



MADISON
AREA | TECHNICAL
COLLEGE

**INFORMATION
TECHNOLOGY**

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How to Reach Us

In Person

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Deaf/hh: use 711 (relay)

Associate Degree Programs

IT – Cloud DevOps Specialist

As more people use cloud storage and computing, the need to provide customer service grows. Learn the fundamentals of managing these operating systems to help businesses and customers alike. We are the first two-year college in the Midwest to offer this program!

Program Information

With an associate degree from Madison College in IT-Cloud DevOps, you will learn the fundamentals of architecture, deployment, management, and operations on leading cloud computing platforms.

Valuable skills sought by employers including cloud-based identity management, networking, infrastructure migration and management, application deployment and automation, as well as security and cost controls are at the core of this program. The IT-Cloud DevOps Specialist focuses on the Amazon AWS and Microsoft Azure cloud environments. The virtual computing capability and cloud services offered by these two industry leaders are revolutionizing the way business of all sizes approach their information technology needs.

Students will Learn

Through classroom instruction, extensive hands-on labs, and group projects students will become proficient in computing infrastructure and applications in cloud-based systems. As part of this program, students will deploy and configure virtual machines, networks, VPN gateways, storage, and web applications as well as configure directory and identity management services. Auditing and security in cloud scenarios are explored in addition to fundamental cloud business practices. Use of scripting and templates to build repeatable, easily modified virtual infrastructure is emphasized throughout the course culminating with the capstone Cloud Automation/DevOps course.

Typical Job Duties

Cloud DevOps Specialist graduates will support a wide range of services in both public cloud and on-premises infrastructure. With experience, graduates will be positioned for key roles within enterprises of all sizes managing cloud infrastructure. Typical job duties range from deployment and management of cloud-based infrastructure to meet business needs to working with application developers in migrating and managing critical business applications hosted by Amazon, Microsoft, and other cloud vendors. Cloud systems are quickly evolving, require continuing education to stay proficient and are at the forefront of modern information technology systems.

Career Outcomes

- Cloud System Administrator
- Cloud Support Associate
- Cloud Support Engineer

Recent Employers

- American Family Insurance, CUNA

More Information

<https://madisoncollege.edu/academics/programs/cloud-support-associate>

Special Note

Courses core to the IT-Cloud Support Associate program will only be offered during the daytime for Students accepted in the spring term.

Recommended Two-Year Course Progression for IT – Cloud DevOps Specialist

| Semester 1 17 credits | Semester 2 15 credits | Semester 3 16 credits | Semester 4 15 credits |
|--|--|---|--|
| Data Communications 10-150-104 (3 credits) | Intro to Cloud Computing 10-157-101 (3 credits) | AWS Administration* 10-157-141 (3 credits) | Azure Administration** 10-157-130 (3 credits) |
| IT Security Awareness 10-151-102 (1 credit) | Windows Server 1 10-154-171 (3 credits) | VMWare Certified Pro* 10-157-135 (3 credits) | Cloud Automation/DevOps** 10-157-155 (3 credits) |
| Enterprise Client 10-154-184 (3 credits) | Linux Server 1 10-154-190 (3 credits) | Advanced Scripting for Cloud* 10-157-123 (3 credits) | Cloud Internship** 10-157-196 (3 credit) |
| Introduction to Databases 10-156-124 (3 credits) | Python Programming 10-152-109 (3 credits) | Job Search Prep 10-107-175 (1 credit) | Contemporary Amer Society ² 10-809-197 (3 credits) |
| Exploration of Info Tech 10-107-111 (1 credit) | Oral/Interpersonal Comm ² 10-801-196 (3 credits) | Math of Finance ² 10-804-144 (3 credits) | Elective (3 Credits) |
| Written Communication ² 10-801-195 (3 credits) | | Elective (3 Credits) | |
| Psych. of Human Relations ² 10-809-199 (3 credits) | | | |

Color Codes for Course Types

| | | |
|----------------------|-------------------|----------------|
| Cloud/Virtualization | Automation | Infrastructure |
| Career Preparation | General Education | |

Recommended Electives (6 credits total)

| | | |
|------------|-----------------------|---|
| 10-115-114 | Linux Server 2 | 3 |
| 10-151-118 | Infrastructure Auto 3 | 3 |
| 10-152-120 | Website Development | 3 |
| 10-154-172 | Windows Server 2** | 3 |

* Fall Only ** Spring Only

² See your advisor for alternate general education courses that transfer

Graduate Summary

Graduate Employment Report: IT – Cloud DevOps Specialist

| | 2019 | 2020 |
|----------------------------------|------|------|
| Number of Program Graduates | 5 | 3 |
| Number of Returned Surveys | 5 | 2 |
| Graduates Employed | 3 | 2 |
| Employed in Related Occupation | 3 | 1 |
| Employed in Unrelated Occupation | 0 | 1 |

Salary Trend: IT – Cloud DevOps Specialist

| | 2019 | 2020 | |
|----------------------|-----------------------------|---------|---------|
| Full Time Employment | Full Time Salary Count | 2 | 1 |
| | Average Monthly Wage | \$4,730 | \$6,039 |
| | Average Hourly Wage | \$27.50 | \$35.11 |
| | Average Work Hours per Week | 40 | 43 |

IT – Cybersecurity Specialist

Fight the battle against cybercriminals and scam artists by mastering virtual cyber defense strategies. Your training will also cover ethics and investigation practices.

Program Information

The IT-Cybersecurity Specialist associate degree program at Madison College provides comprehensive instruction in computing systems and networks that have an important impact on data confidentiality, integrity, and availability. Emphasis is placed on vigilant security awareness throughout the curriculum.

Students Will Learn

The IT-Cybersecurity Specialist program introduces the student to computer network threats and the appropriate incident response, to include defenses, countermeasures, and computer forensics. Students are exposed to scenarios reflecting the legal and ethical issues associated with information security. Extensive hands-on labs build practical experience in configuring a variety of network operating systems, firewalls, virtual private networks (VPN), packet filters and intrusion detection systems (IDS) to maximize information security in the network.

Typical Job Duties

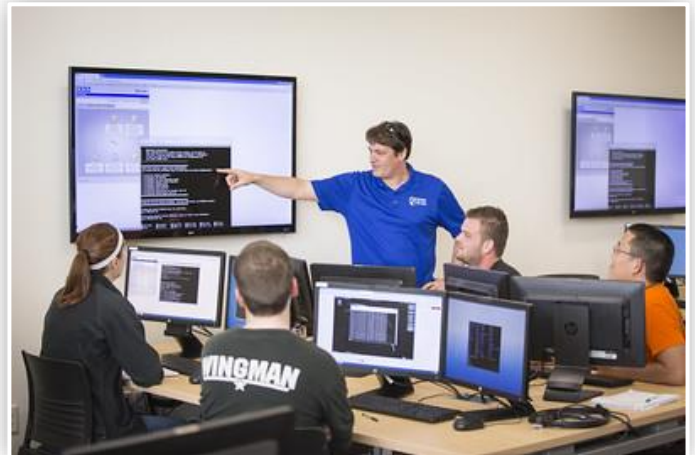
Cyber Security Specialists will initially be involved in all facets of network installation and management. With a proven employment history, they can expect to eventually be incorporated into the information security infrastructure of the organization. Typical duties might include participation in a rapid incident response team to quickly thwart information security attacks against the organization, performing risk assessments and designing security to address those risks, designing and implementing security in network operating systems, evaluating corporate security policies, review of all project development plans to ensure compliance with security policy, evaluating and installing security tools, advising management on emerging vulnerabilities, and developing and disseminating information security awareness presentations throughout the organization.

Career Outcomes

- Cybersecurity Defense Analysis (CDA)
- Cybersecurity Defense Infrastructure Support (INF)
- Incident Response (CIR)
- Vulnerability Assessment and Management (VAM)
- Systems Analysis (ANA)
- Dynamic Applications Security Testing (DAST)
- Network Penetration Testing (NPT)

Recent Employers

- Bruce Company
- Madison College
- Madison Metropolitan School District
- Naviant
- QBE Insurance
- Team Logic IT



More Information

<https://madisoncollege.edu/academics/programs/cybersecurity-specialist>

Special Note

Courses core to the IT-Cybersecurity Specialist Associate program will only be offered during the daytime for Students accepted in the spring term.

Recommended Two-Year Course Progression for IT – Cybersecurity Specialist

| Semester 1 17 credits | Semester 2 15 credits | Semester 3 16 credits | Semester 4 15 credits |
|--|--|--|--|
| Data Communications 10-150-104 (3 credits) | Linux Server 2 10-151-114 (3 credits) | Incident Response 10-151-137 (3 credits) | Ntwrk Forensics & Threat Hunting 10-151-333 (3 credits) |
| Linux Server 1 10-154-190 (3 credit) | Perimeter Security 10-151-106 (3 credits) | Web Application Security 10-151-142 (3 credits) | Penetration Testing 10-151-164 (3 credits) |
| Enterprise Client 10-154-184 (3 credits) | Windows Server 1 10-154-171 (3 credits) | VMware Certified Prof (VCP) 10-157-135 (3 credits) | Security Design 10-151-168 (3 credit) |
| IT Security Awareness 10-156-124 (3 credits) | Python Scripting 10-152-109 (3 credits) | Intro to Cloud Computing 10-157-101 | Cybersecurity Internship** 10-151-197 (3 credit) |
| Exploration of Info Tech 10-107-111 (1 credit) | Oral/Interpersonal Comm ² 10-801-196 (3 credits) | Job Search Prep 10-107-175 (1 credit) | Contemporary Amer Society ² 10-809-197 (3 credits) |
| Written Communication ² 10-801-195 (3 credits) | | Math of Finance ² 10-804-144 (3 credits) | |
| Psych. of Human Relations ² 10-809-199 (3 credits) | | | |

Color Codes for Course Types

| | | |
|--------------------|-------------------|----------------|
| Security | Networking | Infrastructure |
| Career Preparation | General Education | |

* Fall Only ** Spring Only

² See your advisor for alternate general education courses that transfer

Graduate Summary

| Graduate Employment Report: IT – Cybersecurity Specialist | | | |
|---|------|------|------|
| | 2018 | 2019 | 2020 |
| Number of Program Graduates | 12 | 16 | 22 |
| Number Surveys Returned | 5 | 11 | 14 |
| Graduates Employed | 4 | 9 | 10 |
| Related Occupation | 3 | 7 | 8 |
| Unrelated Occupation | 1 | 2 | 2 |

| Salary Trend: IT – Cybersecurity Specialist | | | | |
|---|-----------------------------|---------|---------|---------|
| | 2019 | 2019 | 2020 | |
| Full Time Employment | Full Time Salary Count | 3 | 7 | 7 |
| | Average Monthly Wage | \$4,351 | \$3,846 | \$3,744 |
| | Average Hourly Wage | \$25.30 | \$22.36 | \$21.77 |
| | Average Work Hours per Week | 40 | 41 | 42 |

IT – Data and Analytics Specialist

With an associate degree from Madison College in IT-Data & Analytics Specialist, you will have practical, applicable skills in data engineering and analytics to secure employment in this rapidly growing specialty and thrive in most technical workplaces.

Program Information

Valuable skills sought by employers include Python programming, relational database technologies/programming and data-related cloud expertise. Training blends general educational development and required IT technical skills. Graduates are prepared for data-centric jobs in information technology, government, insurance, medicine, marketing, manufacturing, service, software development, wholesale and retail sales, utilities, banking, and academics.

Typical Job Duties

Graduates of the IT-Data & Analytics Specialist are prepared to:

- Prepare data for more extensive analysis through data engineering (ETL) by writing moderately complex Python scripts.
- Discover and quantify trends in data by using industry-standard tools or writing moderately complex Python scripts.
- Solve common analytics tasks through machine learning.
- Recommend basic business solutions through a complete understanding of the data analytics life cycle.
- Communicate status and findings through professional charts and dashboards.
- Manage and store data based on usage (e.g., data lakes, relational, warehouse), both in the cloud and on-prem.
- Migrate data between data stores using Python scripts and industry-standard tools, both in the cloud and on-prem.

Career Outcomes

- Data Analyst
- Data Wrangler

More Information

<https://madisoncollege.edu/academics/programs/data-analytics-specialist>

Recommended Two-Year Course Progression for IT – Data and Analytics Specialist

| Semester 1 16 credits | Semester 2 15 credits | Semester 3 16 credits | Semester 4 15 credits |
|--|---|--|--|
| Python for Developers* 10-152-211 (3 credits) | Data Visualization** 10-152-110 (3 credits) | Predictive Analytics* 10-156-144 (3 credits) | Applied Analytics in the Cloud** 10-156-145 (3 credits) |
| Website Development 10-152-120 | Data Engineering** 10-156-135 (3 credits) | Cloud for Developers 10-152-130 (3 credits) | Data Analytics Internship** 10-156-196 (3 credits) |
| Introduction to Databases 10-156-124 | SQL Database Programming 10-156-125 (3 credits) | UI/UX for Developers 10-152-130 (3 credits) | Agile Practices 10-152-131 (3 credits) |
| IT Security Awareness 10-151-102 | Business Statistics 10-102-104 (3 credits) | Job Search Prep 10-107-175 (1 credits) | Psych of Human Relations 10-809-199 (3 credits) |
| Exploration of Info Tech 10-107-111 (1 credit) | Written Communications ² 10-801-195 (3 credits) | Oral/Interpersonal Comm ² 10-801-196 (3 credits) | Elective (3 credits) |
| Math of Finance ² 10-804-144 (3 credits) | | Contemporary Amer Society 10-809-197 (3 credits) | |
| Excel Beginning 10-103-133 (1 credit) | | | |
| Excel Intermediate 10-103-139 (1 credits) | | | |

Recommended Electives (3 credits total)

| | | |
|------------|---------------------|---|
| 10-152-121 | Advanced CSS | 3 |
| 10-152-158 | JS Frameworks | 3 |
| 10-152-168 | Advanced JavaScript | 3 |

Color Codes for Course Types

| | | |
|--------------------|-------------------|-------------------|
| Data/Analytics | Math/Statistics | Development/Other |
| Career Preparation | General Education | |

* Fall Only ** Spring Only

² See your advisor for alternate general education courses that transfer

IT – Front End Developer

Program Information

The Front-End Developer associate degree program prepares students for employment as an entry level software developer typically advertised/recruited as Front-End Engineer, JavaScript Developer, Full-Stack Web Developer. Students learn fundamental web development technologies such as HTML, CSS, and JavaScript. In contrast to our Web Developer associate degree program the front-end developer curriculum focuses on JavaScript and its vast ecosystem rather than Java, PHP, and/or C#.

Students Will Learn

Students in this program learn to build Single Page Applications (SPAs) with JavaScript and popular frameworks and libraries such as Angular, React, and others. Various Cloud and ‘Serverless’ offerings are also introduced to provide students with valuable experience in modern JavaScript software development

Typical Job Duties

- Write front-end web applications using modern JavaScript frameworks.
- Code using current JavaScript.
- Write front-end applications to access “serverless” cloud-based services and endpoints.
- Write SQL statements to retrieve/manipulate data and manipulate relation database structures.
- Apply UI/UX design principles to perform analysis to and build user-centric applications.
- Demonstrate an understanding of the ever-changing IT field and its job roles with emphasis on IT security as it applies to development.
- Work as an ethical and reliable team member using software collaboration tools.

Careers

- Front-End Developer
- CSS/HTML Developer
- Web Software Developer
- Front End Accessibility
- Front End DevOps
- Front End Engineer
- Front End Architect

More Information

<https://madisoncollege.edu/academics/programs/front-end-developer>

Special Note

The core classes unique to the IT-Front End Developer program are offered only during the day. Courses core to the IT-Front End Developer program will only be offered during the daytime for students accepted in the spring term.



Recommended Two-Year Course Progression for IT – Front End Developer

| Semester 1 14 credits | Semester 2 15 credits | Semester 3 16 credits | Semester 4 15 credits |
|--|--|--|---|
| Intro to Prog with JavaScript 10-152-119 (3 credits) | Cloud for Developers 10-152-110 (3 credits) | JS Frameworks 10-152-158 (3 credits) | Adv Front End Development** 10-152-182 (3 credits) |
| Website Development 10-152-120 | Advanced CSS 10-152-121 (3 credits) | Agile Practices 10-152-131 (3 credits) | Serverless Cloud with React** 10-152-108 (3 credits) |
| Introduction to Databases 10-156-124 | UI/UX for Developers 10-152-130 (3 credits) | Job Search Prep 10-107-175 (1 credits) | Psychology of Human Relations 10-809-199 (3 credits) |
| IT Security Awareness 10-151-102 | Oral/Interpersonal Comm ² 10-801-196 (3 credits) | Contemporary Amer Society 10-809-197 (3 credits) | Elective (3 Credits) |
| Exploration of Info Tech 10-107-111 (1 credit) | | Math of Finance ² 10-804-144 (3 credits) | |
| Written Communication ² 10-801-195 (3 credits) | | Elective (3 Credits) | |

Color Codes for Course Types

| | | |
|--------------------|-------------------|-------|
| Front End Dev | Website Dev | Other |
| Career Preparation | General Education | |

* Fall Only ** Spring Only

² See your advisor for alternate general education courses that transfer

Recommended Electives (6 credits total)

| | | |
|------------|-------------------------------|---|
| 10-156-128 | Big Data Fundamentals | 3 |
| 10-152-130 | C# Web Dev Using ASP .NET | 3 |
| 10-152-166 | PHP Web Dev with MySQL | 3 |
| 10-156-125 | SQL Database Programming | 3 |
| 10-152-138 | Software Quality Scripting | 3 |
| 10-152-200 | Software Quality Fundamentals | 3 |

Graduate Summary

| Graduate Employment Report: IT Font-End Developer | | 2020 |
|---|--|------|
| Number of Program Graduates | | n/a |
| Number Surveys Returned | | n/a |
| Graduates Employed | | n/a |
| Related Occupation | | n/a |
| Unrelated Occupation | | n/a |

| Salary Trend: IT Font-End Developer | | 2020 |
|-------------------------------------|-----------------------------|------|
| Full Time Employment | Full Time Salary Count | n/a |
| | Average Monthly Wage | n/a |
| | Average Hourly Wage | n/a |
| | Average Work Hours per Week | n/a |

IT – Network Specialist

Program Information

The Information Technology-Network Specialist program will prepare you to administrate, install, troubleshoot, and maintain computer networks, designed in partnership with local hiring managers, to meet the needs of their companies, as well as the Cisco Networking Academy.

Students Will Learn

You will gain a working knowledge of Local Area Networks (LANs) and Wide Area Networks (WANs), as well their interconnectivity via routers, switches, servers, and other end- and intermediate- devices in the enterprise network. Additionally, you will gain first-hand experience planning, troubleshooting, and implementing wired networks, wireless networks, perimeter networks, Voice over IP (VoIP), and Software Defined Networking (SDN).

Typical Job Duties

Network Specialists will be involved in all facets of network installation and management. Typical duties might include creation of software programs or scripts that aid in network analysis such as diagnostics or monitoring utilities; familiarity with the Internet, web server management and its connectivity to LANs and WANs; responsibility for system and client software management, network creation, support and scaling, network security measures, user administration and network event log monitoring.

Certifications

The program prepares students for the following certifications:

- Cisco Certified Networking Associate (CCNA)
- Cisco Certified DevNet Associate
- Cisco CCNA-Voice

Career Outcomes

- Cable Installer-Voice/Data
- Network Control Operator
- Network Support Technician
- Network Support Services
- Network Technician
- Network Specialist
- Network Professional
- Networking Services
- Assistant LAN Manager
- Assistant LAN Administrator
- Assistant Network Administrator

Recent Employers

- Dept of Corrections
- State of Wisconsin
- Spectrum Brands
- INOC
- TDS

More Information

<https://madisoncollege.edu/program/network-specialist>

Special Note

Courses core to the IT-Network Specialist Associate program will only be offered during the daytime for Students accepted in the spring.



Recommended Two-Year Course Progression for IT - Network Specialist

| Semester 1 17 credits | Semester 2 15 credits | Semester 3 13 credits | Semester 4 15 credits |
|--|--|--|---|
| Intro to Cisco Networking 10-150-121 (3 credits) | Cisco Networking 2 10-150-122 (3 credits) | Cisco Networking 3* 10-150-123 (3 credits) | Advanced Network Topics** 10-150-151 (3 credits) |
| IT Security Awareness 10-151-102 (1 credit) | Wireless Topics** 10-150-190 (3 credits) | VoIP Conv Fundamentals* 10-150-150 (3 credits) | Firewall/VPN Technologies** 10-150-163 (3 credits) |
| Enterprise Client 10-154-184 (3 credits) | Windows Server 1 10-154-171 (3 credits) | Software Defined Networking* 10-150-163 (3 credits) | Networking Internship** 10-150-195 (3 credit) |
| Linux Server 1 10-154-190 (3 credits) | Python Scripting 10-152-109 (3 credits) | Job Search Prep 10-107-175 (1 credit) | Contemporary Amer Society 10-809-197 (3 credits) |
| Exploration of Info Tech 10-107-111 (1 credit) | Oral/Interpersonal Comm ² 10-801-196 (3 credits) | Math of Finance ² 10-804-144 (3 credits) | Elective (3 Credits) |
| Written Communication ² 10-801-195 (3 credits) | | | |
| Psych. of Human Relations ² 10-809-199 (3 credits) | | | |

Color Codes for Course Types

| | | |
|--------------------|-------------------|----------------------|
| Networking | Security | Infrastructure/Other |
| Career Preparation | General Education | |

Recommended Electives (3 credits total)

| | | |
|------------|---------------------|---|
| 10-115-114 | Linux Server 2 | 3 |
| 10-157-135 | VMware Cert Prof | 3 |
| 10-152-120 | Intro to Cloud Comp | 3 |

* Fall Only ** Spring Only

² See your advisor for alternate general education courses that transfer

Graduate Summary

Graduate Employment Report: IT Network Specialist

| | 2018 | 2019 | 2020 |
|------------------------------------|------|------|------|
| Number of Program Graduates | 24 | 32 | 21 |
| Number Surveys Returned | 12 | 17 | 11 |
| Graduates Employed | 11 | 15 | 8 |
| Related Occupation | 9 | 13 | 6 |
| Unrelated Occupation | 2 | 2 | 2 |

Salary Trend: IT Network Specialist

| | 2018 | 2019 | 2020 | |
|-----------------------------|-----------------------------|---------|---------|---------|
| Full Time Employment | Full Time Salary Count | 7 | 11 | 5 |
| | Average Monthly Wage | \$3,358 | \$4,343 | \$4,388 |
| | Average Hourly Wage | \$19.53 | \$25.25 | \$25.51 |
| | Average Work Hours per Week | 39.7 | 40.8 | 39.7 |

IT – System Administration Specialist

Systems administrators keep networks and workplaces running smoothly. You will become an expert in Microsoft systems and in configuring and managing organizational resources.

Program Information

The IT-Systems Administration Specialist program is a two-year Associate Degree program where students learn the fundamentals of operating system configuration, networking, and systems integration. Students will be challenged to learn Microsoft Windows system administration for both client and server systems, as well as other technologies valued by area employers.

Students Will Learn

The IT-System Administration Specialist program provides students with a strong foundation in a variety of computer systems, as well as substantial skills in cloud computing, networking and virtualization. Students will deploy and configure virtual devices and configure virtual switches. Students get experience installing, configuring and managing servers in a virtualized environment. They will promote servers to be domain controllers, create and manage resources in Active Directory, use Group Policy, and configure DNS and DHCP. Students will learn to write scripts, as well as manage and automate on premise and cloud IT Infrastructures.

We are in close contact with area information technology employers, and our graduates are well regarded by employers. The skills you gain in the System Administration program, as well as your internship with an area employer, will prepare you for a satisfying career in information technology.

Typical Job Duties

System Administration graduates' job duties can vary greatly, depending on the needs of the organization. Typical job duties can include on premise or virtual installation, configuration and administration of client and server operating systems. Configuration and management of components of Windows Server, as well as Linux. Performing technical troubleshooting of computer systems and networks. Integration of hardware and software required to support new initiatives. Installation, maintenance, and troubleshooting of Internet connectivity for a variety of services and applications. System Administration employees may be responsible for critical system backups and plan for the restoration of computing services in the event of disasters. To be successful in this role employees should demonstrate initiative and work collaboratively with other members of an information technology team.

Certification

The program prepares graduates to test for the following certifications:

- CompTIA A+
- Microsoft Technology Associate (MTA)
- VMware Certified Professional (VCP)
- AWS Certified Solution Architect

Career Outcomes

- System Administrator
- Technical Support Services
- Help Desk
- Networking Services and Installation

More Information

<https://madisoncollege.edu/program/systems-administration-specialist>

Special Note

Courses core to the It-System Administration Specialist Associate program will only be offered during the daytime for Students accepted in the spring term.



Recent Employers

- AE Business Solutions
- City of Sun Prairie
- Exact Sciences
- Fleetworthy Solutions
- Fort Health & Rehabilitation
- Forward Health Group
- JBC Business Technologies
- MadCity Techs
- Madison Metropolitan School District
- Nelnet Diversified Solutions
- New Vision Networks
- Randstand Technologies
- Reedsburg Area Medical Center
- Regal Beloit
- State of Wisconsin
- Sun Prairie Area School District
- Web Coursework
- TDS

Recommended Two-Year Course Progression for IT – Systems Administration Specialist

| Semester 1 16 credits | Semester 2 15 credits | Semester 3 16 credits | Semester 4 15 credits |
|--|--|--|--|
| Enterprise Client 10-154-184 (3 credits) | Windows Server 1 10-154-171 (3 credits) | Infrastructure Automation* 10-154-118 (3 credits) | Windows Server 2** 10-154-172 (3 credits) |
| A+ Hardware Essentials 10-154-104 (3 credits) | IT Service Concepts 10-154-122 (3 credits) | Supporting Emerging Trends* 10-154-147 (3 credits) | Python Scripting 10-152-109 (3 credits) |
| Intro to Cisco Networking 10-150-121 (3 credits) | Linux Server 1 10-154-190 (3 credits) | VMware Certified Prof (VCP) 10-157-135 (3 credits) | Systems Admin Internship 10-154-198 (3 credits) |
| IT Security Awareness 10-151-102 (1 credits) | Intro to Cloud Computing 10-157-101 (3 credits) | Job Search Prep 10-107-175 (1 credits) | Contemporary Amer Society ² 10-809-197 (3 credits) |
| Exploration of Info Tech 10-107-111 (1 credit) | Oral/Interpersonal Comm ² 10-801-196 (3 credits) | Math of Finance ² 10-804-144 (3 credits) | Elective (3 Credits) |
| Written Communication ² 10-801-195 (3 credits) | | Psychology of Human Relations ² 10-809-199 (3 credits) | |
| Excel Beginning ² 10-103-133 (1 credits) | | | |
| Excel Intermediate 10-103-139 (1 credits) | | | |

Recommended Electives (3 credits total)

| | | |
|------------|---------------------------|---|
| 10-152-120 | Website Development | 3 |
| 10-151-114 | Linux Server 2 | 3 |
| 10-156-124 | Introduction to Databases | 3 |
| 10-157-130 | Azure Administration | 3 |
| 10-157-141 | AWS Administration | 3 |
| 10-150-122 | Cisco Networking 2 | 3 |
| 10-150-194 | Firewall/VPN Technologies | 3 |

Color Codes for Course Types

| | | |
|--------------------|-------------------|----------------|
| System Admin | Desktop Support | Infrastructure |
| Career Preparation | General Education | |

* Fall Only ** Spring Only

² See your advisor for alternate general education courses that transfer

Graduate Summary

| Graduate Employment Report: IT System Administration Specialist | | | |
|---|------|------|------|
| | 2018 | 2019 | 2020 |
| Number of Program Graduates | 38 | 34 | 31 |
| Number Surveys Returned | 26 | 24 | 23 |
| Graduates Employed | 21 | 21 | 22 |
| Related Occupation | 19 | 18 | 20 |
| Unrelated Occupation | 2 | 3 | 2 |

| Salary Trend: IT Network Specialist | | | | |
|-------------------------------------|-----------------------------|---------|---------|---------|
| | 2018 | 2019 | 2020 | |
| Full Time Employment | Full Time Salary Count | 16 | 16 | 18 |
| | Average Monthly Wage | \$3,535 | \$3,862 | \$4,216 |
| | Average Hourly Wage | \$20.55 | \$22.46 | \$24.51 |
| | Average Work Hours per Week | 40.7 | 41.7 | 40.8 |

IT – Web Software Developer

Most businesses and freelance professionals rely on having a good website. You will learn the fundamentals of designing interactive, secure websites and professional communication skills.

Program Information

The Web Software Developer program meets the specific skills and knowledge requirements of technical and professional jobs within the IT field for an entry-level web software developer. It is designed to meet entry-level educational needs of most segments of the IT field, which utilize a variety of computers. Training blends general educational development and required IT technical skills. Graduates are prepared for entry-level web developer jobs in government, insurance, manufacturing, service, software development, wholesale and retail sales, utilities, banking, and accounting.

Students Will Learn

Students learn required core IT technical skills in areas such as SQL, XML, XHTML, JavaScript, ES6 technology, UI/UX, Accessibility Best Practices and object-oriented systems design.

Typical Job Duties

The Web Software Developer will code and deploy applications in a cross-platform, cross-browser environment; build user interfaces and prototypes from wireframes and designs; build applications using java, html, CSS, and JavaScript; update applications to meet modern standards and requirements; consult with managerial and engineering and technical personnel to clarify program intent, identify problems, and suggest changes.

Career Outcomes

- Web Developer

Recent Employers

- American Family Insurance
- CUNA Mutual Group
- Dept of Health Services
- Madison Metropolitan School District
- Mandli Communications
- Moxe Health
- Propeller Health
- Stelthbits Inc
- TDS
- UW Credit Union
- Web Coursework
- Widen Enterprises

More Information

<https://madisoncollege.edu/program/web-software-developer>

Special Note

Courses core to the IT-Web Software Developer program will only be offered during the daytime for students accepted in the spring term.



Recommended Two-Year Course Progression for IT – Web Software Developer

| Semester 1 17 credits | Semester 2 15 credits | Semester 3 16 credits | Semester 4 15 credits |
|--|--|--|--|
| Intro to Prog with JavaScript 10-152-119 (3 credits) | Java Programming 10-152-111 (3 credits) | Adv Java Programming 10-152-112 (3 credits) | Enterprise Java Programming 10-152-113 (3 credits) |
| Website Development 10-152-120 (3 credits) | UIUX for Developers 10-152-130 (3 credits) | Cloud for Developers 10-152-110 (3 credits) | Advanced JavaScript 10-152-168 (3 credits) |
| Introduction to Database 10-156-124 (3 credits) | PHP Web with MySQL 10-152-166 (3 credits) | Agile Practices 10-152-131 (3 credits) | Web Software Internship 10-152-132 (3 credits) |
| IT Security Awareness 10-152-102 (1 credits) | SQL Database Programming 10-156-125 | Job Search Prep 10-107-175 (1 credit) | Contemporary Amer Society ² 10-809-197 (3 credits) |
| Exploration of Info Tech 10-107-111 (1 credit) | Oral/Interpersonal Comm ² 10-801-196 (3 credits) | Math of Finance ² 10-804-144 (3 credits) | Elective (3 Credits) |
| Written Communication ² 10-801-195 (3 credits) | | Elective (3 Credits) | |
| Psych. of Human Relations ² 10-809-199 (3 credits) | | | |

Color Codes for Course Types

| | | |
|--------------------|-------------------|-------|
| Software Dev | Website Dev | Other |
| Career Preparation | General Education | |

* Fall Only ** Spring Only

² See your advisor for alternate general education courses that transfer

Recommended Electives (6 credits total)

| | | |
|------------|-------------------------------|---|
| 10-152-103 | C# Web Dev using ASP .NET | 3 |
| 10-152-108 | Serverless Cloud with React | 3 |
| 10-152-121 | Advanced CSS | 3 |
| 10-152-138 | Software Quality Scripting | 3 |
| 10-152-158 | JS Frameworks | 3 |
| 10-152-167 | Adv PHP & MySQL Web Dev | 3 |
| 10-152-200 | Software Quality Fundamentals | 3 |
| 10-156-125 | Big Data Fundamentals | 3 |
| 10-156-129 | Advanced Big Data Topics | 3 |

Graduate Summary

| Graduate Employment Report: IT Web Software Developer | | | |
|---|------|------|------|
| | 2018 | 2019 | 2020 |
| Number of Program Graduates | 47 | 51 | 47 |
| Number Surveys Returned | 31 | 39 | 34 |
| Graduates Employed | 27 | 36 | 24 |
| Related Occupation | 25 | 34 | 16 |
| Unrelated Occupation | 2 | 2 | 8 |

| Salary Trend: IT Web Software Developer | | | | |
|---|-----------------------------|---------|---------|---------|
| | 2018 | 2019 | 2020 | |
| Full Time Employment | Full Time Salary Count | 23 | 31 | 13 |
| | Average Monthly Wage | \$4,294 | \$4,709 | \$5,121 |
| | Average Hourly Wage | \$24.97 | \$27.38 | \$29.77 |
| | Average Work Hours per Week | 41 | 40.4 | 45 |

Certificates

IT – Cisco Certified Networking Associate (CCNA)

Program Overview

The Cisco Certified Networking Associate (CCNA) certificate program is designed to prepare information systems professionals for the field of network management, design, configuration, maintenance and troubleshooting of both local area networks (LANs) and wide area networks (WANs). CCNAs are becoming increasingly important as the number of networking devices continues to increase. Students enrolling in the CCNA certificate program will be able to meet these needs, thereby effectively engaging with this growing segment of the economy. Four courses will teach students the necessary skills to make them successful in the field of data networking.

After completing the certificate courses, students will need additional preparation and practice time to successfully pass the CCNA certification exam.

IT – Java Professional Developer

Program Overview

The IT-Java Professional Developer certificate from Madison College is designed to prepare information systems professionals to use the Java programming language for web development. Three classes teach students the necessary skills to be successful in Java web development.

IT – PHP Professional Web Developer

Program Overview

The IT-PHP Professional Web Developer Certificate at Madison College is designed to prepare information systems professionals to use the PHP programming language for web development. Classes cover advanced web application features such as shopping carts, content management systems using Drupal, web forums and connecting to web services. The certificate classes teach students the necessary skills to make them successful in PHP web development.

IT – VMware Certified Professional

Program Overview

The IT-VMware Certified Professional Certificate from Madison College is designed for students who have already graduated with a degree in Computer Information Systems or Information Technology, or have significant IT industry work experience, and are seeking to gain the knowledge required to earn the VMware Certified Professional designation. The certificate provides students with the skills required to install, configure, administer, and troubleshoot VMware server virtualization infrastructures such as VMware vSphere. After completing the certificate courses, students will need additional preparation and practice time to successfully pass the VMware Certified Professional certification exams.

VMware is the industry standard and most widely used server virtualization platform. VMware runs many of the IT infrastructures of small, medium, and large businesses worldwide. The VMware Certified Professional certification designates individuals who have demonstrated superior knowledge and skill levels with VMware virtualization infrastructures. It is a highly sought-after certification for many prospective employers.

Technical Diploma

IT – Desktop Support Technician

Program Overview

The IT-Desktop Support Technician program will prepare you to provide first-level technical support to resolve software, hardware, and system problems for PC users. You will develop skills to install, support, and maintain hardware and software, and to ensure that all customer requests and problems are dealt with quickly and effectively. Courses are presented in a hands-on classroom atmosphere. As a student you will be trained in hardware and software installation, configuration, and troubleshooting, basic network concepts, supporting new technologies, repairing workstations, and performing upgrades.

You will gain an understanding of how a help desk functions, and how customer service plays an important role in today's world of technology. Career opportunities exist in all areas of the country. This program may be used to help prepare for the CompTIA A+ computer troubleshooting certification.

Recommended Course Progression for IT – Desktop Support Technician

| Semester 1 14 credits | Semester 2 14 credits |
|--|--|
| Enterprise Client 10-154-184 (3 credits) | IT Service Concepts 10-154-122 (3 credits) |
| A+ Hardware Essentials 10-154-104 (3 credits) | Windows Server 1 10-154-171 (3 credits) |
| Introduction to Cisco Networking 10-150-104 (3 credits) | Linux Server 1 10-154-190 (3 credits) |
| IT Security Awareness 10-152-102 (1 credits) | Excel Beginning 10-103-133 (1 credit) |
| Exploration of Info Tech 10-107-111 (1 credit) | Excel Intermediate 10-103-139 (1 credit) |
| Written Communication ² 10-801-195 (3 credits) | Oral/Interpersonal Comm ² 10-801-196 (3 credits) |

Color Codes for Course Types

| | | |
|--------------------|-------------------|----------------|
| System Admin | Desktop Support | Infrastructure |
| Career Preparation | General Education | |

* Fall Only ** Spring Only

² See your advisor for alternate general education courses that transfer

Career Pathway Certificate

IT – Service Center Technician

Program Overview

The IT-Service Center Technician Certificate from Madison College provides instruction for information systems professionals and programming students in the areas of computer hardware and software. Topics covered include installation, maintenance and troubleshooting of personal computer hardware, operating systems, and software. After completing the certificate courses, students will need additional preparation and practice time to successfully pass the CompTIA A+ certification exams.

National Center of Academic Excellence in Cyber Defense

Madison College is a National Center of Academic Excellence in Cyber Defense

The increasing prevalence of cybersecurity attacks on both individuals and businesses emphasizes the need for cybersecurity professionals to protect and defend our Nation's critical infrastructure and systems. The National Centers of Academic Excellence in Cyber Defense (CAE-CD) program, co-sponsored by the National Security Agency (NSA) and the Department of Homeland Security (DHS), was established to meet this growing need for knowledgeable and skilled cybersecurity professionals within the Federal Government – and ultimately, within state and local governments and industry.

Institutions designated as CAEs in Cyber Defense:

- Are recognized by the U.S. Government for their cyber defense programs and curricula.
- Have curricula that is mapped to specified Knowledge Units, which align with the NICE
- Cybersecurity Workforce Framework, a cybersecurity language employed nationwide by educators, industry workers, and government organizations.
- Have degree programs that are a top choice for students who want to learn the necessary knowledge and skills to succeed in the cybersecurity workforce.
- Assist federal agencies by providing academic insight into cyber-related programs at DHS, NSA, and other federal agencies.
- Serve as a potential source and facilitator for government-academic researcher exchanges.
- Facilitate development of faculty and research leaders.
- Participate in a large network of cybersecurity professionals, educators, researchers, and advocates to grow the cyber field.
- Are privy to opportunities for student scholarships and grants through the



Department of Defense Cyber Scholarship Program and the Federal Cyber Service Scholarship for Service Program.

Scholarships and Financial Aid

Financial Aid

Online application is available at <http://madisoncollege.edu/financial-aid/>. Paper applications are available in the Enrollment Center on the Truax Campus, Downtown Education Center, and at all regional campuses, or call (608) 246-6170.

Scholarships

Madison College Foundation

The Foundation has disbursed more than \$8 million in financial assistance to more than 27,000 Madison College students. For more information, call (608) 246-6441. <http://madisoncollege.edu/scholarships>

External Scholarships

Hundreds of scholarships from private organizations and donors

New Student Scholarships

Ready to open those doors but aren't sure how you can afford college

Emergency Assistance Scholarships

Emergency and short-term book loans

Information Technology Specific Scholarships

GIPAW

Scholarships are intended to defray the educational costs for full-time Associate Degree IT program students

Women in IT

Available to women who are pursuing an associate degree in computer Information Technology at the MATC Truax campus. To receive the award, a student must have applied and been accepted into one of the IT associate degree programs.

Student Organizations

Wolfpack Techies

Wolfpack Techies is Madison College's only computer repair service for all students, faculty, and staff. Wolfpack Techies is comprised of students in IT degrees that are looking for more exposure and experience with computer repair.

Cyber Security Club

Cyber Security Club is a student-run organization for those interested in cyber security and information security. Students learn the technologies involved in cybersecurity and are given opportunities to practice what they learn during hands-on challenge events hosted by the club. The club also provides opportunities for its members to participate in local, regional, and national competitions. Parking and Tours at Madison College

Experience Madison College

The best way to see yourself at Madison College is by visiting campus. Tour our facilities, schedule an appointment with a recruiter, get help with your college application and more. <https://madisoncollege.edu/get-started/visit>

Parking at Madison College

For more information about parking, please visit: <https://madisoncollege.edu/parking>

Madison College Parking Regulations

All vehicles that are parked on Madison College Campuses by students must be registered by completing the online vehicle registration form on the Madison College Public Safety website. All students shall park in general parking areas and must be parked in a **marked stall**. Parking along curbs or in the grass is **NOT** allowed on Madison College Campuses. Vehicles found in violation are subject to citation and/or towing at the owner's expense without warning. **Unpaid citations may also result in suspension of the vehicles registration.**

To learn more about parking and to register your vehicle please visit the Public Safety website and select parking information.
<https://madisoncollege.edu/public-safety>

