Academic Alliance - Collegiate Level

The following are registered members of the NCWIT Academic Alliance in Wisconsin. As members, they are committed to providing an inclusive culture for women in computing and related disciplines on campus and through their K12 STEM Outreach programs.

*Alverno College
Carthage College
Gateway Technical College
Marquette University
Milwaukee Area Technical College
*Milwaukee School of Engineering
*UW-Madison
*UW-Milwaukee (CEAS-CS, Data Science Institute, SOIS)
UW-Platteville
*UW-Stout
UW-Superior
UW-Whitewater
*Waukesha County Technical College

* indicates a flyer is attached
BREAK THROUGH

Ready to change the world?
At Alverno College, get the hands-on experience, creativity and leadership skills you need to innovate and advance in today’s STEAM fields.

alverno.edu/ready
Bachelor of Science in Computer Science

Computer science is one of the fastest growing, highest paying professions with impacts in virtually every corner of society. Graduates of MSOE’s computer science program will be prepared to write cutting-edge software to solve tomorrow’s problems with a special emphasis on machine learning and artificial intelligence. Whether it’s smartphones, automobiles, advanced manufacturing, or big data, emerging developments in machine learning and artificial intelligence enable breakthrough innovations for the challenging problems of our time. MSOE computer science students will learn on the leading edge of this technological revolution, developing skills to solve problems using algorithms, applied mathematics, and artificial intelligence in a hands-on environment working on real problems with faculty who have industry experience.

msoe.edu/cs

Dwight and Dian Diercks Computational Science Hall
MSOE computer science students will have the privilege of learning in the Dwight and Dian Diercks Computational Science Hall. Computer Science students have access to “Rosie,” a GPU-powered supercomputer and other hardware from NVIDIA, a global leader in artificial intelligence, supercomputing and visual computing. Purpose built AI, big data visualization, cyber security and human machine interface labs in Diercks Hall will facilitate collaborative problem-solving to tackle real-world challenges using big data, algorithms and computing hardware in concert. Corporate and research partnerships between industry and students in dedicated spaces throughout the building will advance experiential learning opportunities by enabling students to work on real problems with industry and subject matter experts. Diercks Hall was made possible through a $34 million gift from MSOE Regent and alumnus Dr. Dwight ’90 and Dian Diercks.

Diercks Hall by the numbers:
- 16,500 square-feet of data-rich laboratories
- 11,500 square-feet of interactive classrooms
- 256-seat auditorium

msoe.edu/diercks-hall

Careers
Some career choices of MSOE CS graduates include:
- Big data engineer
- Data architect
- Data scientist
- Information security specialist
- Machine learning engineer
- Web developer
- Software engineer
- Software business analyst

Partners and potential employers
- Astronautics Corporation of America
- Direct Supply
- Centare
- FIS
- GE Healthcare
- Google
- Johnson Controls Inc.
- Kohl’s
- Microsoft
- Northwestern Mutual
- NVIDIA
- Oshkosh Corp.
- Rockwell Automation

Graduate schools
Some MSOE graduates pursue graduate school at universities including:
- Carnegie Mellon University
- George Washington University
- Marquette University
- Washington State University
### YEAR ONE

#### FALL
- **CH 200**  Chemistry I  4 credits
- **CS 1011**  Software Development I  4 credits
- **GS 1001**  Freshman Studies I  4 credits
- **MA 136**  Calculus I  4 credits

*Total: 16 lecture hours - 4 lab hours*  
16 credits

#### WINTER
- **CS 1021**  Software Development II  4 credits
- **GS 1002**  Freshman Studies II  4 credits
- **MA 137**  Calculus II  4 credits
- **PH 2011**  Physics I - Mechanics  4 credits

*Total: 16 lecture hours - 4 lab hours*  
16 credits

#### SPRING
- **CS 2852**  Data Structures  4 credits
- **GS 1003**  Freshman Studies III  4 credits
- **MA 2314**  Calculus III  4 credits
- **MA 2343**  Elective (Lab Science)  4 credits

*Total: 16 lecture hours - 4 lab hours*  
16 credits

### YEAR TWO

#### FALL
- **BA 2220**  Foundations of Business Economics  3 credits
- **CS 2911**  Network Protocols  4 credits
- **MA 2310**  Discrete Mathematics I  3 credits
- **MA 2323**  Calculus IV  3 credits
- **SE 2030**  Software Engineering Tools and Practices  3 credits

*Total: 16 lecture hours - 4 lab hours*  
16 credits

#### WINTER
- **CS 2300**  Computational Science  4 credits
- **CS 2711**  Computer Organization  4 credits
- **MA 3320**  Discrete Mathematics II  3 credits
- **SE 2811**  Software Component Design  4 credits

*Total: 13 lecture hours - 4 lab hours*  
15 credits

#### SPRING
- **BA 3444**  Organizational Behavior and Leadership  3 credits
- **CS 2040**  Programming in C and C++  4 credits
- **CS 2400**  Introduction to Artificial Intelligence  3 credits
- **MA 383**  Linear Algebra  3 credits
- **SE 2800**  Software Engineering Process I  3 credits

*Total: 13 lecture hours - 6 lab hours*  
16 credits

### YEAR THREE

#### FALL
- **CS 3040**  Program Languages and Translators  4 credits
- **CS 3860**  Database Systems  4 credits
- **MA 262**  Probability and Statistics  3 credits
- **MA 263**  Elective (HU/SS)  3 credits
- **MA 263**  Elective (Free)  3 credits

*Total: 16 lecture hours - 2 lab hours*  
17 credits

#### WINTER
- **CS 3300**  Introduction to Data Science  4 credits
- **CS 3840**  Operating Systems  4 credits
- **HU 432**  Ethics for Professional Managers and Engineers  3 credits
- **OR 402**  Professional Guidance  1 credit
- **SE 2840**  Web Application Development  4 credits

*Total: 14 lecture hours - 4 lab hours*  
16 credits

#### SPRING
- **CS 3310**  Data Science Practicum  4 credits
- **CS 3400**  Machine Learning  4 credits
- **CS 3851**  Algorithms  4 credits
- **MA 263**  Elective (HU/SS)  3 credits

*Total: 12 lecture hours - 6 lab hours*  
16 credits

### YEAR FOUR

#### FALL
- **CS 4000**  Senior Design Project I  3 credits
- **CS 4400**  Deep Learning  4 credits
- **MA 263**  Elective (Technical)  6 credits
- **MA 263**  Elective (HU/SS)  3 credits

*Total: 14 lecture hours - 4 lab hours*  
16 credits

#### WINTER
- **CS 4010**  Senior Design Project II  3 credits
- **MA 263**  Elective (Technical)  6 credits
- **MA 263**  Elective (Math/Science)  3 credits
- **MA 263**  Elective (HU/SS)  3 credits

*Total: 14 lecture hours - 2 lab hours*  
16 credits

#### SPRING
- **CS 4020**  Senior Design Project III  3 credits
- **CS 2911**  Elective (Technical)  3 credits
- **CS 2911**  Elective (HU/SS)  3 credits
- **CS 2911**  Elective (Math/Science)  3 credits
- **CS 2911**  Elective (Free)  3 credits

*Total: 14 lecture hours - 2 lab hours*  
16 credits

### SAMPLE TECHNICAL ELECTIVES
- **CS 421**  Advanced Computer Graphics
- **CS 4230**  Distributed and Cloud Computing
- **CS 4920**  Information Security
- **SE 3250**  Introduction to Game Development
- **SE 3830**  Human-Computer Interaction
- **SE 3910**  Real-Time Systems
- **SE 4910**  Mobile Application Development
- **SE 4930**  Developing Secure Software
- **SE 4940**  Network Security Tools and Practices

### NOTES
1. BI 102 - Cell Biology and Genetics may be taken in place of CH 200 in Fall of first year.
2. HU 4321 - Ethics of Digital Technologies and AI may be taken in place of HU 432.
3. There are 46 credits of elective subjects in the computer science program which must be taken as follows:
   - 15 credits of humanities and social sciences: 6 credits of humanities (HU), 6 credits of social science (SS), and 3 credits of humanities or social science
   - 4 credits of an approved lab science elective
   - 6 credits of approved math or science electives
   - 15 credits of approved technical electives
   - 6 credits of an approved elective from any area (free electives)
The Department of Computer Sciences at UW-Madison was one of the first computer science departments in the country, which means we've been pioneers in the field for a long time. In fact, the first PhD in CS graduated in 1965 from UW-Madison – Mary Kenneth Keller! We're well established, highly ranked, and growing. We now have the largest number of majors on the UW-Madison campus, which means we can provide more course and research opportunities for our students. And we are firmly rooted in The Wisconsin Idea — that the university should use education for good, benefiting not just the UW-Madison community but also the entire state of Wisconsin, the country, and the world.

The CS department is part of the College of Letters and Science at UW, so our program is flexible. Almost half of our majors are double majors and combine CS with a wide variety of areas, from Spanish and art to statistics, math, and biology. We are also one of three departments, with the Department of Statistics and the Information School, in the new School of Computer, Data & Information Sciences (CDIS). With CDIS, we are creating more interdisciplinary research opportunities, expanding course offerings, and leading the computing revolution across the state of Wisconsin and beyond. Learn more at http://ls.wisc.edu/areas-of-study/cdis.

UW-Madison Department of Computer Sciences Aspirations Award

UW–Madison Computer Sciences majors can apply for the $1000 UW-Madison Department of Computer Sciences Aspirations Award if they are a winner of the NCWIT Award for Aspirations in Computing at the state or national level. This is awarded one time after the student has declared a major in CS.

WACM is the women’s chapter of the Association for Computing Machinery. The group provides opportunities and creates community for women in the CS department. WACM holds tech talks, networking events, trainings, and attends the Grace Hopper Celebration of Women in Computing every fall. They also pair graduate student mentors with undergraduate students and hold speaker series.

Wisconsin Emerging Scholars—Computer Sciences (WES-CS) is a fun, interactive study group—for which you earn credit! WES-CS accompanies the Programming I class (CS 200). Each group of 8-10 students is peer-led and meets regularly to learn more about programming and learn about career paths.

Rankings

#13 in UW News and World Report’s rankings of Computer Science programs
From CSrankings.org: #1 in Logic and Verification, #4 in Computer Architecture, #4 in Databases, #4 in Operating Systems, #5 in Programming Languages, #5 in Measurement & Performance Analysis, #8 in Computer Networks, #9 in Mobile Computing, #12 in Machine Learning & Data Mining, #21 Human-Computer Interaction, #22 Computer Graphics

Follow us on Instagram, Twitter, and Facebook: @WisconsinCS

www.cs.wisc.edu
Computer Science for Women

Interested in STEM? Curious About How Things Work?
Like to Code? Want to Change the World?

The College of Engineering & Applied Science provides an inclusive and empowering environment for women to thrive in tech. We welcome you to explore our computer science opportunities.

Majors

We’ll help you build a solid foundation in computing, math and engineering and motivate you to find your passion in one of these majors:

• BS in Computer Science
• BS in Computer Engineering
• BA in Computer Science (new!)
• Applied Math & Computer Science program (AMCS)

Student Organizations

Student orgs such as Women in Computing, IEEE-CS Group, Google Developers Group, and Society of Women Engineers provide social and academic networks with other women of similar interests, and connections to professional mentors.

Your future is bright and you’re off to great places!

Career Statistics

Our Computer Science and Computer Engineering graduates are prepared for exciting careers in business, medicine, design, fashion, and teaching. 90% of these graduates are employed within three months of graduation in careers at amazing tech organizations including Intel, Amazon, Google, Microsoft and Northwestern Mutual. The average salary is $71K.

Questions? Contact ceas-cs@uwm.edu or visit our website uwm.edu/computerscience
As part of a newly developed partnership with the Northwestern Mutual Data Science Institute, UWM’s College for Kids & Teens (CFK&T) is now offering a Data Science Certificate Track designed for high school students interested in the study of data science.

THE NEW CERTIFICATE INCLUDES:
- Three core classes and two elective courses from a selection of College for Kids & Teens offerings.
- All core courses are for grades 9-12 and can be completed within a three-year window.

Core courses
- Introduction to Data Science
- Probability and Statistics
- Entrepreneurial Data Science

Elective courses
- Adventures in Statistics
- Algebra Camp
- Algebra I
- Algebra II
- Build Your Own Business
- Discrete Mathematics and Combinatorics
- Introduction to Programming I
- Introduction to Programming II
- Pre-Calculus
- Programming Primer
- Python Programming
- Roll the Dice
- Sportistics
- Survey of Calculus
- What’s the Chance?

To learn more about this exciting new certificate designed specifically for high school students, visit uwm.edu/sce/kids

FOR MORE INFORMATION CONTACT:
Ben LaDuke – Director
Gloria T. Lane – Assistant Director
cfkids@uwm.edu • 414-227-3360

Visit UWM.EDU/SCE/KIDS
School of Continuing Education
Katrina Hightower (BSIST 2017)
Associate System Engineer, Kohl’s Corporation
FUNDING SUPPORT: SOIS Research Day Award & SOIS Diversity Scholarship

In one semester at SOIS, I got an internship at Manpower-Group lasting my final year of school. I participated in The Commons program, and innovated with Kohl’s through Destination Innovation. Through all of this, I was able to land a career IT position with Kohl’s as an Associate Software Engineer.

SOIS WOMEN IN INFORMATION TECHNOLOGY

IST Alumna, Katrina Hightower took full advantage of her education and the opportunities that exist at the School of Information Studies (SOIS). While majoring in Information Science & Technology (IST), Katrina served as an IT ambassador for the IT United Student Technology Career Fair (mentoring high school students). This opportunity lead first to an internship with ManpowerGroup, and then to a full-time job as a software engineer at Kohl’s. Katrina is just one example of the way students can enhance their education through real world experiences.

SOIS provides a vast array of opportunities for students to enhance their education. Through assistantships, internships, student technology tutoring, advanced hands-on training as SOIS IT Services Technicians, along with professional and career networking opportunities, SOIS students are positioned to become leaders in the information technology professions.
My Bachelor Degree in Information Science and Technology has allowed me to become a Senior Web Developer at an Advertising Agency. Everything I’ve learned such as PHP, Project Management, Data Analysis, HTML, CSS, Javascript, User Experience Design (UX), and User Interface Design has been used and applied in my field as a web developer. The Information Science and Technology bachelors degree prepared me to become a Senior Developer. As a result, I am able to manage, analyze and lead as one of the top developers in this technological industry.

---

Nita Yang (BSIST 2011)
Lead Web Developer at OneTrust

Laud Turner (BSIST 2018)
IT Application Analyst at SwedishAmerican, A Division of UW Health

Allison Hecker (BSIST 2018)
Information Technology Technician
Whitefish Bay School District

INTERNSHIPS
Team Lead and Intern, Nonprof-IT

FUNDING SUPPORT
SOIS Attitude & Aptitude Scholarship
Misix Scholarship

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BACHELOR OF SCIENCE IN INFORMATION SCIENCE & TECHNOLOGY (IST)
The IST program combines core IT skills like front-end web design, programming, and project management, with electives that you choose. The only degree of its kind in the UW System, the BSIST degree will set you apart from the competition.

• 120 CREDIT PROGRAM
• ONLINE OR ONSITE OFFERINGS
• TRANSFER FRIENDLY
• INTERNSHIPS AND SERVICE LEARNING

CONTACT US
School of Information Studies
NWQB 3550
2025 E Newport Ave
Milwaukee, WI 53211
Phone: 414-229-4707
Toll Free: 888-349-3432
Email: soisinfo@uwm.edu

Apply Today!
apply.wisconsin.edu

THROUGH INTERNSHIPS AND COLLABORATIONS WITH LOCAL COMPANIES, SOIS STRIVES TO CREATE OPPORTUNITIES FOR FEMALE STUDENTS TO EXPERIENCE INCLUSIVE AND PRODUCTIVE TECHNICAL WORKPLACES.

MEET OUR SOIS ALUMNAE

Lauren Turner (BSIST 2018)
IT Application Analyst at SwedishAmerican, A Division of UW Health

INTERNSHIPS
Digital Marketing/Web Design Intern, Actuant Corporation
Team Lead, Nonprof-IT

FUNDING SUPPORT
SOIS Attitude & Aptitude Scholarship
Do you like working with computers? Unsure of how to turn that interest into a career?

Look to UW-Stout, Wisconsin’s Polytechnic Institute, to meet your needs. In the dynamic and ever-changing world of computing, our programs cover the broad range of computing fields that lead to exciting careers in a variety of industries. You’ll prepare by working with technology, hands-on. Students can learn about computer hardware and network systems, software, the internet, mobile apps, games, social media, and enterprise applications.

Pre-Computing 1st Year Option

When you follow this first year option, you retain the flexibility of moving seamlessly into any of Stout’s computing related programs.

// Semester 1
_ ENGL-101/111 Freshman English
_ Math (course determined by your placement test)
_ ICT-103 Information and Communication Technologies
_ *CNIT-133 Networking Fundamentals 1 and/or *CS-141 Intro. to Programming
_ General Education course of your choice

// Semester 2
_ ENGL-102/112/113 Freshman English
_ COMST-100 Fundamentals of Speech
_ ICT-215 or ETECH-100
_ *CNIT 134 Networking Fundamentals 2 or CS-144 Computer Science 1
_ Math (next course in sequence if interested in a major that requires more math)
  or General Education course of your choice

*course accepted in all computing majors except Computer Engineering

OVER 900 COMPUTING STUDENTS

- 204, 22%
- 198, 21%
- 147, 16%
- 139, 15%
- 42, 4%
- 203, 22%

- Applied Mathematics and Computer Science
- Computer Engineering
- Computer Science
- Computer Networking and Information Technology
- Digital Marketing Technology
- Information and Communication Technologies

Numbers as of fall 2016
Career Paths that a computing related degree from UW-Stout might lead toward include:

// Applied Mathematics and Computer Science
> Software Development Concentration
Software Development uses computers to solve problems. It encompasses many different areas, such as operating systems, databases, programming languages, graphics, algorithms, modeling, and Web and Internet programming. Software Developers work in practically every company in the world. Skills developed in this program may be used in many high tech areas.

> Cyber Security Concentration
With the development of new technologies and increasing reliance on Internet and wireless communication, computer security has become a major concern for many businesses and consumers. Cyber security deals with keeping the information shared through digital technology, such as online banking and shopping, secret and safe from attacks. Hackers often threaten to steal personal information; in fact, identity theft is one of the top concerns for people who utilize cyber space for business. Skills in cyber security are valued by companies which rely on computer and digital technology.

> Scientific Computing Concentration
Scientific computing is a rapidly growing multidisciplinary field. Topics include: big data, cloud computing, data analysis, data mining, high-performance computing, informatics, mathematical modeling, simulation, security, and algorithms. This field requires practitioners to have strong skills in mathematics, statistics, algorithm development, and programming. It is the discipline engineers, scientists, economists, financial analysts, and security analysts utilize when their problems involve data and simulation. So the skills developed in this program may be used in many high tech areas.

// Computer Engineering
A degree in Computer Engineering combines the areas of ‘hardware’ and ‘software’ so that you can design both new hardware (i.e. electronics, circuits, etc.) and software (i.e. computer programs, etc.) for any sort of computer-based or embedded system. Your unique skills will be suited to meet the needs of many industries. This program also contains a computer science minor and a mathematics minor. EAC-ABET accredited.

// Computer Science
> Game Design and Development Concentration
A Computer Science major with a Game Design and Development concentration prepares you to design and develop software programs that use digital imagery and physics to create games, simulations or other applications. These programs can transform education, allow us to visualize ideas, bring worlds of imagination to life, or improve how we interact with computers and one another. This program also contains a mathematics minor. CAC-ABET accredited.

> Mobile Applications Concentration
A Computer Science major with a Mobile Applications concentration prepares you to design and develop software programs that are secure, user-friendly and sought after. Mobile devices are changing the way we communicate, do business, and access news and entertainment. You will develop apps for phones, tablets and wearable devices that can improve healthcare delivery, strengthen national security, shape public policy and continue to create social networks. This program also contains a mathematics minor.

// Computer Networking and Information Technology
The world revolves around technology. The Computer Networking and Information Technology program offers a hands-on, minds-on, fun learning environment with cutting edge computer networking and server IT laboratories. Plus IT courses that count toward valuable IT certifications. You will also have the opportunity to minor in Computer Science, Project Management, Information Security Management, and/or Business Administration.

// Digital Marketing Technology
You can apply your skills learned in school as a Market Research Analyst, Web Developer, Digital Project Manager, or Marketing Technologist. A Digital Marketing Technology degree combines cutting-edge technology with traditional marketing skills to prepare you to meet the evolving and growing demands of the digital marketing industry.

// Information and Communication Technologies
With an Information and Communications Technology major, you will be able to apply critical thinking skills to analyze data and information. Be prepared for a career in IT, networking, web management, telecommunications, instructional design, enterprise systems, and technical support services.
INFORMATION TECHNOLOGY: ASSOCIATE OF APPLIED SCIENCE DEGREES

Computer Support Specialist 61-credit Associate of Applied Science Degree
Computer support specialists install equipment, assist users with technology or software issues, troubleshoot when problems arise and serve as a resource for end users. Gain skills in problem solving, team building, service management and interpersonal communication. Become proficient at installing and updating computer operating systems and working with hardware and networks. Those working in IT support roles are tech-savvy problem solvers.
SKILLS AND TECHNOLOGIES LEARNED: ITSM, WINDOWS 10, MS SERVER, AGILE METHODOLOGY, TRAIN THE TRAINER.

Web and Software Developer 64-credit Associate of Applied Science Degree
Creating interactive, inviting and functional web applications requires the skills of a web and software developer. Learn to develop software solutions using multiple programming languages, tools and frameworks. Apply design patterns, object-oriented analysis and SOLID principles to create robust and scalable applications. Explore web server administration and mobile application development. Prepare for jobs such as application software developer, application programmer, and software analyst or software engineer.
SKILLS AND TECHNOLOGIES LEARNED: JAVA, SPRING, C#, ENTITY FRAMEWORK, MVC, JQUERY, MOBILE, IIS, REST, SQL, SCRUM.

Database Specialist 63-credit Associate of Applied Science Degree
In the Database Specialist program, learn how to support the data needs of small to medium businesses. Gain skills to plan, develop and maintain new and existing databases. Become proficient in SQL development, reporting and data visualization, and database design/data modeling. Gain an introduction to tabular models, data analysis, data analytics and big data. Prepare for jobs such as database administrators, database analyst, and BI Developer and Report Analyst.
SKILLS AND TECHNOLOGIES LEARNED: SQL, DATA MODELING, TABLEAU/POWER BI, TABULAR MODELS, DATA VISUALIZATION.

Network Specialist 61-credit Associate of Applied Science Degree
Network specialists create and maintain computer systems essential for day-to-day business operations, ensuring network security and connectivity. Install and troubleshoot network and client operating systems, configure routers and switches, and manage remote clients and devices. Explore cloud security, cost and core services, and understand and implement virtualization in an enterprise.
SKILLS AND TECHNOLOGIES LEARNED: CISCO, WINDOWS 10, MS SERVER, LINUX, SECURITY, VIRTUALIZATION, CLOUD

Cybersecurity Specialist 63-credit Associate of Applied Science Degree
Cybersecurity specialists implement, maintain and audit the security of an organization’s computer networks and systems. Learn to protect data confidentiality, integrity and availability by implementing current real-world technology, processes and procedures. Emphasis is placed on vigilant security awareness, identifying security threats and implementing appropriate incident responses. Students will participate in lab work and content that dives deep into current and trending topics in information security.
SKILLS AND TECHNOLOGIES LEARNED: ETHICAL HACKING, DIGITAL FORENSICS, PALO ALTO FIREWALLS, CRYPTOGRAPHY, INCIDENT RESPONSE.

Web and Digital Media Design 63-credit Associate of Applied Science Degree
Blend the creative and analytical sides of web design to develop engaging and intuitive web applications. Learn techniques for page layout, managing projects, working with content management systems and adapting content for delivery on multiple devices.
SKILLS AND TECHNOLOGIES LEARNED: PHP, WEB PAGE DESIGN, JAVASCRIPT, USER INTERFACE DESIGN, INTEGRATED WEB DEVELOPMENT
Business Systems Analyst  
9 credits

Business systems analysts support business applications that rely on databases. In this certificate, learn the basics of networking and support. Develop knowledge to perform user management and permissions in SQL Server, learn the basic of reporting in Access, and discover how to create and interpret database diagrams.

CAE2Y Cybersecurity  
20 credits

Cybersecurity is one of today’s most popular, in-demand skill sets. Learn to protect computers, networks, infrastructure and data from unintended or unauthorized access, change or destruction. Enhance your technical proficiency in Wisconsin’s first college with the National Security Agency and Department of Homeland Security’s CAE2Y designation.

Cisco CCNA  
9 credits

Master the skills needed to earn CISCO’s Certified Network Associate (CCNA) certification by learning how to install, configure, operate and troubleshoot medium-sized routed and switched networks. Explore basic security threat mitigation, wireless networking concepts and terminology, and performance-based skills. Excel in supporting complex network infrastructures with this in-demand professional certification.

Database Developer  
14 credits

Learn how to create and maintain databases, SQL scripts and stored procedures. Develop skills to integrate systems and build applications that are integrated with databases. Explore SQL Server and the C# programming language.

Database Server Administrator  
9 credits

Learn how to install, upgrade and maintain the day-to-day operations of database servers. Explore task scripting and automation, business continuity and disaster continuity. Gain hands-on experience using MS Server, SQL Server and PowerShell.

Enterprise Support Technician  
12 credits

Learn real-world enterprise support skills including hardware and software installation and configuration, troubleshooting and problem resolution, customer support skills and the fundamentals of Cisco networking. Practice communication skills and problem-solving techniques, plus gain hands-on experience in service management applications.

IT Network Support Specialist  
12 credits

Learn to implement, manage and troubleshoot small, medium and large network systems, keeping businesses secure and connected. Prepare for the Microsoft Windows MCTS, LPI Linux Essentials and Cisco CCENT certifications and gain skills for a challenging career in IT networking.

IT Security Administrator  
17 credits

Enhance your IT knowledge with specialized security skills. Learn to implement security solutions using Cisco routers, switches and Adaptive Security Appliances. Gain hands-on experience in configuring a variety of network operating systems, firewalls, VPNs, packet filters and intrusion detection systems. Learn skills to prepare for the CompTIA Security+ certification exam.

IT Security Manager  
12 credits

Explore cybersecurity issues and responses, and learn about the role information technology plays in business processes. Learn to prepare a Business Impact Analysis (BIA), contingency plan and disaster recovery plan. Build crisis communication skills needed to interact with employees, customers and vendors during a disaster.

IT Support Technician  
10 credits

Develop skills necessary to plan and implement small networks across a range of applications. Lean how networks are set up, how hardware and software are configured and how communication takes place on a network. Explore network security best practices and learn how to efficiently diagnose and troubleshoot common computer problems.

Java Programming  
13 credits

Develop the IT industry’s most in-demand skills in object-oriented analysis and design using the popular Java programming language. Build, test and deploy a wide range of stand-alone and client-server applications, including web applications. Learn object-oriented programming concepts that apply to any OOP language.

Report Analyst  
9 credit

Report analysts design and develop reports, dashboards, metrics, and data extracts to support daily business operations. They also analyze data for accuracy and data integrity. Technologies taught include: SQL Server, SSRS, Microsoft Access & Excel, and Tableau.

Storage and Virtualization Admin  
15 credits

Learn to support dynamic IT structures and use virtualization technologies to optimize efficiency, resiliency and control over complex network environments. Explore the technologies required to build classic, virtualized and cloud data center environments. Enhance skills with emerging information storage and management solutions.