

# Cyber threats are growing. So are your career opportunities.



Put the future of your cybersecurity career in the hands of a respected online education leader.



## Everything you need to succeed.

Excelsior College offers many advantages, resources and services to make your educational experience a successful one. We support you every step of the way as you earn your degree or certificate.

- **Maximum credit transfer from prior college learning, military, and workplace training**
- **Flexible 8-week online courses**
- **Cutting-edge technology and hands-on experience**
- **Distinguished faculty from leading schools throughout the world, many pioneers in their fields**
- **24/7 access to online services, including our extensive virtual library, study buddy program, and free tutoring**
- **Personalized support services, including academic and career counseling**
- **Financial aid and payment plan options available**

## You're the Key to Cybersecurity.

Cyberspace has become the new battleground against crime and terrorism — and you're needed to join the fight against an increasingly sophisticated and dangerous foe.

Excelsior College has risen to the challenge with its nine totally online programs in cybersecurity on the undergraduate and graduate levels. With a cybersecurity education from Excelsior behind you, there's a great future ahead of you, deploying your skills to defeat cyber threats at every level.

According to the Bureau of Labor Statistics, employment of computer network, systems and database administrators — which includes cybersecurity professionals — was projected to grow 23% from 2008 to 2018, much faster than the average for all occupations. And, according to CNN, an estimated 30,000 jobs in cybersecurity alone are being created to meet this rapidly emerging and alarming threat. With salaries from \$50,000 to \$120,000 a year and companies such as AT&T, Wells Fargo (WFC), Citigroup, Microsoft (MSFT), and Boeing (BA) on the lookout for staff, cybersecurity is a growing industry.

**Join the digital defense team.**

## We've got a program just for you.

Whether you're an IT professional, government employee or contractor, law enforcement professional or military servicemember, Excelsior has a flexible and affordable cybersecurity program that's right for you.

Excelsior's multidisciplinary curriculum features broad coverage on strategies, policy, ethics and legal compliances, operational processes, and cybersecurity techniques and technologies. Our courses go far beyond theory, giving you the know-how and leadership skills you need to succeed.



❖ **Excelsior College has eight programs that are certified by the National Security Agency (NSA) to meet the Committee on National Security Systems (CNSS) training standards.**



# Undergraduate Programs

## UNDERGRADUATE CERTIFICATE IN CYBERSECURITY<sup>❖</sup>

Excelsior's Undergraduate Certificate in Cybersecurity is ideal if you're working in the law enforcement and crime prevention sectors. This certificate comprises introductory courses in cybersecurity technology and fundamental knowledge in cybercrime investigation. Its curriculum focuses on the techniques, policies and operational procedures that detect threats and secure information. You'll be required to complete the capstone course at Excelsior College. Approved courses from other institutions may be accepted in transfer for your remaining requirements.

### Career Paths

With this certificate, you can pursue careers in network architecture, network design and administration, system architecture, security tools, incident response, forensic analysis and vulnerability analysis.

### Certificate Credit Requirements

- **Introduction to Cybersecurity**
- **Computer System Security Fundamentals**
- **Cybersecurity Defense in Depth**
- **Large Scale Cybercrime and Terrorism**
- **White Collar Crime**
- **Cybersecurity Investigations and Case Studies (Capstone)**

**Total: 16 credits**

“Every day, the media reminds us of threats aimed at stealing, damaging, or manipulating our electronic data/information for the benefit of the “attacker.” Identifying information assets and having a thorough understanding of the threats is critical for organizations of all sizes. Being able to analyze these threats and then design tactical and strategic defenses to these threats is an exciting career field that has a tremendous future in the Information Age. Excelsior's new certificate and degree programs in cybersecurity provide a rigorous education in which students learn to integrate theories and concepts with hands-on experience in order to prevent, detect, counter, and recover from cyber threats at every level.”

Ken Desforges

M.Sc., PMP, CISSP-ISSMP

Director Information Systems

Excelsior Graduate: BS in Information Technology, 2010

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## BACHELOR OF SCIENCE IN CYBER OPERATIONS

The bachelor's in cyber operations provides students with technical skills through labs, simulations, and other exercises. Student in this program become proficient with national security technologies and processes, and learn how to detect, analyze, and respond to cyber attacks on computer networks.

### Career Paths

After earning this degree, you may work for corporations or law enforcement agencies investigating cyber crimes, conducting risk and vulnerability assessments, and implementing cybersecurity policies and procedures.



### Degree Credit Requirements

#### *Cyber Operations Component*

- **C++ Programming**
- **Microprocessors**
- **Computer Architecture**
- **Operating Systems**
- **Advanced Networking**
- **Internetworking with TCP/IP**
- **Secure Mobile and Cloud Computing**
- **Reverse Engineering**
- **Fundamentals of Information Assurance**
- **Cybersecurity Defense in Depth**
- **Cyber Attacks and Defenses**
- **Computer Forensics**
- **Governance, Legal, and Compliance**
- **Security Focused Risk Management**
- **Secure Software Development and Analysis**
- **Cryptography**
- **Capstone**

#### *Arts and Sciences Component (60 credits)*

- **Communications**
- **Ethics**
- **Humanities**
- **Social Sciences/History**
- **Natural Sciences/Mathematics**

#### *Free Elective Component – 9 credits*

**Total: 120 Credits**

# BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY❖

## with a Cybersecurity Technology Concentration

If you already hold a position or associate degree in information technology, Excelsior's bachelor's degree program with a concentration in cybersecurity technology can prepare you to be a leader in protecting vital data assets. The curriculum focuses on ethics and legal compliances, operational processes, techniques, and technologies that secure and defend information and information systems.

### Career Paths

As a graduate of this program, you'll be trained for positions in system management security, administration security analysis, mobile computing configuration and security, cloud computing applications, and fighting cybercrime.

### Degree Credit Requirements

#### *Information Technology Component*

- Object-Oriented Programming
- Computer Systems Architecture
- Operating Systems
- Data Communications and Networking
- Database Concepts
- Software Systems Analysis and Design
- Overview of Computer Security
- Project Management
- Integrated Technology Assessment (Capstone)

#### *Cybersecurity Technology Concentration*

- Computer Forensics
- Cyber Attacks and Defenses
- Business Continuity
- Securing Mobile and Cloud Computing Environments
- Large Scale Cybercrime and Terrorism

#### *Arts and Sciences Component (60 credits)*

- Communications
- Ethics
- Humanities
- Social Sciences/History
- Natural Sciences/Mathematics

#### *Free Elective Component (12 credits)*

**Total: 120 Credits**

# Dual Degree Programs

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## BS IN INFORMATION TECHNOLOGY with concentration\*❖..... to MBA with concentration\*.....

The fast-growing cybersecurity sector not only needs technicians, but expert managers. This dual degree program provides working adults with a convenient way to develop advanced technical and managerial skills at once.

### Career Paths

With these degrees you can work in managerial roles that require an understanding of computer networking and cybersecurity defense systems, and the business processes that they support. You can pursue careers within private and nonprofit sectors, and federal agencies.

### Degree Credit Requirements

#### *Arts and Sciences Component (60 credits)*

- Communications
- Ethics
- Humanities
- Social Sciences/History
- Natural Sciences/Mathematics

#### *Free Elective Component (7 credits)*

#### *Information Technology Component*

- Object-Oriented Programming
- Computer Systems Architecture
- Operating Systems
- Data Communications & Networking

- Database Concepts
- Software Systems Analysis & Design
- Overview of Computer Security
- Project Management
- Integrated Technology Assessment (Capstone)

#### *Cybersecurity Technology Concentration*

- Computer Forensics
- Cyber Attacks and Defenses
- Business Continuity
- Securing Mobile and Cloud Computing Environments
- Large-Scale Cybercrime and Terrorism

#### *Bridge Component*

- Business Communications
- Global Business Environment

#### *Graduate Course Component*

- Accounting for Managers
- Human Resources Management
- Operations Management
- Information Technology
- Leadership or Change Management
- Strategy and Policy (Capstone)

#### *Concentration in Cybersecurity Management*

- Ethics, Legal, and Compliance Issues in Cybersecurity
- IT Risk Analysis and Management
- Information Assurance

**Total: 148 credits**

❖ Excelsior College has eight programs that are certified by the National Security Agency (NSA) to meet the Committee on National Security Systems (CNSS) training standards.

# BS IN NUCLEAR ENGINEERING TECHNOLOGY\*

## to MBA with a concentration in Cybersecurity Management

This dual degree program allows students to pursue disparate interests through one course of study. It encompasses functional areas of nuclear engineering technology and systems operation, and topics in business administration and cybersecurity management.

### Career Paths

With these degrees, you'll be able to pursue careers in cybersecurity engineering and analysis, cyber-defense investigations, and network security consulting.

### Degree Credit Requirements

#### *Nuclear Engineering Technology Component*

- **Electrical Theory**
- **Computer Applications**
- **Nuclear Materials**
- **Health Physics/Radiation Protection**
- **Radiation Measurement Lab**
- **Plant Systems Overview**
- **Reactor Core Fundamentals**
- **Heat Transfer & Fluid Mechanics**
- **Integrated Technology Assessment (Capstone)**

#### *Arts and Sciences Component (60 credits)*

- **Communications**
- **Ethics**
- **Humanities**
- **Social Sciences/History**
- **Natural Sciences/Mathematics**
- **Quantitative Methods**

#### *Free Elective Component (10 credits)*

#### *Bridge Component*

- **Business Communications**
- **Global Business Environment**

#### *Graduate Course Component*

- **Accounting for Managers**
- **Human Resources Management**
- **Operations Management**
- **Information Technology**
- **Leadership or Change Management**
- **Strategy and Policy (Capstone)**
- **Electives - 9 credits in concentration**

**Total: 151 Credits**



\*Students in pursuit of a degree that is comprised of cybersecurity are encouraged to pick the concentration in cybersecurity at the undergraduate or graduate level.

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## BS IN INFORMATION TECHNOLOGY❖ to MS IN CYBERSECURITY

Students learn how to defend corporate, nonprofit, or government computer networks from predators in this dual degree program that provides working adults with a streamlined way to earn both degrees at once.

### Career Paths

With these degrees, you'll be equipped to gain employment preventing cyber criminals from accessing digital assets and sensitive information within an organization. Your work may involve software engineering, risk analysis, disaster recovery planning, data encryption, and related activities.

### Degree Credit Requirements

#### *Information Technology Component*

- Object-Oriented Programming
- Computer Systems Architecture
- Operating Systems
- Data Communication & Networking
- Database Concepts
- Software Systems Analysis & Design
- Overview of Computer Security
- Project Management
- Integrated Technology Assessment (Capstone)

#### *Arts and Sciences Component (60 credits)*

- Communications
- Ethics
- Humanities
- Social Sciences/History
- Natural Sciences/Mathematics

#### *Free Elective Component (9 credits)*

#### *Bridge Component*

- Advanced Networking

#### *Graduate Course Component*

- Digital Crime Prevention and Investigation
- Communications Security
- Ethics, Legal & Compliance Issues in Cybersecurity
- Information Assurance
- IT Risk Analysis & Management
- Cyber Attacks and Defenses
- Project Management
- Capstone Project in Cybersecurity

**Total: 144-147 Credits**

# Graduate Programs

## MASTER OF SCIENCE IN CYBERSECURITY<sup>®</sup>

Excelsior's Master of Science in Cybersecurity degree is designed for midcareer professionals who have the goal of supervising or being closely involved with cybersecurity operations. Our program will provide you with the advanced techniques and knowledge to safeguard an organization's cyber assets. The curriculum focuses on prevention, detection, countering, and recovery from cyber incidents.

### Career Paths

With an MS in Cybersecurity from Excelsior, you can pursue careers in system administration; security administration; defensive and offensive positions; specialized areas including server configuration, database management and account management; security assessment; business continuity and disaster planning and recovery.

### Degree Credit Requirements

- Digital Crime Prevention and Investigation
- Communication Security
- Ethics, Legal, and Compliance Issues in Cybersecurity
- Information Assurance
- IT Risk Analysis and Management
- Cyber Attacks and Defense
- Advanced Networking
- Project Management
- Capstone Project in Cybersecurity

**Total: 30 credits**

“The one thing I took away from the MS in Cybersecurity is: be consistent with the overall objective of the security within the organization that's doing it. Too often we have fragmented security. We do a little bit of security here, and a little bit of security there. Consistency ensures the layering that's required for in depth protection.



The best aspect of the online experience at Excelsior was the inclusivity of the discussion groups, which simulated the paradigm of collaboration in the industry. Because we must be able to collaborate or the security will fail.”

#### Robert Norris

Information System Security Analyst  
Excelsior Graduate: BS in Liberal Studies, 2011  
MS in Cybersecurity, 2013

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## MASTER OF BUSINESS ADMINISTRATION ❖

### with a Cybersecurity Management Concentration

Excelsior's MBA with a Cybersecurity Management Concentration will give you a solid business foundation along with an overview of cybersecurity management. Using a multidisciplinary approach, this MBA concentration is designed to provide you with a broad analytical framework for evaluating and solving cybersecurity problems.

With our updated MBA, you can waive up to 15 credits of foundation requirements through exams or relevant undergraduate courses you've taken. You can apply a total of 24 credits, including graduate-level credit you've already earned, toward the 48 credits required for graduation.

### Career Paths

Graduates of this program will be prepared for leadership positions as chief information officers, chief security officers, and senior executive staff members. You'll also be ready to perform vital support functions in policy, legal, contracts and budget, risk management, and cybersecurity compliance.

### Degree Credit Requirements

*Foundation Requirements (0-15 credits, waivable)*

- **Business Ethics and Social Responsibility**
- **Finance**
- **Marketing**
- **Organizational Behavior**
- **Quantitative Analysis**

*Core Courses (24 credits, required)*

- **Accounting for Managers**
- **Business Communications**
- **Global Business Environment**
- **Human Resource Management**
- **Information Technology**
- **Leadership or Change Management**
- **Operations Management**
- **Strategy and Policy (Capstone)**

*Cybersecurity Management Concentration (9 credits, required)*

- **Ethics, Legal, and Compliance Issues in Cybersecurity**
- **IT Risk Analysis and Management**
- **Information Assurance**

**Total: 33-48 Credits**

## GRADUATE CERTIFICATE IN CYBERSECURITY MANAGEMENT<sup>❖</sup>

Our graduate certificate program is designed for midcareer professionals who wish to help meet the challenges posed by increasing cyber threats. The curriculum evaluates strategies for societal responses to threats at the enterprise, national and global levels. You may be able to transfer up to eight credits into the certificate program, and you must complete the capstone course at Excelsior College.

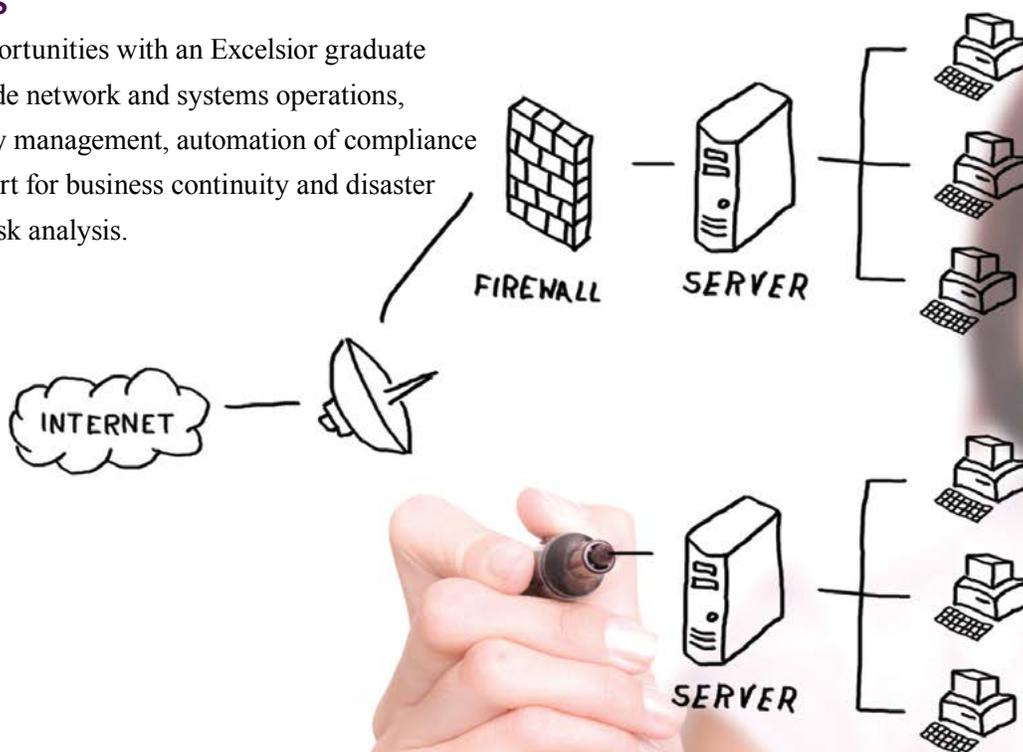
### Career Paths

Your career opportunities with an Excelsior graduate certificate include network and systems operations, network security management, automation of compliance activities, support for business continuity and disaster planning, and risk analysis.

### Certificate Credit Requirements

- Ethics, Legal, and Compliance Issues in Cybersecurity
- Information Assurance
- IT Risk Analysis and Management
- Security Management Awareness
- Special Topics in Cybersecurity (Capstone)

**Total: 16 credits**





## Study with an accredited WORLD LEADER.

As a world leader in distance education, Excelsior College has helped more than 150,000 busy working adults earn their degrees since 1971.

Our flexible, affordable online programs empower you to fit learning into your life, studying whenever and wherever you choose. And you earn your degree from an accredited college: Excelsior College is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools.



**CERTIFIED  
CYBERSECURITY  
PROGRAMS**

Call 888-647-2388, ext. 27  
or visit [excelsior.edu](http://excelsior.edu)



Excelsior College is accredited by the Middle States Commission on Higher Education, 3624 Market Street, Philadelphia, PA 19104, telephone: 267-284-5000. The Middle States Commission on Higher Education is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation. All the College's academic programs are registered (i.e., approved) by the New York State Education Department. Excelsior College is a Title IV eligible educational institution (Federal Code #014251) offering Federal Financial Assistance (Pell Grants, the FSEOG program, Stafford Loans, and PLUS Loans) to students who qualify and are enrolled in course-based programs. Excelsior College accepts students of any race, color and national or ethnic origin.

