware and software components and best practices in maintenance, security, and safety. Teaches, through hands-on activities and labs, how to assemble and configure a computer, install operating systems and software, and troubleshoot hardware and software problems. Includes concepts such as security, networking, and responsibilities of an information and communication technology professional.

Catalog Notes: Prepares students for CompTIA's A+ certification, and Microsoft desktop certification.

Grade Modes: Letter Graded, Credit by exam, license etc., Student Option-Letter/Credit, Pass/No Pass Grading

Degree Applicability: Applies to Associate Degree

AA/AS GE: None

Transfer Credit: CSU

UC Credit Limitations: None

CSU GE-Breadth: None

IGETC: None

CNSE M13 Internetworking and TCP/IP 4 Units*In-Class Hours:* 35 lecture, 105 laboratory

Examines protocols used in Internetworking. Focuses on Transport Control Protocol/Internet Protocol (TCP/IP) versions 4 and 6. Explores protocol architectures and devices such as switches and routers. Applies tools used in network management including Wireshark Protocol Analysis software.

Advisories/Rec Prep: CNSE M05 or CNSE M18**Grade Modes:** Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**CSU GE-Breadth:** None**IGETC:** None**CNSE M18 Cisco System Computer Networking A 4 Units***In-Class Hours:* 35 lecture, 105 laboratory

Provides introduction to architecture, structure, functions and components of digital networks. Introduces wireless local area networks (WLAN) and network security concepts. Covers how networks operate and perform basic configurations for routers and switches, and implement Internet Protocol (IP). Covers operations on routers and switches including troubleshooting network equipment while configuring advanced functionality using security best practices. Course prepares students for the Cisco Certification Exam.

Advisories/Rec Prep: CNSE M01 or CNSE M05**Grade Modes:** Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**CSU GE-Breadth:** None**IGETC:** None**CNSE M19 Cisco System Computer Networking B 4 Units***In-Class Hours:* 35 lecture, 105 laboratory*Prerequisites:* CNSE M18

Provides intermediate-level instruction on routing and LAN (local area network) switching, VLANs (virtual local area networks), routing protocols, access control lists (ACLs), and network management. Covers WANs (wide area networks), WANs design, point-to-point protocol (PPP), virtual private networking and network management. Covers deployment of a variety of security best practices, and includes automation and programming of network services. Course prepares students for the Cisco Certification Exam.

Grade Modes: Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**CSU GE-Breadth:** None**IGETC:** None**CNSE M30 MS Windows Administration 3 Units***In-Class Hours:* 43.75 lecture, 26.25 laboratory

Provides an in-depth, hands-on introduction to Microsoft client operating system administration. Covers creating and administering user and group accounts, network resources security, network printer server set-up and administration, resources and events auditing, and backup procedures.

Catalog Notes: Prepares students for the current version of the Microsoft certification exam.*Advisories/Rec Prep:* CNSE M05**Grade Modes:** Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**CSU GE-Breadth:** None**IGETC:** None**CNSE M31 MS Windows Network Server 3 Units***In-Class Hours:* 43.75 lecture, 26.25 laboratory*C-ID:* ITIS 155

Provides an in-depth, hands-on introduction to Microsoft Windows Server technical support. Covers server installation, server environment configuration, management of system policies, file system, partition, and fault tolerance. Includes protocols configuration, remote access services implementation, internetworking and intranetworking, and troubleshooting.

Catalog Notes: Prepares students for the current version of the Microsoft certification exam.*Advisories/Rec Prep:* CNSE M30**Grade Modes:** Letter Graded, Credit by exam, license etc., Student Option- Letter/Credit, Pass/No Pass Grading**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**CSU GE-Breadth:** None**IGETC:** None**CNSE M49 Microsoft SQL Server Client Application Architecture 1.5 Units***In-Class Hours:* 17.5 lecture, 26.25 laboratory*Prerequisites:* CNSE M35 and CNSE M39

Provides advanced level instruction in database management emphasizing client-server interface requirements using Microsoft Access. Fourth in a four-course series to provide comprehensive Microsoft SQL Server database management skills. Server-side skills are presumed.

Grade Modes: Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**CSU GE-Breadth:** None**IGETC:** None

CNSE M50 Fundamentals of Voice over IP 2 Units*In-Class Hours:* 17.5 lecture, 52.5 laboratory

Provides the student with fundamental knowledge to configure, troubleshoot and implement Voice over IP (Internet Protocol) using IP Telephony technologies. Includes configuration of Call Manager Express phone systems using gateways and trunks. OTHER: Basic networking skills including access-list creation, and command line router configuration. Student should be familiar with: 1) Basic configuration experience with router command line syntax 2) How to configure features and configure interfaces. 3) Creating and applying access-list statements. Prepares students for relevant certification exams.

Advisories/Rec Prep: CNSE M18 or equivalent**Grade Modes:** Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**CSU GE-Breadth:** None**IGETC:** None**CNSE M52 Cisco Semester 6-Remote Access 4 Units***Prerequisites:* CNSE M17 OR CCNA 2.0 certified. Applies to Associate Degree**Grade Modes:** Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**CSU GE-Breadth:** None**IGETC:** None**CNSE M55 Linux Networking and System Administration 3 Units***In-Class Hours:* 35 lecture, 52.5 laboratory

Teaches the knowledge and skills needed to install, configure, operate, and manage the Linux operating system. Covers topics in Linux system and network administration, Linux network services, Linux Internet services, Linux system maintenance, and security and technical problem solving.

Catalog Notes: Prepares students for CompTia Linux+ certification examination.*Advisories/Rec Prep:* CNSE M01**Grade Modes:** Letter Graded, Credit by exam, license etc., Student Option- Letter/Credit, Pass/No Pass Grading**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**CSU GE-Breadth:** None**IGETC:** None**CNSE M56 CompTIA Advanced Security Practitioner Preparation 3 Units***In-Class Hours:* 35 lecture, 52.5 laboratory

Examines advanced security topics and use of security tools. Includes user access management, advanced storage, automation, networking, logging, software management and security administration tasks with heavy emphasis on applied security. Covers topics from CompTia Advanced Security Practitioner (CASP) certification exam.

Catalog Notes: Prepares students for CompTia Advanced Security Practitioner certification exam.*Advisories/Rec Prep:* CNSE M55 and CNSE M82**Grade Modes:** Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**CSU GE-Breadth:** None**IGETC:** None**CNSE M57 Scripting for Security Management 3 Units***In-Class Hours:* 35 lecture, 52.5 laboratory

Examines creating and modifying scripts for communications with security and network based applications. Covers scripting using Python, BASH, and Powershell for system administration, web interaction, network and host security and penetration testing. Provides knowledge and hands-on experience applying various programming concepts while using security tools.

Advisories/Rec Prep: CNSE M55**Grade Modes:** Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**CSU GE-Breadth:** None**IGETC:** None**CNSE M67 VMware vSphere Fundamentals 3 Units***In-Class Hours:* 43.75-47.75 lecture, 26.25 laboratory

Provides training using VMware's ESXi platform used by organizations which provide virtualized cloud computing systems. Teaches students how to manage virtual machines, virtual networks, and virtual storage and to administer vCenter Server. Requires students to perform labs dealing with data protection, authentication, monitoring virtual environments, high availability, scalability, patch management, and other VMware components. This course helps prepare students to pass VMware Certified Professional Exam.

Advisories/Rec Prep: CNSE M30 or CNSE M31 or CNSE M55**Grade Modes:** Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**CSU GE-Breadth:** None**IGETC:** None

CNSE M68 VMware Optimize and Scale 3 Units

Prerequisites: CNSE M30 or CNSE M31 or CNSE M55 or CNSE M67

Provides training using VMware's ESXi platform used by organizations which provide virtualized cloud computing systems. Teaches students how to optimize and scale the vSphere environment, troubleshoot operational faults, and identify root causes. Requires students to perform labs using vSphere ESXi Shell, vSphere Management Assistant, and vSphere Auto Deploy. Completion of this course also satisfies the prerequisite for taking the VMware Certified Professional 5 exam.

Grade Modes: Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading

Degree Applicability: Applies to Associate Degree

AA/AS GE: None

Transfer Credit: CSU

UC Credit Limitations: None

CSU GE-Breadth: None

IGETC: None

CNSE M79 Fundamentals of Project Management 2 Units

In-Class Hours: 17.5 lecture, 52.5 laboratory

Examines foundations of project management, including project integration, scope, cost, quality, human resources, communications, risk and procurement, and the application of interpersonal communication skills. Utilizes various project management software and examines case studies.

Grade Modes: Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading

Degree Applicability: Applies to Associate Degree

AA/AS GE: None

Transfer Credit: CSU

UC Credit Limitations: None

CSU GE-Breadth: None

IGETC: None

CNSE M80 Internship in Computer Network Systems Engineering 1-4 Units

In-Class Hours: 75-300 paid cooperative

Prerequisites: Completion of or concurrent enrollment in one course in the discipline and instructor approval

Provides on-the-job learning to develop effective work habits, attitudes, and career awareness in paid or unpaid internships that are related to the discipline. Involves the development and documentation of learning objectives and the completion of an internship paper, presentation, or project. Includes both workplace supervisor and faculty adviser feedback and/or written evaluations. To take this course, contact the Career Transfer Center. Requires orientation session. Students receive one unit of credit for each 60 hours unpaid or 75 hours paid work. May enroll in up to 4 units a semester with a maximum of 16 total units of any type of work experience.

Grade Modes: Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading

Repeatable for Credit: Course may be taken up to 3 times for credit.

Degree Applicability: Applies to Associate Degree

AA/AS GE: None

Transfer Credit: CSU

UC Credit Limitations: None

CSU GE-Breadth: None

IGETC: None

CNSE M81 Introduction to Cyberspace Law 1.5 Units

Provides a framework about the law and cyberspace, examining the extent to which the Internet is currently under control and the extent to which it can or should be controlled. Regulation strategies are identified and discussed including legislation, policy changes, administrative agency activity, international cooperation, architectural changes, private ordering, and self-regulation. Also applies major regulatory models to some of the most volatile Internet issues, including cyber-security, consumer fraud, free speech rights, intellectual property rights, and file-sharing programs.

Grade Modes: Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading

Degree Applicability: Applies to Associate Degree

AA/AS GE: None

Transfer Credit: CSU

UC Credit Limitations: None

CSU GE-Breadth: None

IGETC: None

CNSE M82 Introduction to Network Security 3 Units

In-Class Hours: 35 lecture, 52.5 laboratory

C-ID: ITIS 160

Provides a comprehensive overview of network security. Covers general security concepts, communication security, infrastructure security, cryptography, and operational/organizational security needs.

Catalog Notes: Prepares students for Computing Technology Industry Association (CompTIA) Security+ certification exam.

Advisories/Rec Prep: CNSE M01

Grade Modes: Letter Graded, Credit by exam, license etc., Student Option- Letter/Credit, Pass/No Pass Grading

Degree Applicability: Applies to Associate Degree

AA/AS GE: None

Transfer Credit: CSU

UC Credit Limitations: None

CSU GE-Breadth: None

IGETC: None

CNSE M83 Introduction Computer Forensics 3 Units

In-Class Hours: 35 lecture, 52.5 laboratory

Provides a comprehensive overview of computer and network forensics tools and strategies including evidence collection and analysis.

Demonstrates techniques used by forensics professionals to collect evidence including Intrusion Detection, Distributed Denial of Service Attacks, Buffer Overflow, and virus distribution attacks.

Advisories/Rec Prep: CNSE M06 or CNSE M01

Grade Modes: Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading

Degree Applicability: Applies to Associate Degree

AA/AS GE: None

Transfer Credit: CSU

UC Credit Limitations: None

CSU GE-Breadth: None

IGETC: None

CNSE M84 Certified Ethical Hacker 2 Units*In-Class Hours:* 17.5 lecture, 52.5 laboratory

Provides training using the latest tools, techniques, and exploits used in network penetration. Focuses on students' performance in labs related to digital reconnaissance, hacking strategies, bypassing intruder detection systems, firewall management, network sniffing, and testing of security settings on Windows and Linux systems. Course prepares students to pass the Certified Ethical Hacker exam given by the EC-Council.

Advisories/Rec Prep: CNSE M13 and CNSE M55**Grade Modes:** Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**CSU GE-Breadth:** None**IGETC:** None**CNSE M85A Cybersecurity of IOS Networks 3 Units***In-Class Hours:* 35 lecture, 52.5 laboratory

Focuses on cybersecurity processes and policy with an emphasis on router, switch and firewall hands-on skills. Covers router and switch security, firewall implementation, Access Control Lists (ACLs), Authentication, Authorization, Accounting (AAA), intrusion detection, monitoring, and management, and Virtual Private Network (VPN) implementation. Covers the first half of the Cisco Network Security Curriculum.

Catalog Notes: Prepare students for Securing Cisco IOS Networks exam (Exam #210-260).*Advisories/Rec Prep:* CNSE M18 or ENGT R120 or Work experience configuring Cisco equipment**Grade Modes:** Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**CSU GE-Breadth:** None**IGETC:** None**CNSE M85B Cisco Fundamentals of PIX Firewalls 3 Units***In-Class Hours:* 35 lecture, 52.5 laboratory*Prerequisites:* CNSE M18

Provides an in-depth introduction to Cisco Private Internet Exchange (PIX) Firewall technology. Topics of PIX Firewall include translations and connections, Access Control Lists (ACLs), Authentication, authorization, Accounting (AAA), advanced protocols and intrusion detection, Virtual Private Network (VPN), and management. Covers the second half of the Cisco Fundamentals of Network Security Curriculum.

Catalog Notes: Prepares students for Cisco Secure PIX Firewall exam (CSPFA 642-521).**Grade Modes:** Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**CSU GE-Breadth:** None**IGETC:** None**CNSE M86 Firewall Administration 3 Units***In-Class Hours:* 35 lecture, 52.5 laboratory

Covers knowledge and skills needed to install, configure, verify, and manage firewalls. Provides instruction on how to secure internal networks from public Internet users.

Catalog Notes: Prepares students for firewall certification exam.*Advisories/Rec Prep:* CNSE M18**Grade Modes:** Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**CSU GE-Breadth:** None**IGETC:** None**CNSE M87 Cisco Secure Virtual Private Network (VPN) 1.5 Units***In-Class Hours:* 17.5 lecture, 26.25 laboratory*Prerequisites:* CNSE M15

Basic knowledge to plan, administer, and maintain a virtual private network (VPN). This course covers virtual private network fundamentals, Cisco VPN family products, Cisco IOS (Internetwork operating system) VPNs, Cisco PIX (Private Internet Exchange) Firewall VPNs, Cisco VPN concentrator VPNs, and scaling Cisco VPN solutions.

Catalog Notes: Prepares students for Cisco CCIP/Security certification exam.*Advisories/Rec Prep:* CNSE M85**Grade Modes:** Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**CSU GE-Breadth:** None**IGETC:** None**CNSE M88 Cisco Secure Intrusion Detection System 1.5 Units***In-Class Hours:* 17.5 lecture, 26.25 laboratory*Prerequisites:* CNSE M18

Provides comprehensive knowledge to design, deploy, and manage the Cisco Secure Intrusion Detection System (CSIDS). Explains why network security is crucial in today's converged networking environment, how CSIDS improves the security on a network, and how to install and configure CSIDS.

Catalog Notes: Prepares students for Cisco CCIP/Security certification exam.*Advisories/Rec Prep:* CNSE M85**Grade Modes:** Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**CSU GE-Breadth:** None**IGETC:** None

CNSE M100 Cybersecurity Analysis 3 Units*In-Class Hours:* 35 lecture, 52.5 laboratory*C-ID:* ITIS 161

Provides training for security analysts in areas of vulnerability and threat analysis. Includes instruction in the use of threat detection tool sets to perform security architecture analysis, and interpret results to mitigate vulnerabilities. Covers how to best handle security incidents.

Catalog Notes: This course helps prepare students to pass the Cybersecurity Analyst Exam from CompTIA and is best taken after Introduction to Network Security (CNSE M82) and before Certified Ethical Hacker (CNSE M84), see Comptia.org for more details.

Advisories/Rec Prep: CNSE M82

Grade Modes: Letter Graded, Credit by exam, license etc., Student Option-Letter/Credit, Pass/No Pass Grading

Degree Applicability: Applies to Associate Degree

AA/AS GE: None

Transfer Credit: CSU

UC Credit Limitations: None

CSU GE-Breadth: None

IGETC: None

CNSE M105 AWS Cloud Foundations 3 Units*In-Class Hours:* 35 lecture, 52.5 laboratory

Provides training for students who seek an overall understanding of cloud computing concepts and experience configuring cloud components. Includes a detailed overview of cloud concepts, Amazon Web Services (AWS) core services, security, architecture, pricing, and support. This course helps prepare students to pass the AWS Cloud Foundations Exam from Amazon.com.

Grade Modes: Letter Graded, Credit by exam, license etc., Pass/No Pass Grading

Degree Applicability: Applies to Associate Degree

AA/AS GE: None

Transfer Credit: CSU

UC Credit Limitations: None

CSU GE-Breadth: None

IGETC: None

CNSE M106 Cloud Architecture 3 Units*In-Class Hours:* 35 lecture, 52.5 laboratory

Provides training for students who seek an overall understanding of designing distributed applications and systems in the cloud. Includes a detailed overview of designing and deploying scalable, highly available, and fault-tolerant systems. This course helps prepare students to pass the Amazon Web Services (AWS) Cloud Architect Exam from Amazon.com.

Grade Modes: Letter Graded, Credit by exam, license etc., Student Option-Letter/Credit, Pass/No Pass Grading

Degree Applicability: Applies to Associate Degree

AA/AS GE: None

Transfer Credit: CSU

UC Credit Limitations: None

CSU GE-Breadth: None

IGETC: None

CNSE M107 AWS Cloud System Operations 3 Units*In-Class Hours:* 35 lecture, 52.5 laboratory

Provides training for students who seek an overall understanding of how to provision cloud technologies, design cloud architectures, implement performance and security controls, and manage the overall tuning of cloud technologies. Covers cloud system operations such as high availability, deployment, storage, data management, networking, automation and optimization using Amazon Web Services. Aligns with Amazon Web Services System Operations Certification Exam. This course helps prepare students to pass the Amazon Web Services (AWS) SysOps Exam from Amazon Web Services.

Grade Modes: Letter Graded, Credit by exam, license etc.

Degree Applicability: Applies to Associate Degree

AA/AS GE: None

Transfer Credit: CSU

UC Credit Limitations: None

CSU GE-Breadth: None

IGETC: None

CNSE M111 Azure Cloud Fundamentals 3 Units*In-Class Hours:* 35 lecture, 52.5 laboratory

Provides training for students who seek an understanding of Microsoft cloud fundamentals. Covers Azure services and resource subscriptions, storage, virtual machine management, virtual networks, active directory identities, core services, security and compliance, pricing, and cloud management tools. Aligns to current Microsoft Azure cloud certification. This course helps prepare students to pass the Microsoft Azure Certification.

Grade Modes: Letter Graded, Credit by exam, license etc.

Degree Applicability: Applies to Associate Degree

AA/AS GE: None

Transfer Credit: CSU

UC Credit Limitations: None

CSU GE-Breadth: None

IGETC: None

CNSE M170 Cloud Security 3 Units*In-Class Hours:* 35 lecture, 52.5 laboratory

Provides an overview of the architectural concepts and design requirements including cloud security, platform and application security, cloud operations and legal compliance. Emphasizes cloud security principles and practices.

Catalog Notes: Prepares student for Certified Cloud Security Professional exam.

Advisories/Rec Prep: CNSE M01 or CNSE M67, or CNSE M82

Grade Modes: Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading

Degree Applicability: Applies to Associate Degree

AA/AS GE: None

Transfer Credit: None

- Computer Network Systems Engineering, Associate in Science (<http://catalog.vcccd.edu/moorpark/programs-courses/computer-network-systems-engineering/computer-network-systems-engineering-as/>)
- Cybersecurity, Associate in Science (<http://catalog.vcccd.edu/moorpark/programs-courses/computer-network-systems-engineering/cybersecurity-as/>)
- CNSE: Advanced Network Specialist, Certificate of Achievement (<http://catalog.vcccd.edu/moorpark/programs-courses/computer-network-systems-engineering/cnse-advanced-network-specialist-coa/>)

- CNSE: Technical Support Specialist, Certificate of Achievement (<http://catalog.vcccd.edu/moorpark/programs-courses/computer-network-systems-engineering/cnse-technical-support-specialist-coa/>)
- CNSE: Windows Administration, Certificate of Achievement (<http://catalog.vcccd.edu/moorpark/programs-courses/computer-network-systems-engineering/cnse-windows-administration-coa/>)
- CNSE: Windows Engineering, Certificate of Achievement (<http://catalog.vcccd.edu/moorpark/programs-courses/computer-network-systems-engineering/cnse-windows-engineering-coa/>)
- Cybersecurity Administration, Certificate of Achievement (<http://catalog.vcccd.edu/moorpark/programs-courses/computer-network-systems-engineering/cybersecurity-administration-coa/>)
- Cybersecurity Penetration Tester, Certificate of Achievement (<http://catalog.vcccd.edu/moorpark/programs-courses/computer-network-systems-engineering/cybersecurity-penetration-tester-coa/>)

- CNSE: Basic Network Specialist, Proficiency Award (<http://catalog.vcccd.edu/moorpark/programs-courses/computer-network-systems-engineering/cnse-basic-network-specialist-pa/>)
- CNSE: Cisco System Network Associate, Proficiency Award (<http://catalog.vcccd.edu/moorpark/programs-courses/computer-network-systems-engineering/cnse-cisco-system-network-associate-pa/>)

Dean

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