

Network Operations & Systems Security Associate of Applied Technology Degree / Associate in Applied Science – T Degree

The NOSS program prepares students to pursue careers in a variety of entry- to mid-level positions including, but not limited to, help desk, network system administration, and cybersecurity. Our instructors prepare students for careers involving the protection of information on computers and networks against unauthorized access or modification of information and the denial of service to authorized users. Includes those security measures, both physical and virtual, necessary to detect, document, and counter such threats. Curriculum content includes basic and advanced computer and networking skills, physical and virtual security processes, and procedures, and introduction to security management, planning, and recovery.

The NOSS AAT/AAS-T program focuses primarily on the technical and problem-solving skills associated with PC and network management and cyber-security implementation but adds hands-on experience building computer and network systems. Additional skills include administration, configuration, and security for Cisco, Linux, and Microsoft products. Our focus also includes ethical hacking and prevention, assessing the security needs of computer networking systems, and developing safeguard solutions for computer and information-system infrastructures and countermeasures.

The AAT or AAS-T degree is earned by completing the technical program requirements and general education requirements. The program includes preparing students for the CompTIA A+, Security+, Linux+, Cisco CCNA, and Microsoft MCSA & MTA certification examinations and internship work experience.

Employers include business and industrial firms, financial institutions, government agencies, consulting firms, software developers, health providers, and Internet service providers. Innovations in computer technology continue to rapidly change and expand the computer security field. Therefore, the following courses of study may be subject to change to offer students training based on current industry standards.

Program Learning Outcomes

Upon successful completion of the Network Operations & Systems Security degree, students will be able to:

- Troubleshoot computers, software, and networks in order to provide quality service to end-users.
- Design a local area network and wide area network that incorporates the fundamentals of network addressing.
- Implement systems security for organizational information systems.
- Apply principles of cybersecurity in order to defend against cybersecurity threats.

- Administer server operating systems in a variety of stand-alone and enterprise network environments.
- Use virtualization and cloud management tools to centralize the management of multiple virtual servers.

Completion Requirements

Prerequisite(s)

Before completion of the first quarter, a student must provide documentation of a background check with the Washington State Patrol.

Program Course List

NOS 100	IT Fundamentals I	4
NOS 105CL	IT Fundamentals II	4
NOS 115	Introduction to Networking	4
NOS 120	Desktop Support I	4
NOS 125	Desktop Support II	4
NOS135	Scripting for Network Admins	4
NOS 205	Implementing System Security	4
NOS 130	Server OS Installation and Configuration	4
NOS 210	Digital Forensics and Investigations	4
NOS 160	Server Security	4
NOS 110	Cyber Security Fundamentals	4
NOS 140	Linux I	4
NOS 145	Administering Windows Server OS	4
NOS 150	Virtualization and Cloud Technologies	4
NOS 155	Linux II	4
NOS 200	Windows Server Identity Services	4
NOS 215	Switch and Route Essentials	5
NOS 220	Enterprise Networking	4
NOS 225	Internship I	3
NOS 230	Practical Penetration Testing I	5
NSS 235	Practical Penetration Testing II	4
NOS 240	Internship II	3
	Total Credit Hours	88

AAT Requirements

Technical Course Requirements	88
AAT General Education Requirements	18
Total Credit Hours:	106

AAT General Education Requirements: See list above

AAS-T Requirements

Technical Course Requirements	88
AAS-T General Education Requirements	23
Total Credit Hours:	111

AAS-T General Education Requirements: See list above

General Degree Requirements

In addition to the program course requirements, students must also complete the general education requirements for the degree they seek to obtain. The two-degree options in this program are the Associate of Applied Technology (AAT) or the Associate in Applied Science-T (AAS-T). The different requirements for each degree are listed below:

Network Operations & Security AAT Degree General Education Requirements (18 credits):

ENGL& 101	English Composition I	5
	Or	
CMST& 220	Public Speaking	5
	Any 100-Level Math Class	5
PSYC& 100DIV	General Psychology	5
COLL 102	College Success for All	3

Note: CMST 220 or higher

PSYC 100DIV: PSY 112DIV, SOC& 101DIV, or other social science or humanities course that meets the diversity requirement

AAS-T Degree General Education Requirements (23 credits):

All AAS-T degrees must have a minimum of 20 credits of transferable general education. These credits replace the academic courses required for the AAT degree. Required credits include:

5 credits in communication:

[ENGL& 101](#) English Composition I 5

5 credits in quantitative reasoning:

MATH& 107 Math in Society	5
MATH& 141 Precalculus I	5
MATH& 142 Precalculus II, Functional Trigonometry	5
MATH& 146 Introduction to Statistics	5
MATH& 151 Calculus I	5

5 credits in social science that meet the diversity requirement:

[PSYC& 100DIV](#) General Psychology 5
[SOC& 101DIV](#) Introduction to Sociology 5

5 credits in social science, humanities, or science;

Choose one from the following:

ART& 100 Art Appreciation	5
ASL& 121 American Sign Language I	5
ASL& 122 American Sign Language II	5
BIOL& 160 General Biology w/Lab	5
BIOL& 175 Human Biology w/Lab	5
BIOL& 241 Human A & P I	5
BIOL& 242 Human A & P II	5
BIOL& 260 Microbiology	5
CHEM& 110 Chemical Concepts w/Lab	5
CHEM& 121 Intro to Chemistry	5
CHEM& 131 Introduction to Organic/Biochemistry	5
CMST& 220 Public Speaking	5
GEOL& 110 Environmental Geology with Lab	5
HIST& 146 US History I	5

HIST& 147	US History II	5
HIST& 148	US History III	5
HUM& 101	Introduction to Humanities	5
MUSC& 105	Music Appreciation	5
PHYS& 114	General Physics I with Lab	5
POLS& 202	American Government	5
PSYC& 100		5
PSYC& 200	Lifespan Psychology	5
PSYC& 220	Abnormal Psychology	5
SOC& 101		5

3 credits in College Success:

[COLL 102](#) College Success for All 3

Students pursuing an AAT or AAS-T degree must complete all college degree requirements before graduation. This includes courses that meet the requirements for diversity, computer literacy, and the capstone project.

Program Length

This program is approximately seven quarters long, depending on the time students need to satisfactorily complete all graduation requirements.

Admission Dates

Summer, fall, winter, and spring quarters.