

CYBER SECURITY

What can I do with this major?

The field of cyber security is continually changing. The areas listed below do not exhaust possible career options.

See also *What Can I Do With This Major in Management Information Systems*.

AREAS

EMPLOYERS

STRATEGIES

INFORMATION SECURITY

Network security
Data breaches or leak investigation
Firewalls, intrusion detection systems, and intrusion prevention systems configuration
Network and security infrastructure development
Security architecture
Security administration
Security management

For-profit and nonprofit organizations
Product and service organizations
Manufacturers
Financial companies
Insurance companies
Print and electronic media outlets
Software and technology companies
Internet companies
Consulting firms
Government agencies

Seek programming experience through volunteer positions, internships and co-ops.
Develop attention to detail, logical thinking and communication skills.
Exhibit patience and creativity for designing programs.
Learn to work effectively independently on teams and with end-users while maintaining deadlines.
Supplement degree with courses in business, science or engineering.
Maintain current knowledge of programming languages; vendor and professional certifications may increase job prospects.
Consider earning the certifications by completing a series of exams and experiential requirements.
Earn a master's degree for upper level positions.

IT AUDITING & CONSULTING

Network security
Network security infrastructure
Information security and processing
Security testing
Penetration testing
Compliance
Standardization

For-profit and nonprofit organizations
Product and service organizations
Manufacturers
Financial companies
Insurance companies
Print and electronic media outlets
Software and technology companies
Internet companies
Consulting firms
Government agencies

Develop excellent interpersonal skills for effective communication with technical and non-technical colleagues and clients.
Seek knowledge of industries, business areas or government agencies of interest. Complete a minor to gain specialized knowledge related to a field of interest.
Strengthen logical thinking and problem solving skills.
Maintain current knowledge of computer languages and technology.
Gain programming experience and specialize for increased opportunities.

AREAS

EMPLOYERS

STRATEGIES

IT AUDITING & CONSULTING continued

Obtain business experience through internships or part-time employment.
Supplement program with courses such as accounting, management, human resources, consulting to increase understanding of business theory.
Earn a graduate degree in technology or business for advanced opportunities in analysis, project management and executive operations.

THREAT INTELLIGENCE & DIGITAL FORENSICS

Network security
Security plan development
Cyber threat hunting
Cyber-attack investigation

For-profit and nonprofit organizations
Product and service organizations
Manufacturers
Financial companies
Insurance companies
Print and electronic media outlets
Software and technology companies
Internet companies
Consulting firms
Government agencies

Develop excellent communication skills and an interest in helping customers solve problems.
Exhibit patience and a commitment to customer satisfaction.
Obtain industry recognized certifications
Supplement curriculum with technical writing courses to develop skills.
Explore labs and challenges that support opportunity to gain hands-on experience.

SOFTWARE DEVELOPMENT

Strategy
Design
Testing
Implementation
Front-end software design

For-profit and nonprofit organizations
Product and service organizations
Manufacturers
Financial companies
Insurance companies
Print and electronic media outlets
Software and technology companies
Internet companies
Consulting firms
Government agencies

Start learning popular programming languages.
Seek out internships to gain real world experience.
Enroll in coursework related to programming and software development.
Seek out certifications that are recognized by industry.

GENERAL INFORMATION

Consider a dual major to help shape toward a particular career, since cybersecurity intersects with a number of other fields

Examples: Biology for a career in bioinformatics; Political science/criminal justice for career in security and information policy; Fine arts for a career in animation; or, Business for some types of IT careers.

Develop strong interpersonal, communication and teamwork skills. Patience and perseverance are essential for cybersecurity professionals.

Complete informational interviews with current cyber security professionals to help establish career goals.

Obtain an internship, co-op or part-time job in a relevant area to increase employability. Related experience is essential to employers hiring cyber security majors.

Obtain vendor-specific or networking certifications to gain a competitive edge for some positions.

Obtain an area of specialization through a master's degree or by doing advanced coursework.

Expect to work extended and/or irregular hours at times and to be "on call."

Prepare to learn new information on a regular basis through online discussions, classes, conferences, periodicals, and update your skills accordingly.

It might be better to major in Business Administration and minor in cyber security if you want to work in the private sector because the cloud is transforming IT and creating hybrid roles across the enterprise.