

Associate in Applied Science



Program Description:

The Associate in Applied Science Degree Program in Network Systems Security offers comprehensive network training from Mountwest Community and Technical College's Microsoft Information Technology Academy and Cisco Networking Academy. Within the two-year Associate Degree program, students take courses developed by Microsoft and Cisco, providing specialized skills in network administration, design, and security. Students will take courses preparing them for the following certifications:

CompTIA's A+ Hardware and Operating Systems.....Microsoft's MCITP: Server Administrator (Microsoft Certified IT Professional)
CompTIA's Linux+..... Cisco's CCNA (Cisco Certified Network Associate)
CompTIA's Security+..... Cisco Firewall Specialist
CompTIA's Server+..... PIX Firewall Advanced exams Cisco's Wireless LAN Support Specialist

Career Outlook:

Released on February 14, 2003, the National Strategy to Secure Cyberspace identifies a need for training programs in cyber security to produce a workforce capable of securing our nation's information technology infrastructure (http://csrc.nist.gov/policies/cyberspace_strategy.pdf). A recent IDC survey shows the total information technology security market revenues, including software, hardware, and services, is expected to increase from \$17 billion in 2001 to \$45 billion by 2006, thus fueling a 24% rise in spending for network security services. For more information visit (<http://www.idc.com>), then search for February 4, 2003 Press Release entitled "Total IT Security Market."

Salary Forecast:

Salary ranges depend upon geographic location of the job. The U.S. Department of Labor listed the Huntington, WV - Ashland, KY Metropolitan Area average annual wage for Network Systems and Data Communications Analysts at \$44,770 (http://stats.bls.gov/oes/2008/may/oes_wv.htm#b15-0000). In a 2006-2007 Salary Survey conducted by (<http://tcpmag.com/salariesurveys/>), CCNA's reported average annual salaries of \$47,070 for individuals with at least three years of experience and Cisco Firewall Specialists reported an average salary of \$86,520 for individuals with 5 to 10 years of experience.

Career Description:

A well-rounded network professional is capable of performing network administration, design, maintenance, and security on a variety of network operating systems and devices. Microsoft Certified IT Professional Server Administrators manage and troubleshoot system environments running the Windows 2008 operating system. Cisco Certified Network Associates design, build, and maintain computer networks using a variety of network devices. CompTIA Security+ and Cisco Network Security Specialists design and implement security solutions that reduce network vulnerability. Cisco Wireless LAN Support Specialists implement and troubleshoot Wireless LANs. MCTC's Network Systems Security option provides fundamental networking knowledge and skills with specific network security training crucial for entry into information security positions in public corporations and government entities.

Contact Information:

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Major Code – CI20 • Concentration Code – CI26 Network Systems Security

FIRST YEAR	
<p>Fall Semester¹</p> <p>ENL 111 Written Communication 3</p> <p>IT 101/102 Fundamentals of Computers¹ (EDGE) 3</p> <p>IT 120 Network Operating Systems 4</p> <p>IT 131 Introduction to Networking (EDGE)..... 4</p> <p>MAT Approved Math Elective..... 3</p> <p>TOTAL CREDITS..... 17</p>	<p>Spring Semester</p> <p>COM 112 Oral Communication..... 3</p> <p>IT 141 Networking Systems II² (EDGE)..... 4</p> <p>IT 224 Fundamentals of Network Security 3</p> <p>SCI 201 Integrated Science: Health, Law & Enforce 3</p> <p>SS 215 Lifespan Psychology 3</p> <p>TOTAL CREDITS 16</p>
SECOND YEAR	
<p>Fall Semester</p> <p>IT 210 Networking Administration I^{5,6} 3</p> <p>IT 211 Networking Administration II⁵ 3</p> <p>IT 216 Networking Administration III⁵ 3</p> <p>IT 217 Networking Administration IV⁵ 3</p> <p>IT 231 Networking Systems III³ (EDGE) 4</p> <p>TOTAL CREDITS..... 16</p>	<p>Spring Semester</p> <p>ENL 231 Technical Report Writing..... 3</p> <p>IT 225 Fundamentals of Wireless LANs⁷ 4</p> <p>IT 241 Networking Systems IV⁴ (EDGE) 4</p> <p>IT 277 Management Information Systems⁹..... 3</p> <p>IT 299 Information Technology Internship⁸ 3</p> <p>TOTAL CREDITS 17</p>
HOURS REQUIRED FOR GRADUATION: 66	

Employment Opportunities:

- Network administrator
- Web designer
- Systems support technician
- Network designer
- Security solutions designer
- Help desk technician
- Hardware technician
- Software applications

Earn A Degree Graduate Early (EDGE):

This program provides students the opportunity to receive credit for their high school EDGE courses.

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1. Students are expected to have basic knowledge of computers including operating systems such as Windows XP or 2003 and Microsoft Office XP or 2003 before entering this program. The student must register for IT 101 during his or her first semester or successfully pass a challenge exam for IT 101.
2. IT 141 has a prerequisite or co-requisite of IT 131
3. IT 231 has a prerequisite of IT 141, Networking Systems II, or Cisco Semester 2, and a co-requisite of IT 241.
4. IT 241 has a prerequisite or co-requisite of IT 231.
5. Networking Administration classes IT 210, IT 211, IT 216 and IT 217 must be taken concurrently. These classes cannot be taken individually.
6. IT 210 has a prerequisite of IT 120 or permission.
7. IT 225 has a prerequisite of IT 141 or CCNA certification or Cisco Semester 2.
8. Permission of Program Coordinator is required in order to enroll in IT 299.
9. IT 277 to be taken in last semester or permission.