

NETWORK ADMINISTRATOR NETWORK ADMINISTRATION ASSOCIATE OF APPLIED SCIENCE, YEAR 2 PROGRAM ASSESSMENT - 2016

Information Technology—Network Administration and Security Program Objective

The Information Technology - Network Administration and Security program is designed to prepare graduates for a career in system administration. Successful graduates will be able to design, administer, secure, and troubleshoot networks utilizing Microsoft Windows Server 2012 operating systems, 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 2012 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 2012 operating system, Linux networking technologies, and gaining academic experience with automation tools such as Windows PowerShell. Classes use Microsoft and CompTIA approved curriculum that is designed to help students prepare for the CompTIA Security+ and Network+ certifications and the rigorous Microsoft Certified Solutions Associate (MCSA) exams. Exam vouchers are provided for students who meet the requirements of the Test Pass Assurance (TPA) program.

Program Outcomes - Year Two

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.
- 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 Windows Server 2012 MCSA certification through the completion of Microsoft Exam 70-410 Installing and Configuring Windows Server 2012 R2, Exam 70-411 Administering Windows Server 2012 R2, and Exam 70-412 Configuring Advanced Windows Server 2012 Services.

- Demonstrate an understanding of networking terminology and basic network design and maintenance necessary to obtain CompTIA Network+ certification.
- Demonstrate an understanding of Linux technologies, network administration and maintenance.
- Identify network security risks, construct strategies for effective network security, and employ learning strategies necessary to obtain CompTIA Security+ certification
- Model behavior that reflects confidence, competence, and professionalism.

Program Learning Outcomes (PLOs) Assessment Report Summary

Findings:

In 2016, the Network Administration (ITNA) program assessment involved the completion of individual course assessments and a review of program learning outcomes.

Assessment of ITNA Program Learning Outcomes (PLOs) show most PLOs reflecting satisfactory achievement in individual course assessments. Most show achievement scores of 70% or higher on most assessed items. Two PLOs that reflect deficient scores include the following:

- Identify, troubleshoot, and resolve network problems utilizing the appropriate tools, utilities and resources.
- Employ learning strategies necessary to obtain Windows Server 2012 MCSA certification through the completion of Microsoft Exam 70-410 Installing and Configuring Windows Server 2012 R2, Exam 70-411 Administering Windows Server 2012 R2, and Exam 70-412 Configuring Advanced Windows Server 2012 Services.

Both PLOs resulted in assessment scores below 70%. The PLO related to network troubleshooting follows a corresponding challenge seen in the Technical Support Specialist (A+) program. This points to a broader need to improve or expand current coverage of networking concepts. Currently, students receive a basic introduction to networking via the first-year CompTIA A+ program, but more coverage is required. Expanded coverage could also be obtained by completing the coverage of Network+ concepts (IT276) before students attempt their core server networking in the MCSA courses. Certification achievement rates also need to improve. The program continues to benefit from a variety of resources including appropriate classroom server hardware, software availability to students via Microsoft Imagine Academy, and our Moodle and Lynda.com subscriptions.

Moving forward, an expansion of networking topics and a focus on certification achievement will serve as foundations for new program objectives. In 2016, Microsoft released Windows Server 2016. At the time of this writing, no mainstream textbook or other learning materials are available from our publishers. Materials are expected to enter the market in Q1 2017. In 2017, review of the new server software and materials will be completed in anticipation of a likely adoption in early 2018. The effectiveness of the new Network+ and Security+ courses will also continue to be evaluated.

Action Items

- Improve lessons and assignments related to networking
- Increase the number of completed certifications (MCSA, Network+, Security+)
- Continue ongoing assessment of CompTIA Network+ and Security+ courses