



DEPARTMENT OF  
HIGHER EDUCATION &  
WORKFORCE DEVELOPMENT

## New Program Report

**Date Submitted:**

07/13/2023

**Institution**

Webster University

**Site Information**

**Implementation Date:**

6/1/2019 12:00:00 AM

**Added Site(s):**

**Selected Site(s):**

Webster University, 470 East Lockwood, St. Louis, MO, 63119-3194

**CIP Information**

**CIP Code:**

290207

**CIP Description:**

A program that focuses on the technological and operation aspects of information warfare, including cyber attack and cyber defense. Includes instruction in computer and network security, cryptography, computer forensics, systems security engineering, software applications, threat and vulnerability assessment, wireless networks and satellite communications, tactical and strategic planning, legal and ethical issues, and cyber warfare systems development and acquisition.

**CIP Program Title:**

Cyber/Electronic Operations and Warfare

**Institution Program Title:**

Cybersecurity - Information Assurance

**Degree Level/Type**

**Degree Level:**

Postbaccalaureate Certificate

**Degree Type:**

Graduate Certificate (GRCT)

**Options Added:**

**Collaborative Program:**

N

**Mode of Delivery**

**Current Mode of Delivery**

Classroom

Hybrid

Online

**Student Preparation**



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Special Admissions Procedure or Student Qualifications required:

This cybersecurity certificate program is intended for computer science, information technology, information security and related experienced professionals with the goal of expanding their understanding of cybersecurity policies, practices, methods and related technology advancements within the discipline. This certificate program is NOT intended for students without an undergraduate degree and/or professional experience in these disciplines.

Specific Population Characteristics to be served:

n/a

### Faculty Characteristics

Special Requirements for Assignment of Teaching for this Degree/Certificate:

Webster University has academic policies describing minimum faculty qualifications by discipline. These policies meet or exceed guidelines from the Higher Learning Commission.

Estimate Percentage of Credit Hours that will be assigned to full time faculty:

Webster University strives to have more than 50% of credit hours assigned to full-time faculty. The percentage of credit hours assigned to full-time faculty will vary based on location and student enrollment in a program at any given time. Overall, the percentage of credit hours assigned to full-time faculty ranges from 10 to 20%. At Webster University's main campus in Missouri, percentages are often higher.

Expectations for professional activities, special student contact, teaching/learning innovation:

Faculty are expected to continually engage in appropriate professional development activities to ensure their professional qualifications are current. The University provides resources to help ensure robust student contact and engagement. The University also provides resources for faculty to innovate their teaching/learning to meet clear learning outcome objectives.

### Student Enrollment Projections Year One-Five

<b>Year 1</b>	<b>Full Time: 5</b>	<b>Part Time: 0</b>	
<b>Year 2</b>	<b>Full Time: 5</b>	<b>Part Time: 0</b>	
<b>Year 3</b>	<b>Full Time: 5</b>	<b>Part Time: 0</b>	<b>Number of Graduates:</b> 5
<b>Year 4</b>	<b>Full Time: 5</b>	<b>Part Time: 0</b>	
<b>Year 5</b>	<b>Full Time: 5</b>	<b>Part Time: 0</b>	<b>Number of Graduates:</b> 5

### Percentage Statement:

n/a

### Program Accreditation

Institutional Plans for Accreditation:

Webster University will maintain its accreditation by the Higher Learning Commission. There are no plans to pursue specialized accreditation at this time for this program.

### Program Structure

#### Total Credits:

18



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**Residency Requirements:**

n/a

**General Education Total Credits:**

0

**Major Requirements Total Credits:**

18

**Course(s) Added**

COURSE NUMBER	CREDITS	COURSE TITLE
CSSS 5290	3	Cybersecurity Risk Management Framework
CSSS 5270	3	Cybersecurity in Cloud Computing
CSSS 5120	3	Cybersecurity Infrastructures
CSSS 5140	3	Cybersecurity Strategic Operations
CSSS 5160	3	Encryption Methods and Techniques
CSSS 5110	3	Cybersecurity Communications

**Free Elective Credits:**

0

**Internship or other Capstone Experience:**

n/a

**Assurances**

I certify that the program will not unnecessarily duplicate an existing program of another Missouri institution in accordance with 6 CSR 10-4.010, subsection (9)(C) Submission of Academic Information, Data and New Programs.

I certify that the program will build upon existing programs and faculty expertise.

I certify that the institution has conducted research on the feasibility of the proposal and it is likely the program will be successful. Institutions' decision to implement a program shall be based upon demand and/or need for the program in terms of meeting present and future needs of the locale, state, and nation based upon societal needs, and/or student needs.

**Contact Information**

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# Cybersecurity - Information Assurance

## Graduate Certificate 18 Credit Hours

*This program is offered by the George Herbert Walker School of Business & Technology. It is available online, at the St. Louis main campus and at select campus locations. Please see the Campus Locations and Offering section of this catalog for a list of campuses where this program is offered.*

For information on the general requirements for a certificate, see Certificate Program Policies and Procedures under the Academic Policies section of this catalog.

### Program Description

This certificate focuses on expanding the student's knowledge and understanding of the cybersecurity challenges and issues facing corporate and governmental organizations. Courses in the certificate provide an understanding of current cybersecurity threats, phraseology and terminology, various roles, responsibilities, and processes applied in protecting an organization's digital content, as well as evaluation of transmission media, storage systems, networks, risk management and national critical infrastructure. The primary goal of this certificate program is to support IT/CS professionals seeking to expand their understanding of the cybersecurity discipline and to apply that knowledge to their profession.

This cybersecurity certificate program is intended for computer science, information technology, information security and related experienced professionals with the goal of expanding their understanding of cybersecurity policies, practices, methods and related technology advancements within the discipline. **This certificate program is NOT intended for students without an undergraduate degree and/or professional experience in these disciplines.**

### Learning Outcomes

- Summarize and demonstrate an understanding of the vocabulary of cybersecurity terms and phraseology.
- Develop an understanding of the cyber threats to national critical infrastructure.
- Demonstrate and differentiate a basic working knowledge and awareness of current and growing threats to people, organizations and society through the use of cyber war, cyber crime, encryption techniques and other activities.
- Explain the basic knowledge of potential threats and how criminals and nation-states use different cyber techniques, the use of encryption methods and managing cyber risks.
- Describe the roles, responsibilities and duties of computer scientists, IT managers, CIOs, CEOs and other decision makers who may influence the use of IT systems.
- Differentiate the scope of the evolving environment of cybersecurity, international law, national law enforcement and organizational security measures and counter measures as applied to network and telecommunications operational security and applications.

### Requirements

- CSSS 5110 Cybersecurity Communications (3 hours)
- CSSS 5120 Cybersecurity Infrastructures (3 hours)
- CSSS 5140 Cybersecurity Strategic Operations (3 hours)
- CSSS 5160 Encryption Methods and Techniques (3 hours)
- CSSS 5270 Cybersecurity in Cloud Computing (3 hours)
- CSSS 5290 Cybersecurity Risk Management Framework (3 hours)

NOTE: CSSS 5000 is not a prerequisite requirement for this certificate.

### Admission

See the Admission section of this catalog for general admission requirements. Students interested in applying must submit their application online at [www.webster.edu/](http://www.webster.edu/) apply. Transcripts should be sent from your institution electronically to [transcripts@webster.edu](mailto:transcripts@webster.edu). If this service is not available, send transcripts to:

Office of Admission  
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