NORTHEAST
WI Technical College

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IT Systems Administrator Associate Degree
Program Code 101502

IT System Administrators are technology professionals who are responsible for network infrastructure, software and desktop deployment, maintenance, and troubleshooting. IT System Administrators' opportunities for employment can range from network support specialist to network administrators to business technology consultants. Responsibilities can include network and user administration, network infrastructure configuration and support, and security design - all focused on developing and maintaining an active network for optimal performance. Graduates of this associate degree are also prepared to pursue mainstream vendor certifications.

Average Starting Salary	80%	Job Openings:
$50,207.00	Graduate Employment	**48**[*]
FT Median Annual Wage	With 70% Employed in Field	

Locations

Offered at the Green Bay campus.
For information: (920) 498-5444.
Toll-free: (888) 385-6982.

This program is fully eligible for financial aid.

Follow Your Path

All credits from the following technical diploma(s) apply toward this associate degree:
. Cisco System Administrator, 301506
. Linux System Administrator, 301507
. Microsoft System Administrator, 301505
. Virtualization System Administrator, 301501
All credits from the following certificate(s) apply toward this associate degree:
. Networking, 611504

CURRICULUM

Students following the study plan below will complete the IT Systems Administrator Associate Degree in the number of semesters shown.

FIRST SEMESTER
10-890-101	College 101	1
10-150-163	IT:Network:Cisco 1	3
10-150-175	IT:Network: Network Essentials	3
10-154-150	IT:Support:Hardware-Intro	3
10-801-136	English Composition 1	3
10-804-133	Math & Logic	3
10-809-198	Intro to Psychology	3
SEMESTER TOTAL		**19**

SECOND SEMESTER
10-105-101	Career Planning	1
10-150-156	IT:Network:Linux 1	2
10-150-165	IT:Network:Microsoft Server 1	3
10-150-168	IT:Network:Cisco 2	3
10-150-192	IT:Network:PowerShell	2
10-801-196	Oral/Interpersonal Comm	3
10-809-195	Economics	3
SEMESTER TOTAL		**17**

THIRD SEMESTER
10-105-103	Career Preparation	1
10-150-158	IT:Network:Linux 2	2
10-150-187	IT:Network: Microsoft Server 2	3
10-150-178	IT:Network:Cisco 3	2
10-150-183	IT:Network: Virtualization 1	2
10-809-172	Intro to Diversity Studies	3
10-809-166	Intro to Ethics: Theory & App	3
SEMESTER TOTAL		**16**

FOURTH SEMESTER
10-150-145	IT:Network:Security Fund	3
10-150-170	IT:Network:Capstone	2
10-150-179	IT:Network:Cisco 4	2
10-150-190	IT:Network:Microsoft Server 3	3
10-150-184	IT:Network: Virtualization 2	2
10-150-199	IT:Network: Career Experience	2
SEMESTER TOTAL		**14**

TOTAL CREDITS	**66**

Curriculum Note
. The credit for 10-890-101, College 101 is an Institutional Requirement for graduation. Consequently, it is not part of the program requirements, but must be passed with a C.

Requirements for Program Entry

· Completed application.

· High school transcript or equivalent. For a list of equivalents, go to www.nwtc.edu/gettingstarted.

· One year of high school algebra completed.

· User level familiarity with one or more computer operating environments.

· Ability to interact with a computer system (keyboarding or assist device).

· To be admitted to this program, learners must achieve a prior cumulative high school or college grade point average of 2.6 or higher OR a satisfactory academic skills assessment score. College grade point average must be based on 15 credits or more. To learn more about starting this program, please contact an academic advisor at (920) 498-5444 or (888) 385-6982.

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* Program-related job openings, full- and part-time, within our district, via EMSI. Many programs have additional job opportunities outside of district. Learn more at www.nwtc.edu/graduatesuccess

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Course Descriptions

10-890-101 COLLEGE 101 ...Students will utilize digital tools and resources to assess, explore, practice, apply, and evaluate both employability and learning skills. By establishing NWTC cultural values as hallmarks of success in academic, career, and personal settings the course encourages reflective, personalized development of a growth mindset and emphasizes the importance of making wise choices. To maximize the return on investment, students should take this course in their first semester as it identifies key expectations (hidden rules) of higher learning and professional employment.

10-150-163 IT:NETWORK:CISCO 1 ...cable characteristics and termination, structured cabling systems, OSI reference model, IP addressing and subnetting, network architectures and basic protocols, Ethernet switches, basic router operation and configuration.

10-150-175 IT:NETWORK:NETWORK ESSENTIALS...develop the knowledge, skills, process, and understanding of client OS installation, configuration, administration, and troubleshooting; network connectivity; standard system maintenance procedures; command line introduction; and basic PowerShell script writing.

10-154-150 IT:SUPPORT:HARDWARE-INTRO ...computer network terminology, component identification, computer/peripheral configuration and maintenance, basic operating systems concepts and installations, basic networking concepts and configurations and troubleshooting using the Cisco IT Essentials curriculum.

10-801-136 ENGLISH COMPOSITION 1 ...learners develop knowledge/skills in planning, organizing, writing, editing. Students will also analyze audience/purpose, use elements of research, format documents using standard guidelines, and develop critical reading skills. (Prerequisite: Accuplacer Rdg score greater/equal to 55 AND Sentence Skills greater/equal to 75; OR ACT Rdg score greater/equal to 16 AND Eng greater/equal to 18; OR preparatory courses-contact academic advisor at 920-498-5444)

10-804-133 MATH & LOGIC ...Students will apply problem solving techniques from discrete mathematics.Topics include symbolic logic, sets, algebra and base number systems (Prerequisite: Accuplacer Arith score greater/equal to 65 AND Rdg score greater/equal to 55; OR ACT Math score greater/equal to 15 AND ACT Rdg score greater/equal to 16; OR prep courses-contact academic advisor 920-498-5444).

10-809-198 INTRODUCTION TO PSYCHOLOGY ...survey of theoretical foundations of human behavior such as sensation and perception, motivation, emotions, learning, personality, psychological disorders, therapy, stress, and human diversity in personal, social and vocational settings. (Prerequisite: Cumulative GPA of 2.6 or greater OR satisfactory reading and writing assessment scores OR 10-831-107, College Reading and Writing 1 with "B" or better OR Corequisite: 10-831-102, English Comp Prep)

10-105-101 CAREER PLANNING ...experiential learning introduction. Learn how personal branding allows candidates to differentiate themselves from the competition through appearance, personality, and marketing competency. Career portfolio introduced. (Corequisite: 10-890-101, College 101)

10-150-156 IT:NETWORK:LINUX 1...an introductory look at the Linux operating system. Installation and configuration; boot up and login process; directory structure purpose/use; maneuvering in the Command Line Interface; understanding Long Directory Listings; Users and Groups; modifying permissions; remote access; starting and stopping services. (Prerequisites: 10-150-175, IT:Network:Network Essentials)

10-150-165 IT:NETWORK:MICROSOFT SERVER 1 ...Acquire necessary skills for supporting and configuring Windows Server including installation and configuration of an Active Directory Domain. Account administration, group policy management and core server roles and features are identified while preparing for MCSA Exam 70-410. (Prerequisite: 10-150-175, IT:Network:Network Essentials)

10-150-168 IT:NETWORK:CISCO 2 ...Basic configuration of routers and switches; resolving common issues with RIP, OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks. (Prerequisite: 10-150-163, IT:Network: Cisco 1; 10-150-175 IT: Network: Network Essentials)

10-150-192 IT:NETWORK:POWERSHELL...introduction to PowerShell concepts and how it is used for managing Microsoft networks; develop fundamental understanding of Windows management through the use of native command-lets, programming logic, and

script development. (Prerequisite: 10-150-175 IT: Network: Network Essentials, Corequisite: 10-150-165, IT:Network:Microsoft Server 1)

10-801-196 ORAL/INTERPERSONAL COMMUNICATION ...the communication process, perception and self-concept, language, listening, nonverbal communication, interpersonal relationships, communication in groups and public communication; prepare and deliver an oral presentation. (Prerequisite: Accuplacer Rdg score greater/equal to 55 AND Sentence Skills score greater/equal to 60; OR ACT Rdg score greater/equal to 16 AND English score greater/equal to 16; OR preparatory course-contact an academic advisor at 920-498-5444)

10-809-195 ECONOMICS ...scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment, and global economic issues. (Prerequisite: Accuplacer Rdg score greater/equal to 55 AND Sentence Skills greater/equal to 60; OR ACT Rdg score greater/equal to 16 AND English greater/equal to 15; OR 10-831-107, College Reading and Writing with a B or better)

10-105-103 CAREER PREPARATION ...create professional resume and cover letter, prepare for interviews, understand interviewing techniques, participate in a mock interview. (Prerequisites: 10-105-101, Career Planning; 10-801-136, English Composition 1)

10-150-158 IT:NETWORK:LINUX 2...installation and configuration of basic Linux Server Applications; Web, FTP, SSH, Samba, etc.; building a Windows (Samba) Network on a Linux server; Troubleshooting boot up, login, and networking failures; Introduction to Firewalls and Security applications. (Prerequisite: 10-150-156, IT:Network: Linux 1)

10-150-187 IT:NETWORK:MICROSOFT SERVER 2 ...acquire necessary skills for administering Windows Server environment including Active Directory management, Group Policy, backup and recovery; PowerShell remoting, and infrastructure management; and security concepts while preparing for MCSA Exam 70-411. (Prerequisite: 10-150-165, IT:Network: Microsoft Server 1, 10-150-192 IT: Network: PowerShell)

10-150-178 IT:NETWORK:CISCO 3...configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, STP, AND VTP in both IPv4 and IPv6 networks; implement DHCP and DNS operations in a network. (Prerequisite: 10-150-168, IT:Network: Cisco 2)

10-150-183 IT:NETWORK: VIRTUALIZATION 1...provides the opportunity for the learner to develop the knowledge, skill, process, and understanding of designing, implementing, and securing aspects of virtualization environments including but not limited to, storage technologies, virtual network infrastructure, and virtual machine installation, configuration, and migration. (Prerequisites: 10-150-163, IT:Network:Cisco 1; 10-150-175, Network Essentials)

10-809-172 INTRO TO DIVERSITY STUDIES...basic American values of justice and equality by teaching vocabulary, history of immigration/conquest, transcultural communication, legal liability, multicultural majority/minority relations, ageism, sexism, gender, sexual orientation, the disabled/ADA. (Prerequisite: Accuplacer Rdg score greater/equal to 55 AND Sentence Skills greater/equal to 60; OR ACT Rdg score greater/equal to 16 AND English greater/equal to 15; OR 10-831-107, College Reading and Writing with a B or better)

10-809-166 INTRO TO ETHICS: THEORY & APP ...basic understanding of theoretical foundations of ethical thought; analyze/compare relevant issues using diverse ethical perspectives; critically evaluate individual, social/professional standards of behavior--applying a systematic decision-making process. (Prerequisite: Accuplacer Rdg score greater/equal to 55 AND Sentence Skills greater/equal to 60; OR ACT Rdg score greater/equal to 16 AND English greater/equal to 15; OR 10-831-107, College Reading and Writing with a B or better)

10-150-145 IT:NETWORK:SECURITY FUNDAMENTALS ...examine common security vulnerabilities and defenses used to protect network resources. Included is a discussion of security policies, user awareness training, network monitoring, and secure network design. (Prerequisites: 10-150-156, IT:Network:Linux 1; 10-150-165, IT:Network:Microsoft Server 1; 10-150-168, IT:Network:Cisco 2)

10-150-170 IT:NETWORK:CAPSTONE ...individual case studies to review and consolidate the knowledge and skills gained in previous classes. Course is intended to be taken during the student's last semester. (Prerequisites: 10-150-187, IT:Network:Microsoft Server 2; 10-150-158, IT:Network:Linux 2, 10-150-178 IT: Network: Cisco 3)

10-150-179 IT:NETWORK:CISCO 4...configure and troubleshoot WAN technologies and network devices resolve common issues with data link protocols; implement IPSec and virtual private network (VPN) operation in a complex network. (Prerequisite: 10-150-178, IT: Network: Cisco 3)

10-150-190 IT:NETWORK:MICROSOFT SERVER 3 ...advanced Windows Server administration including advanced Active Directory management, infrastructure, desktop/server deployment; Hyper-V, VDI, PowerShell automation tasks, high availability and other advanced server services while preparing for MCSA Exam 70-411(Prerequisites: 10-150-187, IT:Network:Microsoft Server 2).

10-150-184 IT:NETWORK: VIRTUALIZATION 2...provides the opportunity for the learner to develop the knowledge, skills, process, and understanding of - advanced topics in virtualization including virtual desktop infrastructure, fault tolerance and load balancing of virtual machines and network devices, as well as other virtualization concepts currently utilized in the Information Technology field. (Prerequisite: 10-150-183, IT:Network:Virtualization 1)

10-150-199 IT:NETWORK: CAREER EXPERIENCE...Students can select any hands on experience related to: Internship, Field Research, Service Learning, Simulations, Capstone, Industry Related, or International. Instructor approval required. (Prerequisite: 10-105-103, Career Preparation)