Sample Career and Educational Pathways in Cyber/Computer Information Systems Security through Whatcom Community College & Western Washington University

High School Diploma

Certificates at WCC:

- Technical Support
- Network Administration
- Information Security Specialist

WCC 2-Year Associate in Science — Transfer (AAS-T) Degree **

- Cybersecurity (91 credits)

Baccalaureate (4 year) Degree at WWU

- Computer & Information Security (92 credits)

Entry-level Positions—$16.22/ hour and up:

- Computer Support Specialist
- Network Support Specialist

Mid-level Positions—$26.60/hour and up:

- Computer Support Specialist
- Network Support Specialist
- Information Security Analyst/Specialist
- Network and Computer Systems Administrator
- Computer Network Architect
- Other Computer/IT Occupations

Advanced Positions— $40.81/hour and up:

- Network and Computer Systems Security Administrator
- Computer Network Architect
- Computer and Information Systems Manager
- Secure Software Development Specialist
- Digital Forensic Specialist

**Additional course articulations between Bellingham Technical College and WCC may apply. The AAS-T degree is built upon the technical courses required for job preparation but also includes a college-level general education component common in structure for all degrees. The general education component of the transfer-able technical degree is comprised of not less than 20 credits of courses generally accepted in transfer.

Whatcom COMMUNITY COLLEGE

WESTERN WASHINGTON UNIVERSITY

Whatcom Community College

CORE REQUIREMENTS

Course ID	*Course Title*	*Credits*
CS 140	Programming Fundamentals I	5
CS 145	Programming Fundamentals II	5
CIS 106	Open Source Operating Systems	5
CIS 110	Introduction to Computer Security	3
CIS 116	Virtualization	3
CIS 205	Computer Operating Systems II	5
CIS 214	Network Security I	5
CIS 215	Network Security II	5
CIS 216	Industrial Control Systems Security	5
CIS 226	Cisco Networking I	5
CIS 227	Cisco Networking II	5
CIS 228	Cisco Networking III	5
CIS 229	Cisco Networking IV	5
	Total	**61**

RELATED INSTRUCTION*/GENERAL EDUCATION REQUIREMENTS

Course ID	*Course Title*	*Credits*
MATH& 141	Precalculus I	5
MATH& 142	Precalculus II	5
MATH& 151	Calculus I	5
ENGL& 101	English Composition I (CM)	5
PHYS& 221	Engineering Physics I	5
PHIL 130	Introduction to Ethics	5
Electives	Any college courses numbered 100 or above	0-7
	Total	**30**

TOTAL CREDITS	**91**

Students may enter the program at any quarter, but should be aware that some classes are offered only once a year. Students should plan to complete required English and math courses within their first 30 credits of study.

** CM = Communication, HR = Human Relations, CP = Computation*

Final two years at Western Washington University

REQUIRED COMPUTER INFORMATION SYSTEM SECURITY (CISS) COURSES			
Course ID	*Course Title*	**Upper-division**	***Credits***
CISS 247 (req?)	Computer Systems I		5
CISS 301	Formal languages and Functional Programming	5	5
CISS 349	Computer System Administration	4	4
CISS 360	Operating Systems Concepts	3	3
CISS 461	Computer Security	4	4
CISS 495	Computer Security Project	3	3
	Total	**19**	**24**

REQUIRED SUPPORT COURSES			
Course ID	*Course Title*	**Upper-division**	***Credits***
ENG 302	Technical Writing	5	5
ISTM 201	Science Literacy		3
MATH 125	Calculus 2		5
MATH 341	Probability and Statistical Inference	4	4
PHYS 162	Physics with Calculus II		5
	Total	**9**	**22**

CISS ELECTIVES (choose four courses)			
Course ID	*Course Title*	**Upper-division**	***Credits***
CISS 346	Secure Software Development	4	4
CISS 421	Computer Forensics	4	4
CISS 422	Dynamic Analysis of Software	4	4
CISS 423	Software Reverse Engineering	4	4
CISS 464	Penetration Testing	4	4
CISS 469	Advanced Network System Security	4	4
CISS 478	Cryptographic Techniques	4	4
CISS 346	Secure Software Development	4	4
		16	**16**
	TOTAL CREDITS	**44**	**62**

RECOMMENDED GUR COURSES			
Course ID	*Course Title*	**Upper-division**	***Credits***
JOUR 190	Introduction to Mass Media		5
JOUR 375	Diversity, Mass Media & Social Change	4	4
LBRL 325	Surveillance, Voyeurism and the Culture of Suspicion	4	4
MGMT 271	Law & the Business Environment		4
PHIL 360	Society, Law and Morality	3	3
PLSC 250	The American Political System		5
PLSC 346	Politics of Inequality	5	5
	Total	**16**	**30**