

# CYBERSECURITY, A.A.S.

**Location(s):** AL, AN, LO, MA, NOL, WO

**NOVA Code:** 3450

## Purpose

This curriculum is designed for those who seek employment in the field of Cybersecurity (information assurance), for those who are presently in IT or a security field and who desire to increase their knowledge and update their skills, and for those who must augment their abilities in other fields with knowledge and skills in information security. The curriculum is mapped to the NSA/DHS Knowledge Units necessary for NOVA's designation as a Center of Academic Excellence.

## Transfer Information

Transfer is not the primary purpose of an A.A.S. program, but NOVA has articulation agreements and arrangements that facilitate the transfer of this degree to selected senior institutions. Students interested in transfer should contact their academic advisor early in the program for specific course requirements.

## Recommended Preparation

The student should possess a proficiency in high school English, high school algebra and geometry, and computer keyboarding skills.

## Two Years

Course	Title	Credits
<b>1st Semester</b>		
ENG 111	College Composition I	3
ITE 152	Introduction to Digital and Information Literacy and Computer Applications <sup>1</sup>	3
ITN 106	Microcomputer Operating Systems	3
Select one of the following: <sup>2</sup>		3
ITN 101	Introduction to Network Concepts	
ITN 100	Intro to Telecommunications	
Select one of the following: <sup>3</sup>		3
MTH 154	Quantitative Reasoning	
MTH 155	Statistical Reasoning (or Higher)	
SDV 100 or SDV 101	College Success Skills or Orientation to:	1
<b>Credits</b>		<b>16</b>
<b>2nd Semester</b>		
ITP 100	Software Design <sup>1</sup>	3
ITN 260	Network Security Basics	3
Select one of the following CST Electives:		3
CST 100	Principles of Public Speaking	
CST 110	Introduction to Human Communication	
CST 126	Interpersonal Communication	
CST 229	Intercultural Communication	
Select one of the following: <sup>4</sup>		3
ITN 107	Pers. Computer Hardware & Troubleshooting	
ITE 221	PC Hardware & O/S Architecture	
Select one of the following: <sup>5</sup>		3
ITN 170	LINUX System Administration	
ITN 171	UNIX I	
<b>Credits</b>		<b>15</b>
<b>3rd Semester</b>		
ITN 200	Administration of Network Resources	3
ITN 261	Network Attacks, Computer Crime, & Hacking	4

ITN 262	Network Comm, Security & Authentication	4
Social/Behavioral Sciences Elective ( <a href="https://catalog.nvcc.edu/general-education-electives/#ge_soc_beh_sci_elec">https://catalog.nvcc.edu/general-education-electives/#ge_soc_beh_sci_elec</a> )		3
Select one of the following:		4
ITP 120	JAVA Programming I	
ITP 132	C++ Programming I	
ITP 150	Python Programming	
ITP 160	Introduction to Game Design and Development	
ITP 225	Web Scripting Languages	
ITP 270	Programming For Cybersecurity	
<b>Credits</b>		<b>18</b>
<b>4th Semester</b>		
Humanities/Fine Arts Elective ( <a href="https://catalog.nvcc.edu/general-education-electives/#ge_hum_fa_elect">https://catalog.nvcc.edu/general-education-electives/#ge_hum_fa_elect</a> )		3
ITN 263	Inter/Intranet Firewalls/E-Comm. Sec	4
ITN 266	Network Security Layers	3
ITN 276	Computer Forensics I	3
Select one of the following Approved Electives:		3
ITN 264	Introduction to Malware Analysis	
ITN 267	Legal Topics in Network Security.	
ITN 277	Computer Forensics II	
ITN 290	Coord. Internship	
ITN 295	Topics In: (Cyber Operations and Analysis)	
ITN 295	Topics In: (Introduction to Payments Cybersecurity)	
ENG 112	College Composition II	
<b>Credits</b>		<b>16</b>
<b>Total Credits</b>		<b>65</b>

Information Technology (ITD, ITE, ITN, ITP) and or Computer Science (CSC) courses used for this program may not be more than 10 years old as of the first day of the fall semester of the academic year in which a student graduates, unless approved by the pathway dean.

Electives should be chosen with the advice of an academic advisor to meet the requirements of the intended transfer institution.

<sup>1</sup> United States Naval Community College students may substitute an approved elective.

<sup>2</sup> Credit will not be awarded for both ITN 100 Intro to Telecommunications or ITN 101 Introduction to Network Concepts.

<sup>3</sup> May substitute a higher-level mathematics course. Consult with an academic advisor for appropriate selection.

<sup>4</sup> Credit will not be awarded for both ITN 107 Pers. Computer Hardware & Troubleshooting or ITE 221 PC Hardware & O/S Architecture.

<sup>5</sup> Credit will not be awarded for both ITN 170 LINUX System Administration or ITN 171 UNIX I.