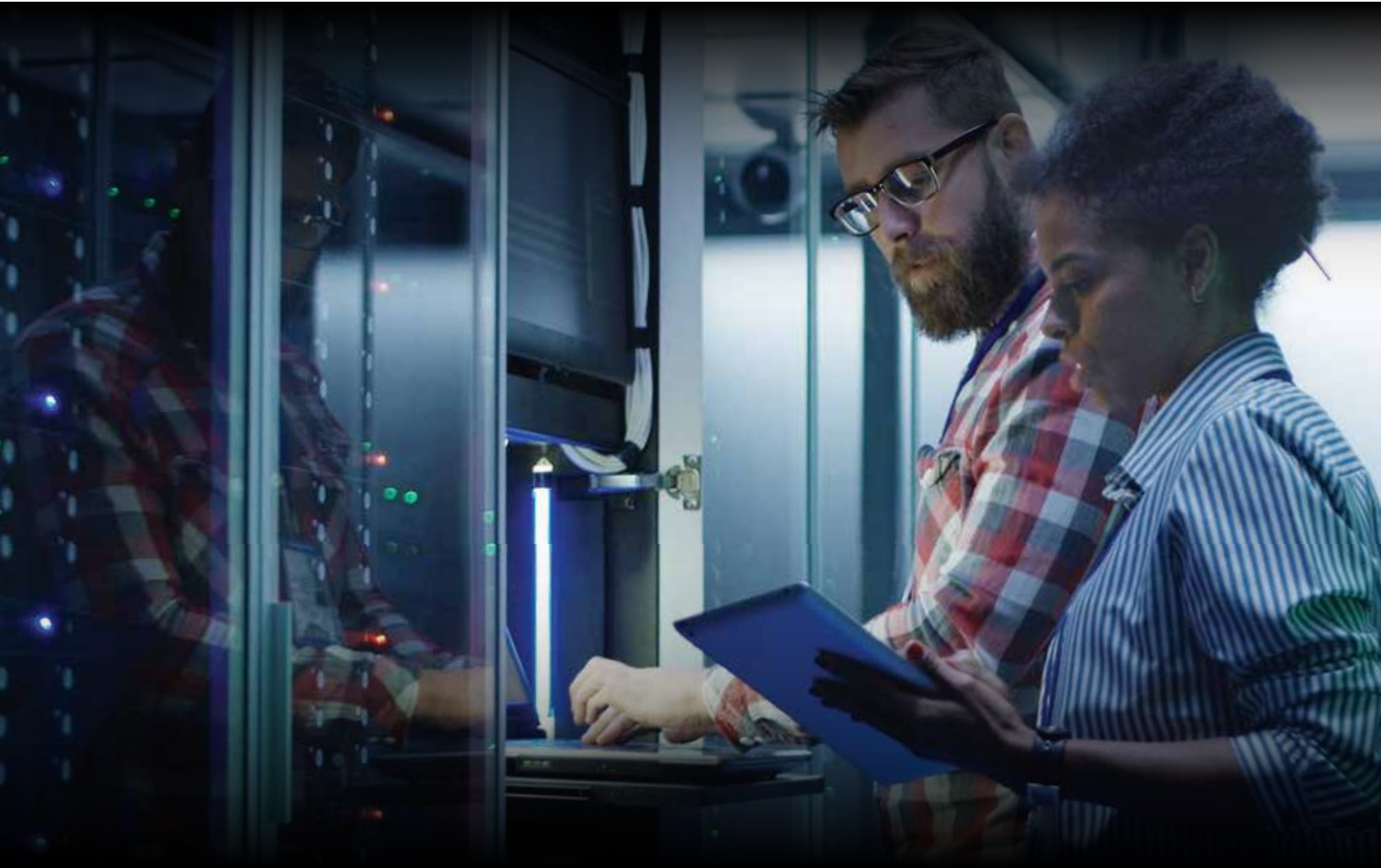


Career Community:

Computer Science,
Information Technology,
Security and Digital Media



Career Community:

Computer Science, Information Technology, Security and Digital Media

Critical skills and abilities

- complex problem-solving
- critical thinking
- problem sensitivity
- reading comprehension
- written communication

Technical skills and knowledge

- computers and electronics
- engineering and technology
- mathematics
- operating system software

Short-term certificates in this Career Community

- Artificial Intelligence
- Artificial Intelligence fundamentals
- C++ programming
- Cisco technology
- Computer maintenance and desktop support technician certificate
- Computer science
- Data analytics
- Database systems
- Help desk and computer user support
- Java programming
- Microsoft networking
- Microsoft SQL server
- Video game design
- Web design

Do you thrive on change and learning the newest technology and techniques?

Programs in this community lead to careers in computer engineering, computer graphics, computer network administration, computer programming, computer science and engineering technology, computer technology, cyber security, digital video and media, music production, video game design and web design, as well as transfer programs in these fields.

Majors in this Career Community

EXPLORATORY MAJOR

If you know this career community is the right fit for you but you're unsure of your major, choose the **computer science, information technology, security and digital media exploratory major** to get started in the right direction. Your first 15 credit hours are applicable to all majors within this career community and you'll get the experience to know which major is right for you.

COMPUTER SCIENCE

COMPUTER ENGINEERING

You'll learn both hardware and software along with design and integration. Write embedded software; work with analog sensors; and design chips, mixed signal circuit boards and operating systems. This degree is accepted by The University of Toledo for the first part of a bachelor's degree.

COMPUTER NETWORK ADMINISTRATION AND SECURITY TECHNOLOGY

You'll cover the bases, from basic PC hardware and software to the latest network operating systems, while learning Cisco, Microsoft and Unix-based operating systems along the way. This multi-platform degree is accepted by The University of Akron for the first part of a bachelor's degree in computer networking.

COMPUTER PROGRAMMING AND DATABASE

Combine database management systems with computer software to organize and store data. You'll ensure the system performs, understand its platform and add new users along with planning and coordinating security measures for sensitive data.

COMPUTER SCIENCE AND ENGINEERING TECHNOLOGY

Go behind the scenes, applying creativity to high-tech fun. Operate, describe and design state-of-the-art software systems.

Video game design and development major

Create computer and video games – whether specializing in Xbox or PlayStation or for a variety of other systems including PCs. You can specialize in role-playing games or first-person games, porting games from one system to another or translating games into other languages.

(continued on back)



Schedule an appointment with
a career specialist to explore
opportunities in these industries.

Consider these and other careers

job title/description

Canton/Akron
entry-level
annual earnings

Canton/Akron
average
annual earnings

<p>computer network support specialist analyze, test, troubleshoot and evaluate existing network systems, such as local area networks (LAN), wide area networks (WAN), cloud networks, servers and other data communications networks; perform network maintenance to ensure networks operate correctly with minimal interruption</p>	43,672	69,708
<p>computer systems analyst analyze science, engineering, business and other data processing problems to develop and implement solutions to complex applications problems, system administration issues or network concerns; perform systems management and integration functions, improve existing computer systems and review computer system capabilities, workflow, and schedule limitations; may analyze or recommend commercially available software</p>	58,450	96,867
<p>computer user support specialist provide technical assistance to computer users; answer questions or resolve computer problems for clients in person, via telephone or electronically; may provide assistance concerning the use of computer hardware and software, including printing, installation, word processing, electronic mail and operating systems</p>	34,409	54,983
<p>data scientist develop and implement a set of techniques or analytics applications to transform raw data into meaningful information using data-oriented programming languages and visualization software; apply data mining, data modeling, natural language processing and machine learning to extract and analyze information from large structured and unstructured datasets; visualize, interpret and report data findings; may create dynamic data reports</p>	46,077	87,134
<p>graphic designer design or create graphics to meet specific commercial or promotional needs, such as packaging, displays or logos; may use a variety of mediums to achieve artistic or decorative effects</p>	29,064	54,683
<p>software developer research, design and develop computer and network software or specialized utility programs; analyze user needs and develop software solutions, applying principles and techniques of computer science, engineering and mathematical analysis; update software or enhance existing software capabilities; may work with computer hardware engineers to integrate hardware and software systems, and develop specifications and performance requirements; may maintain databases within an application area, working individually or coordinating database development as part of a team</p>	62,106	103,094
<p>software quality assurance analysts and tester develop and execute software tests to identify software problems and their causes; test system modifications to prepare for implementation; document software and application defects using a bug tracking system and report defects to software or web developers; create and maintain databases of known defects; may participate in software design reviews to provide input on functional requirements, operational characteristics, product designs and schedules</p>	52,367	89,397
<p><i>careers represented may require further education; an advisor will help you determine your pathway</i></p>		

source: Team NEO (Lightcast Data 2024)

Top hiring industries

- administrative management and general management consulting services
- all businesses with IT departments/help desks
- colleges, universities and professional schools
- financial services
- government and municipalities
- health care organizations
- IT/software development companies



COMPUTER TECHNOLOGY

Learn how to solve business problems using information technology tools such as computer hardware, operating systems, networking, programming and database management systems. You'll apply the tools as part of distributed information systems, system analysis, system design and decision support systems.

Help desk/computer support specialist major

There's been explosive growth in the technology help desk/technical support arena, and this major lets you take part at any level. As difficulty gradually unfolds in a series of stepwise courses, you'll be prepared to work with customers and technology in a professional environment.

CYBER SECURITY AND COMPUTER FORENSICS TECHNOLOGY

Assess a company's security risk in its systems, document and implement security procedures and check for security breaches. Jobs can be found in both the private and public sectors, including those related to digital forensics.

WEB DESIGN AND DEVELOPMENT

Get state-of-the-art training in the exciting and lucrative field of web design and programming. You'll focus on creating the backbone of a website with the latest techniques such as CSS, AJAX and more, learning to develop interactive, database-driven websites using ASP.net, PHP, SQL, JavaScript, AJAX and MySQL.

DIGITAL MEDIA

3D MOTION GRAPHICS TECHNOLOGY

Walk on the creative side of interactive media technology when you learn to communicate through 3D graphics and animation. You'll be able to take your skills into a career in health care, manufacturing, gaming, marketing, advertising or entertainment.

COMPUTER GRAPHIC ARTS

Enter into the exciting digital world of graphic design for a creative career in advertising, print or web media. You'll conceptualize, plan and execute designs that convey a message by learning design theory, typography, page layout, illustration (digital, traditional and 3D), and 2D animation.

Digital photography major

This major covers computer graphic arts with a focus on digital photography instead of illustration. Get skilled in using the latest digital cameras and learn about lighting, lenses and exposure along with photo manipulation. You'll be prepared for a career as a photojournalist, studio manager, photographic editor or commercial photographer.

DIGITAL VIDEO MEDIA TECHNOLOGY

You'll learn storytelling and technical techniques while filming, editing and mastering quality productions. Employment for creatives is expansive, ranging from social media content creating to advertising agencies, broadcast TV independent and professional film studios.

MUSIC PRODUCTION AND ENGINEERING

The technology of sound design has never sounded so good as you learn the skills and concepts of recording, musicianship and music arranging with the goal of employment in corporate audio, audio reinforcement, trade show design, music composition or performance-based fields.



6200 Frank Ave NW
North Canton, OH 44720

Admissions

330-494-6170 ext. 4228 | 1-800-797-8275 | info@starkstate.edu

Career Services

330-966-5459 | careerservices@starkstate.edu

Some careers represented in this viewbook may require further education. The information provided is based on regional data and subject to change. Please see an SSC advisor to make sure you're on the path to success. / Accredited by the Higher Learning Commission / Stark State College is committed to non-discrimination. For the full policy: starkstate.edu/non-discrimination

