



Course Syllabus SEMESTER School of STEM

Introduction Information

Course Name:	Microsoft Network Admin 1
Course & Section Number:	IST240-xxx
Meeting Day(s) & Time(s):	TBD
Credits:	3
Contact Hours:	3
Instructor's Name:*	
Office Hours & Location:	TBD
OCC Phone:	TBD
OCC Email:**	TBD
Additional Contact Information:	TBD

**Please only use your student OCC email or Blackboard Messages in our course to contact me so I know you are a student and may respond safely.

Catalog Description:

Students will learn, practice, apply, and test their skills in real-world scenarios with the latest on-premise Windows Server 2022 and Azure Cloud server technology. Includes performing installations, configuration, and management tasks for both the system and users. Technologies covered include On-Premise Windows Server, Cloud and Azure, Manage IP Addressing, Implement DNS, Active Directory, Active Directory Objects, Group Policy, Manage Servers and Workloads in a Hybrid Environment, Manage Storage Service, Manage File Service, Virtualization, Containers, and On-Premises and Hybrid Network Connectivity,

Students may earn the TestOut Hybrid Server Pro: Core Certification

Students will be prepared for the Microsoft AZ-800: Adminstrating Win Server Hybrid Core Infrastructure

Current Textbooks, Materials, Equipment (Cost included in Course Fees):
CompTIA Hybrid Server Pro code, included with IA

Prerequisites:

IST175

Course Materials:

CompTIA Hybrid Server Pro code, included with IA

Inclusive Access (I.A.) Materials

Inclusive Access (I.A.) Materials are included in the cost of the course to save students money through lower negotiated rates with publishers as per the state of Ohio. Courses containing I.A. materials will have that noted when you click "Find Books" from the course schedule.

This means if your course includes I.A. digital materials, you will receive an email with subject line, "Your inclusive Access Materials," and it will include any codes or digital links. The email will come to your Owens Community College email from the Owens e-Campus Bookstore on the first day of class, if not before that date. Be sure to check your spam (junk email) if you do not find it in your inbox. If the email is not in your inbox or spam folder, contact your instructor immediately. You may also see a folder at the top of your course in Blackboard Labelled "Course Materials by eCampus". This folder will contain any needed codes or links to needed materials included in the I.A. program. Note: It may not include links to eTextbooks if they are provided separately within the course assignments.

If the I.A. materials also include a printed book or are in print form, the item will be shipped to your address of record automatically based on your enrollment in the course. If a course does not contain printed materials or other materials as part of Inclusive Access those materials would need to be purchased separately using the "Find Books" link on the course schedule. When you access the Find Books link you will see which items in a course are included in I.A.

What Will I Learn in This Course?

(where assessed listed in assignment table at the end of the syllabus)

Course Objectives

This Course will:

1. Implement a Microsoft server configuration that includes domain and workgroup systems, file and disk storage server roles, virtualization roles.
2. Perform server management strategies including remote administration, remote server management technologies, and command line remote administration.
3. Create, monitor, and maintain server updates, antimalware, and performance management.

Student Learning Outcomes

Students will:

1. Implement a Windows Server installation based on the correct platform, networking models, and Windows Server features.
2. Configure, modify, and maintain the Windows Server environment using Server Manager/Powershell.
3. Install and configure Active Directory.
4. Install and configure Hyper-V virtualization.
5. Install and configure distributed file and storage systems.
6. Configure and manage Windows Server storage options including fault tolerance, backup and recovery.
7. Demonstrate ability to create and utilize a database to store and analyze data.

Institutional Competencies:

Upon graduation at Owens CC students will...

1. Communicate effectively.
2. Act with professional responsibility.
3. Demonstrate sensitivity to others' beliefs and values.
4. Think analytically, critically, and creatively.

Technology, Lab Requirements, & Files:

Specific download and installation instructions are posted in Blackboard.

Microsoft Visio (Provided by Owens)

Use of Artificial Intelligence Tools in Our Course

Use of AI is not permitted for use in this course.

AI is not a replacement for your own thinking and research. Work will be checked for its originality.

Student Data Files:

There are no student data files needed in this course.

Classroom Attendance for F2F, SWD, Hybrid, or WEB Classes:

Hybrid Classes: students must attend this class in person based upon the schedule published and communicated by your instructor ahead of the first meeting. Instructors will not allow a different form of instructional delivery. You may be asked to show your student ID at the initial class meeting if you are unknown to your instructor. **For every two scheduled class meetings missed your final grade will drop one letter grade no matter the reason.**

In IST100, students with a “B” average after Learning Module 2 is graded may elect to complete the course online. Your instructor will continue to be there each class meeting and if you need help you are encouraged to attend even with a “B” average. Students with below a “B” average must attend all the remaining class meetings.

SWD: for all **Synchronous Web Delivery** Classes, the student must attend this class during the days and times set in the schedule. Example: for a 9:00, M, W SWD class, the student must be online at 9:00 every Monday and Wednesday for this class. **For every two scheduled class meetings missed your final grade will drop one letter grade no matter the reason.**

- **Web cameras:** In a synchronous course, we have a unique opportunity to interact with each other in real time that is not available in a traditional online course. I will have my camera turned on so that you may see me interact in our class. Please have your camera on as well to do the same to build a positive class experience for everyone. Please turn your camera on to introduce yourself, ask questions, and/or respond to questions throughout the class session. Your instructor may request you use your camera and/or show your ID in certain situations, such as at the beginning of a class, when responding to questions or participating in a discussion, during exams, or for an oral presentation. If your camera is off and you do not respond to questions or participate it will count as a missed class meeting. If applicable, your instructor may assist students in blurring their backgrounds. Our online classroom is a safe environment, and we encourage and require you to fully participate.

WEB / Online: for all traditional online classes, also known as **Asynchronous** classes, the student attends at any time and day for instruction. There are no scheduled meetings.

Academic Support

Disability Services Resource Center:

If you have a disability or acquire one, you may be entitled to receive reasonable accommodations intended to assure you an equal opportunity to participate in and benefit from the program. To receive more information or to register for accommodations, please contact the Disability Resource Center at 567-661-7007, email disability@owens.edu, visit <https://www.owens.edu/disability/>, or stop by College Hall 124.

Tutoring Services:

Owens Community College offers academic tutoring and assistance in a variety of subjects including accounting, computing, economics, mathematics, science, and writing. For more information go to: <https://www.owens.edu/successcenters/>.

Counseling Services:

Counseling Services provides assistance to students experiencing personal, educational, interpersonal/relationship, family, social, or psychological difficulties. If you feel you may benefit from this service, please contact them at counselingservices@owens.edu. More information is at <https://www.owens.edu/counseling/>.

Campus and Community Connections:

The Center for Campus and Community Connections (College Hall 151) is a walk-in office created to provide retention support through resource stability initiatives and community connections. Go here for more information: <https://www.owens.edu/connection/> or contact connections@owens.edu

Owens Library:

The Owens Library offers two locations (Toledo and Findlay) as well as online resources. For more information visit <https://www.owens.edu/library/>.

Students can find more information on campus resources, student support, student life, and security at this [link](#).

General Information:

Student Code of Conduct:

All students are expected to follow Owens Community College's [Student Code of Conduct](#), which includes academic honesty, encompassing plagiarism. See the [Board Policy](#) for more information.

Anti-Discrimination and Harassment & Title IX/Sexual Misconduct:

All students, faculty, and staff are expected to follow Owens Community College's [Anti-Discrimination and Harassment Policy](#) and the College's [Title IX Policy](#)/Sexual Misconduct Procedures and Guidelines. The College strictly prohibits and will not tolerate harassment, discrimination, intimidation, or hostile/offensive working or learning environments.

Religious Accommodations:

A student seeking accommodation for an absence permitted under Ohio's Testing Your Faith Act must provide the instructor with a **written email** notice with the specific dates for an absence and must do so not later than fourteen (14) days after the first day of instruction. **Alternative accommodations are not retroactive, and no academic penalty will be imposed for an absence under the policy***. The request for alternative accommodation will be kept confidential. Students with questions about a religious accommodation under Ohio's Testing your Faith Act may contact the College's Office of Academic Affairs: provost@owens.edu

*The policy may be found on the Owens website: [3358:11-2-63 Accommodation](#) for a Student Absence for the Observance of Religious Beliefs and Practices Policy

Document Collection:

Throughout the semester, your instructors may ask for a variety of assignments including tests and/or quizzes for student learning of general education or program assessment. Please save all your class materials until the end of the semester.

Classroom Admittance:

OCC classes shall only be attended by the officially registered OCC students or perspective students, instructor of record, guest lecturer, or substitute. Visitors are not permitted to be in the classroom and should not be invited to attend or participate in the class. See FERPA regulations for more information.

What Will Our Classroom Environment Be Like?

Respectful Class Communication:

Respectful communication: Our classroom is a safe space. Respect in class, online, in posts, on discussion boards, and all communications is important.

Asking for help/clarification: Students are encouraged to contact your instructor as soon as you have questions or need clarification. Your instructor will help you or connect you with someone who can assist.

Unless I am told otherwise, I will assume that every student understands everything posted in our Blackboard course and through online chats, messages, or emails. If you don't understand something, or if you don't understand why we are approaching our materials in the way we are, please ask. Future classes will build on and further develop the concepts we learn.

If you are overwhelmed, tell me. I can't help if I don't know. Working a little bit every day on a technical course is the secret of finishing successfully.

Post questions on the Class Help Forum. In this course, you can post questions in the Class Help Forum located at the top of our course. Please make sure your question has not been answered already in the Class Help Forum on the discussion board. This is the best way to get your questions answered and help your classmates!

Online courses: Communication is very important. The instructor will communicate with you by email and Blackboard announcements. It is the student's responsibility to log in to the Blackboard shell frequently (suggested 3-5 times/week) and check email daily.

I know an online class is challenging for some of you. It takes discipline and time management. You need to keep going even when you want to quit. My goal as your instructor is to help you become as successful as possible in this class, I guarantee you will have to work for it.

Inclusion Statement:

Students in this class are encouraged to speak up and participate during class meetings, online, and on discussion boards in a positive manner. Because the class will represent a diversity of individual beliefs, backgrounds and experiences, every member of this class will show respect for every other member of this class. I support an inclusive learning environment where diversity and individual differences are understood, respected, appreciated, and recognized as a source of strength. We expect that students, faculty, administrators, and staff at OCC will respect differences and demonstrate diligence in understanding how other peoples' perspectives, behaviors and worldviews may be different from their own.

How Will Your Grade Be Determined and What Are the Major Assignments for the Semester?

Final Grading Scale

Grading Procedure:

Grades are calculated on a straight average.

Assignments include:

- Discussions
- Lab Sim Practice Question Sets
- Lab Sim: Simulations
- Lab Sim: Videos
- Lab Sim: Demos
- Final Exam

Final Exam *Required - 1000 points

You must pass the final exam with 72.5% (725 points) to pass the course.

Total Points 3106

90 –100 % A

80 -89 % B

70 –79 % C (minimum 725 points must be scored on the final to pass this course, anything less earns an "F" grade)

60 -69 % D

Below 60 % F

Your grades are displayed in points throughout the course to help you understand your progress. They do not indicate final grade since this is based upon the final exam and your demonstration of mastering the material presented. **Guidelines:** This is a professional, college course, you are required to use proper spelling, punctuation, complete sentences, and correct grammar throughout the course...do not be offended if

emails are returned for correction! Please complete your work carefully, spell checking, and then submitting.

General Grading Rubric for All Assignments

Not submitted on time; "0" points

Assignment submitted on time, follows directions, is of appropriate length, and demonstrates that the student grasps the topic, full points

Assignment submitted on time, is incomplete, misses the point, or does not demonstrate student grasp of topic; half points (more or less depending on degree). Missing assignments 0 Points

Discussions:

Participation in course discussions in each Learning Module are worth significant points in this course.

Grade Transfer: It is the student's responsibility to verify grades for completed assignments transferred successfully to the Blackboard gradebook and notify the instructor before the due date of any issues so they may be resolved.

***** Waiting until the day assignments are due to complete work is not viable to be successful, please work ahead, we want your success!!*****

Posting of Grades & Communications:

Grades will be posted on Blackboard in the Gradebook. Student work will be graded within 1 week of the due date or less. Student questions will be answered as soon as possible. Please do not expect responses on weekends or holidays.

Late Work:

Late work may be accepted at the instructor's discretion with documentation from the student. Examples of documentation are a doctor's note, hospital admissions receipt, death notice (immediate family only) and such items.

Consider this: All students are able and encouraged to work ahead. If you cannot find time to work ahead of due dates, in case of emergency, when would you find time to make up the work? You control your schedule. Please plan the necessary time for coursework.

Work Not submitted on time without prior arrangement; "0" points.

You are expected to be online working on a course in Blackboard for a minimum of 3 times per week and to meet all due dates. This includes checking announcements and e-mails regularly.

Research suggests that students should spend approximately 2-3 hours, per credit hour, studying in order to be successful in their courses. **STEM classes like this one often require 3-4 hours, per credit hour, of studying and computer work to be successful in addition to homework time.**

Class Attendance:

For on ground (traditional), hybrid, and online synchronous class meetings the student is expected to attend and (for online synchronous) have their camera turned on. For every two scheduled meeting sessions not attended for any reason the final grade will be reduced by one letter grade.

Student Responsibilities:

- Attendance: Class discussions, activities and participation are an integral component of learning and understanding the course material. If you are going to be absent or not logging in, please notify the instructor prior to missing the class or assignments to discuss your options, if possible. Please look at the assignment calendar to see what will be missed (topic, assignments, etc.) and contact the instructor if you have questions.
- Assignment submission (format, etc.): Students are to be familiar with the assignment calendar in Blackboard and how to submit assignments. If you are unable to complete an assignment on time, please contact your instructor as soon as possible to discuss options well in advance of the due date. Remember, you have two full weeks to complete assignments except in the last week.
- Contacting your instructor: Your instructor has provided their email address. Please include the course and section number on the Subject line of your email so your instructor knows that you are a student and which class you are asking about. Blackboard Messages in the course are the preferred contact method.

I expect questions and that's okay. Don't hesitate! Reach out when you need assistance! I am here to help you!

Tentative Course Timeline and Assignment Schedule, Including How Assignments Relate to Student Learning Outcomes

(All specific assignments are in Blackboard; this is just a guide, please check To Do List in each Learning Module in Blackboard).

Module /Week	Student Learning Outcomes	Topic
Learning Module 1 Week 1 & 2	1, 2	View & Print: Section PowerPoint Lecture Files Complete: Lab Sims: 1st week 01.01: Course Introduction 104 1st week 01.02: Windows and Azure Simulator Interface 35 1st week 02.01: Server Installation 58 1st week 02.02: Windows Server Roles 20 1st week 02.03: Powershell 20 1st week 02.04: Windows Server Core 19 1st week 02.05: Windows Server Configuration and Management 21 1st week 02.06: Performance Monitor 20 2nd week 02.07: Remote Management Options 71 2nd week 03.01: Cloud Concepts 30 2nd week 03.02: Azure Concepts 44 2nd week 04.01: IP Addressing 80 2nd week 04.02: Troubleshoot IP Configuration Issues 55 2nd week 04.03: Troubleshoot IP Communications 48 2nd week 04.04: DHCP 31 Complete: Introduction Discussion Complete: Module Discussion
Learning Module 2 Week 3 & 4	1, 2	View & Print: Section PowerPoint Lecture Files Complete: Lab Sims: 3rd week 04.05: DHCP Relay 72 3rd week 04.06: Advanced DHCP Management 51 3rd week 04.07: Troubleshoot DHCP 92 3rd week 04.08: IP Version 6 62 3rd week 04.09: IP Address Management (IPAM) 46 4th week 04.10: NIC Teaming 76 4th week 05.01: DNS 58 4th week 05.02: Name Resolution 23 4th week 05.03: Zone Management 45 4th week 05.04: Troubleshoot DNS 21 4th week 05.05: DNS Protection 74 4th week 05.06: Implement Hybrid Name Resolution 26 4th week 06.01: Active Directory 45 4th week 06.02: Azure Active Directory 24

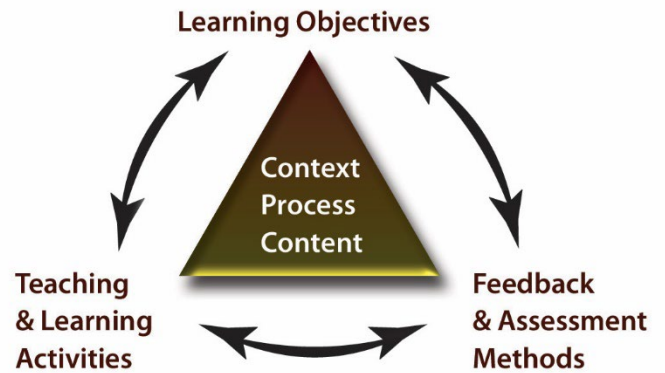
Module /Week	Student Learning Outcomes	Topic
		Complete: Module Discussion
Learning Module 3 Week 5 & 6	2, 3	View & Print: Section PowerPoint Lecture Files Complete: Lab Sims: 5th week 06.03: Read-Only Domain Controllers (RODCs) 40 5th week 06.04: FSMO Roles and Global Catalog Servers 30 5th week 06.05: Active Directory Trusts 60 5th week 06.06: Active Directory Sites 110 5th week 06.07: Active Directory Replication 46 5th week 06.08: Implement and Manage Hybrid Identities 47 6th week 07.01: Active Directory Organizational Units 61 6th week 07.02: Active Directory Computers 45 6th week 07.03: Active Directory Users 22 6th week 07.04: Active Directory Groups 82 6th week 07.05: Active Directory Service Accounts 28 6th week 07.06: Active Directory Bulk Operations 63 Complete: Module Discussion
Learning Module 4 Week 7 & 8	2, 3	View & Print: Section PowerPoint Lecture Files Complete: Lab Sims: 7th week 07.07: Delegation of Control 103 7th week 08.01: Group Policy 27 7th week 08.02: Group Policy Management 29 7th week 08.03: Password Policies 75 7th week 08.04: Audit Policies 40 7th week 08.05: User Rights Assignment 27 7th week 08.06: Security Options 37 7th week 08.07: Restricted Groups 48 8th week 08.08: Application Restriction Policies 30 8th week 08.09: Group Policy Preferences 103 8th week 09.01: Windows Admin Center 70 8th week 09.02: Windows PowerShell Remoting 62 8th week 09.03: Azure Arc 40 8th week 09.04: Azure Automation 39 Complete: Module Discussion

Module /Week	Student Learning Outcomes	Topic
Learning Module 5 Week 9 & 10	2, 5	View & Print: Section PowerPoint Lecture Files Complete: Lab Sims: 9th week 09.05: Azure Monitor 75 9th week 09.06: Azure Security Center 58 9th week 09.07: Azure Policy 109 9th week 10.01: Configure Disk and Volumes 77 10th week 10.02: Configure and Manage Storage Spaces 77 10th week 10.03: Storage Replica 60 10th week 10.04: Data Deduplication 102 10th week 10.05: Manage Storage and Data Performance 19 10th week 10.06: Configure File Systems 48 10th week 10.07: NTFS Permission Troubleshooting 33 10th week 11.01: SMB Shares 57 Complete: Module Discussion
Learning Module 6 Week 11 & 12	3, 5	View & Print: Section PowerPoint Lecture Files Complete: Lab Sims: 11th week 11.02: FSRM Quotas and File Screens 51 11th week 11.03: BranchCache Installation and Configuration 31 11th week 11.04: Distributed File System (DFS) Namespaces 34 11th week 11.05: Configure and Manage Azure File Sync (Part 1) 75 11th week 11.06: Configure and Manage Azure File Sync (Part 2) 110 12th week 12.01: Virtualization Deployment 123 12th week 12.02: Virtual Machines 60 12th week 12.03: Virtual Machine Storage 87 12th week 12.04: Virtual Networks 102 Complete: Module Discussion
Learning Module 7 Week 13 & 14	5, 6, 7	View & Print: Section PowerPoint Lecture Files Complete: Lab Sims: 13th week 12.05: Virtual Network Optimization 55 13th week 12.06: Virtual Machine Movement 58 13th week 12.07: VHD Storage 29 13th week 12.08: Hyper-V Replication 57 13th week 12.09: Hyper-V High Availability 45

Module /Week	Student Learning Outcomes	Topic
		13th week 12.10: Manage Azure Virtual Machines That Run Windows Server 75 13th week 12.11: Containers 40 14th week 13.01: Remote Access Role 56 14th week 13.02: Implement Azure Networking 81 14th week 13.03: Network Policy Server Role 55 14th week 13.04: Implement Web Application Proxy (WAP) 70 14th week 13.05: Virtual Private Networks (VPN) 29 14th week 13.06: Implement Azure Virtual WAN 33 14th week 13.07: Implement Azure Ad Application Proxy 33 Complete: Module Discussion
Learning Module 8 Week 15 & 16	1-7	View & Print: Section PowerPoint Lecture Files Complete: Module 8 Discussion Complete: Practice Questions & Practice Exam - Until you are comfortable! Complete: Final Certification Exam

Disclaimer: "The instructor reserves the right to amend this syllabus as deemed necessary and will communicate such amendment to the students in the course."

PROGRAM LEARNING OUTCOMES BY CIS DEGREE PROGRAM



Computer Networking & Systems Administration Program Outcomes

Upon completion of the program, students will be able to:

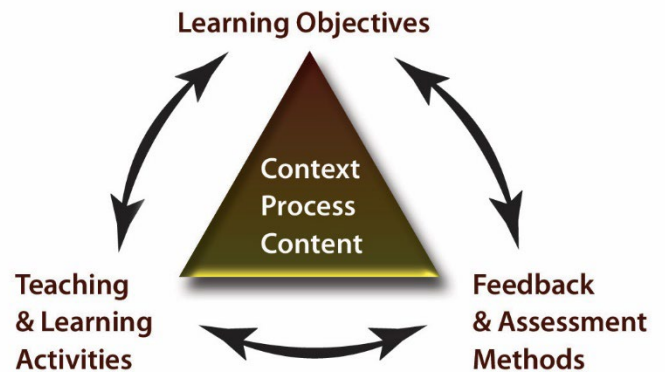
1. Identify possible causes of network and technical problems and to install and maintain network hardware and systems software.
2. Evaluate system performance and security and take corrective action.
3. Communicate with technical and non-technical people, and how to translate technical information into business language and document solutions.
4. Identify and demonstrate understanding of the ethical and legal issues that impact technology.
5. Earn IT Industry Certifications to demonstrate their skills learned and build their credentials for employment and further study.

Certificates embedded in the degree program:

- Network Tech I certificate
- Network Tech II certificate

PROGRAM LEARNING OUTCOMES BY CIS DEGREE PROGRAM

Computer Programming & Development Program Outcomes



Upon completion of the program,
students will be able to:

1. Effectively solve problems using a variety of data formats and environments.
2. Analyze, design, implement, test and document solutions to modern business problems in more than one computer programming language.
3. Demonstrate confidence in the ability to work as a computer programmer/developer in a modern business environment, both independently and as part of a team.
4. Identify and demonstrate understanding of the ethical and legal issues that impact technology.
5. Earn IT Industry Certifications to demonstrate their skills learned and build their credentials for employment and further study.

Certificates embedded in the degree program:

- Computer Programming – Developer I certificate
- Computer Programming – Developer II certificate

Program Learning Outcomes by CIS Degree Program

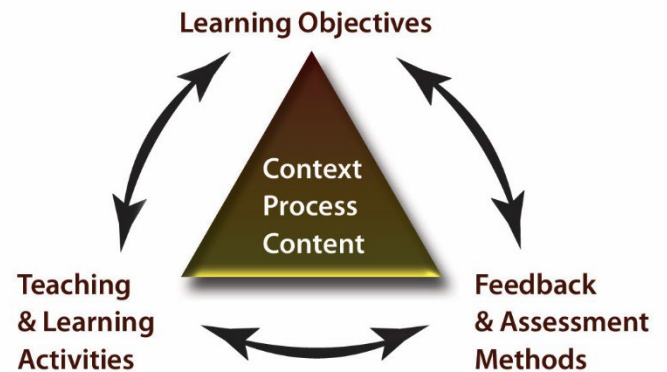
Computer Science Program Outcomes

Upon completion of the program,
students will be able to:

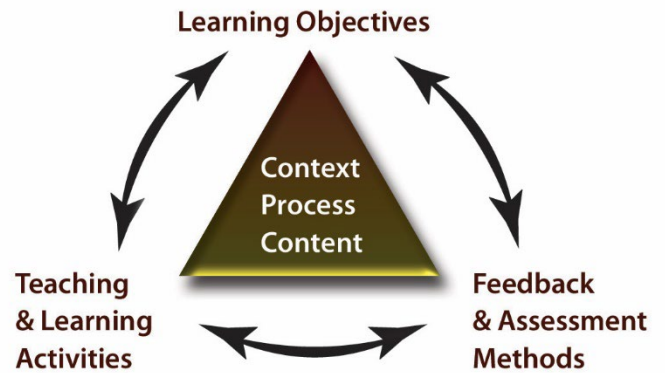
1. Design, analyze and test computer programs and systems.
2. Apply mathematical and algorithmic principles to solve computing problems.
3. Communicate effectively with a range of audiences about computer technologies.
4. Identify and demonstrate understanding of the ethical and legal issues that impact technology.
5. Earn IT Industry Certifications to demonstrate their skills learned and build their credentials for employment and further study.

Certificates embedded in the degree program:

- Computer Science Tech I certificate
- Computer Science Tech II certificate



PROGRAM LEARNING OUTCOMES BY CIS DEGREE PROGRAM



Computer Systems Technologies & Support Program Outcomes

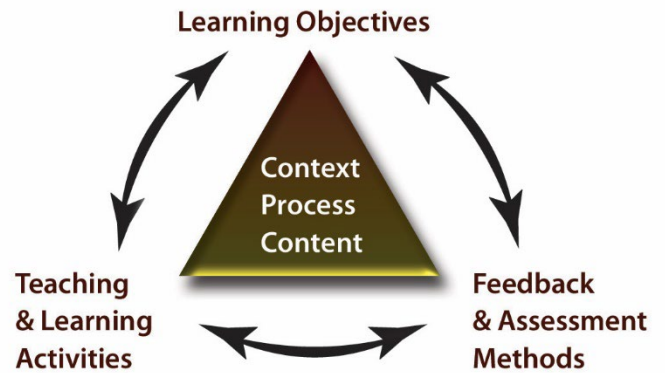
Upon completion of the program, students will be able to:

1. Identify Information Systems-related problems and to document and recommend a solution demonstrating both effective research and documentation skills.
2. Effectively communicate both orally and/or in written form with management, team members or customers.
3. Install and maintain secure computer hardware and systems software.
4. Demonstrate knowledge and ability to support applications, hardware, and security.
5. Identify and demonstrate understanding of the ethical and legal issues that impact technology.
6. Earn IT Industry Certifications to demonstrate their skills learned and build their credentials for employment and further study.

Certificates embedded in the degree program:

- Computer Support certificate
- IT Project Management certificate

PROGRAM LEARNING OUTCOMES BY CIS DEGREE PROGRAM



Computer WAN & Cloud Technologies Program Outcomes

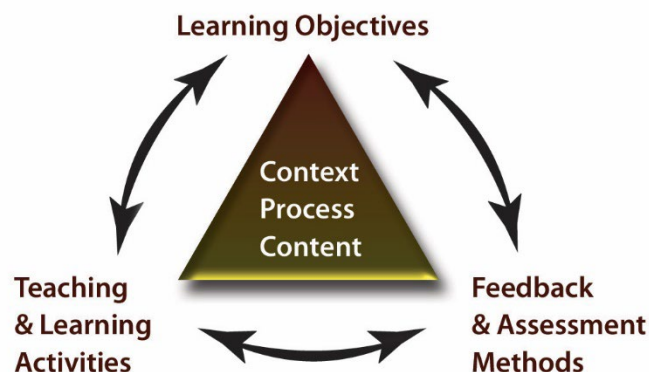
Upon completion of the program, students will be able to:

1. Design, configure, troubleshoot and secure networks.
2. Demonstrate use of network protocols, routing, switching, hardware and management.
3. Implement cloud computing principles, virtualization, cloud infrastructure and platform-as-a-service (PaaS) solutions.
4. Communicate effectively with a range of audiences about computer technologies.
5. Identify and demonstrate understanding of the ethical and legal issues that impact technology.
6. Earn IT Industry Certifications to demonstrate their skills learned and build their credentials for employment and further study.

Certificates embedded in the degree program:

- Computer WAN Cloud Tech I certificate
- Computer WAN Cloud Tech II certificate

PROGRAM LEARNING OUTCOMES BY CIS DEGREE PROGRAM



Cyber Security Program Outcomes

Upon completion of the program, students will be able to:

1. Identify validated sources for security alerts and tools.
2. Use a collection of appropriate tools and techniques to identify, isolate, eliminate and recover from threats and to make appropriate recommendations in order to avoid, lessen, or mitigate such risks.
3. Create and maintain a knowledge base including end-user documentation, policies, procedures and problem resolutions using industry standard maintenance and reporting tools.
4. Secure and test processes for business and industry continuity and disaster recovery.
5. Identify and demonstrate understanding of the ethical and legal issues that impact technology.
6. Earn IT Industry Certifications to demonstrate their skills learned and build their credentials for employment and further study.

Certificates embedded in the degree program:

- Security Tech certificate