

**Cybersecurity Certificate**  
Requirements Effective Fall 2024  
Academic Plan Code: SYACYC45  
Program Planning Guide

**Program Description:** The Cybersecurity Certificate is designed to offer our college students a streamlined pathway to quickly enter STEM careers. The program has been mapped to essential skills needed to pursue employment in high-demand careers in network security, support, and administration. The program curriculum comprehensively covers cybersecurity essentials, ethical hacking techniques, incident response, digital forensics, defensible evidence acquisition, host system security, reverse engineering malware, secure network design, risk mitigation, and implementation of administrative and technical controls, preparing students for the CompTIA Security+, CompTIA CySA+, and ISC2 SSCP exams. The program includes internship credits so that students engage in work-based learning or a capstone project to apply their knowledge and be better prepared to enter the job market upon completion.

**Prerequisites:** Many classes have prerequisites. Prerequisites are those classes that prove eligibility for entry-level classes by testing or by having satisfied prior course work. Course work earned at other institutions must be unofficially evaluated or approved by a program advisor before registering. Courses in this degree with pre-requisites are marked with an asterisk (\*). See catalog for more information.

**Cybersecurity Certificate Prerequisites:** MATH 081 with an S or placement into MATH 084 or higher. Placement into ENGL&101.

**Note:** Advanced placement testing, work experience, and transfer of credits may result in course waivers, credit transfer, and advanced placement.

<b>Program Requirements</b>		
<b>Course Number</b>	<b>General Education/Related Instruction Requirements (15 credits)</b>	<b>Credit Hours</b>
BUS 236	Interpersonal Communications for the Workplace	5
EET 109*	Mathematical Applications for Circuit Analysis	5
ENGL& 101*	Composition	5
<b>Course Number</b>	<b>Certificate Requirements (58 credits)</b>	
BUS 169	Using Computers in Business	5
CWE 110* or IT 291*	Internships or Network Security Practicum <i>with instructor permission</i>	3
EET 131	IT Essentials I – A+ Certification	5
IT 100	Information Technology Fundamentals	5
IT 111*	Programming Fundamentals	5
IT 115	Introduction to Software Development & Version Control	5
IT 130* or IT 120*	Network Essentials or Network Essentials – Comptia Network+	5
IT 138*	Linux for Network Administration	5
IT 150*	IT Systems Security+	5
IT 157*	Ethical Hacking	5
IT 231 or IT 135	Linux Operating System or Introduction to Linux	5
IT 255*	Network Forensic & Incident Response	5
		<b>Total Credits: 73</b> (excluding pre-requisites)

## Program Outcomes:

- Display comprehension of administrative and technical methodologies to alleviate and oversee threats that impact information systems.
- Identify, intercept, and reverse engineer various types of malwares identified as common and/or current threats.
- Select, configure, and employ the appropriate technical solutions and components to protect a network infrastructure and the related information assets.
- Plan and execute an information security risk analysis, vulnerability assessment, and red/blue team exercise.
- Conduct forensic analysis on various types of computing devices and demonstrate the ability to acquire evidence in a forensically sound fashion.
- Demonstrate knowledge of the techniques and processes used for incident response, incident documentation, and notification of stakeholders.

## What Skills do I need to be successful in this field?

- <https://www.onetonline.org/link/summary/15-1231.00>
- <https://www.onetonline.org/link/summary/15-1232.00>

## What are some potential job titles?

- IT Customer Support Specialist
- Network Technician
- Help Desk Analyst

## Wages, employment trends and pathways

- <https://www.onetonline.org/link/summary/15-1231.00#WagesEmployment>
- <https://www.onetonline.org/link/summary/15-1232.00#WagesEmployment>

**Suggested Course Sequence:** This program of study is outlined by quarter, and courses should be taken in the indicated sequence. However, it should not be concluded that students will always proceed through their program of study exactly as prescribed here. The number of quarters listed here is minimal. Not all courses are offered every quarter. Individual student experiences, educational and training background, and personal schedules and demands all may affect the time it takes to finish this program. Also, in general, summer quarter is not considered one of the full-time quarters in the program.

<b>1<sup>st</sup> quarter:</b> EET 109, EET 131, IT 100	15 credits
<b>2<sup>nd</sup> quarter:</b> BUS 169, IT 120 or IT 130, IT 231 or IT 135	15 credits
<b>3<sup>rd</sup> quarter:</b> IT 115, IT 138	10 credits
<b>4<sup>th</sup> quarter:</b> BUS 236, ENGL& 101	10 credits
<b>5<sup>th</sup> quarter:</b> IT 111, IT 150	10 credits
<b>6<sup>th</sup> quarter:</b> CWE 110 or IT 291, IT 157, IT 255	13 credits

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**Website:** <https://northseattle.edu/programs/information-technology>