

Information Technology Network Administration Year 2 (ITNA2)/Information Technology Network Administrator Assessment Results

ITNA2 Program Objective

The Information Technology - Network Administration program is designed to prepare graduates for a career in system administration. Successful graduates will be able to design, administer, and troubleshoot networks utilizing Microsoft Windows Server 2008 operating systems, the Microsoft Exchange email messaging system, Cisco technologies, Linux networking technologies and automation tools such as Windows PowerShell.

Year One is designed to prepare students for employment in end-user application work, computer operations, technical support, or a related computer field. Through hands-on instruction, students will become proficient utilizing desktop operating systems and various office applications commonly used in today's market. Students will also focus on fundamental networking concepts as well as developing skills necessary for troubleshooting and supporting hardware and software related issues. This program will help students prepare for CompTIA A+ Certification. Exam vouchers are provided for students who meet the requirements of the Test Pass Assurance (TPA) program.

In Year Two, students will focus on developing skills to effectively plan, implement, maintain, and support systems in a wide range of computing environments using Microsoft Windows Server 2008 and Linux. Students will develop an understanding of the design, implementation, and administration of LANs/WANs utilizing Microsoft technologies. Students will be provided with an opportunity to learn about the Microsoft Server 2008 operating system, the Exchange email messaging environment, as well as being introduced to fundamental Cisco technologies, Linux networking technologies, and gaining academic experience with automation tools such as Windows PowerShell. The Microsoft related classes use Microsoft approved curriculum that is designed to help students prepare for the rigorous Microsoft Certified IT Professional (MCITP) exams. Exam vouchers are provided for students who meet the requirements of the Test Pass Assurance (TPA) program.

Information Technology Network Administrator (diploma) Program Objective

The Information Technology - Network Administrator program is designed to prepare graduates for a career in system administration. Successful graduates will be able to design, administer, and troubleshoot PC networks utilizing Windows operating systems, the Exchange email messaging system, Cisco technologies, basic Linux networking, and automation tools such as Windows PowerShell. The Microsoft related classes use Microsoft approved curriculum that is designed to help students prepare for rigorous Microsoft exams. Exam vouchers are provided for students who meet the requirements of the Test Pass Assurance (TPA) program.

In order to qualify for this rigorous program, applicants must provide verification of current or recent employment in the information technology industry or evidence of a related industry certification such as A+ or Microsoft Certified Professional. Due to the level of difficulty of this program, student progress and attendance will be closely monitored. Students must maintain a minimum C grade average and demonstrate excellent class attendance and participation in order to advance through the class series.

To fulfill the basic goals and objectives the following ITNA Program Learning Outcomes have been adopted for the program.

- Upon successful completion of this program, students will be able to do the following:
- Demonstrate an understanding of terminology and functions for network operating systems and network services in a business network.
- Apply industry standard tools and technologies to perform routine system administrative tasks.
- Install and upgrade desktop and server operating systems, and configure services, protocols, and access per client specifications.
- Identify, troubleshoot, and resolve network problems utilizing the appropriate tools, utilities and resources.
- Employ learning strategies necessary to obtain the MCITP - Server Administrator certificate.
- Apply systems knowledge to support, administer, design, and secure a Microsoft Exchange Server for a business email environment.
- Apply industry standard tools for automating server tasks in a Microsoft network environment
- Demonstrate an understanding of Cisco terminology and basic network design and maintenance
- Demonstrate an understanding of Linux technologies, network administration and maintenance.

Program Learning Outcomes (PLOs) Assessment Report Summary

Findings:

This assessment was completed in 2012. The course student learning outcomes assessments from all of the course assessments in the ITNA programs map to the program learning outcomes. The department set target achievement goals and compared the results of the actual achievement goals to the target. The results of the course and program assessment showed the following:

- There was a strong message from students that there are not enough hands on learning opportunities. This was a theme through many course evaluations.
- The need for IT205 has been removed. When the class was first introduced virtualization was a new concept for students. Over the last three years virtualization has been heavily integrated into both first and second year tech classes. Students finishing the first year A+ program will have built or used dozens of virtual machines. Through the second year program students will continue to build and use multiple VM's in all classes.
- The Microsoft server certification classes need to be updated. The MOAC team has decided to skip an R2 update and students have suffered in the actual exams. The R2 update contains significant changes for the Windows 2008 Server environment and those changes were reflected on the live certification exams. Students need material that more closely maps to current certification questions. IT220, IT230, and IT240 need updated curriculum. The classes will continue to be IT220, IT230, and IT240.
- The IT260 class needs to be updated. Exchange 2007 no longer has a valid Microsoft certification exam. This is viewed by students as being outdated technology. The class needs to be updated to Exchange 2010 or Exchange 2013. A new class, IT261 will take its place.
- The IT290 class needs to be updated. The copyright on current books is from 2008. Students perceive that this is old technology. We need to identify newer books that discuss current Cisco products. We also need to update the virtual machines students use to Windows 7. Using the old XP VM again gives a perception of older technology. The class will continue to be IT290.

Action Items:

We will need to increase and modify hands on labs. The cable creation lab from IT290 needs to be moved towards the beginning of the year. Field trips to our network room need to happen in the second term of the program so students are able to identify hardware to the concepts they are learning in the class are examples of how to improve this. We also need to have students understand that working with virtual machines is indeed “hands on.” The perception that you need to work with something physical to be “hands on” needs to change.

To support the increased need for hands on training, the 20 hours of class time from IT205 could be added to IT210, creating an IT211 that goes even more in depth into the requirements of Network + curriculum and adds on cable making and management for a server room environment.

The curriculum in IT220, IT230, IT240, IT260 and IT290 will be updated.