CYBERSECURITY: CP

Certificate of Proficiency | 45 credit hours minimum

Area of Interest: Science, Technology, Engineering, and Math (STEM)

Program Website (https://stlcc.edu/programs-academics/pathways/s-t-e-m/cybersecurity/)

Academic Advising (https://stlcc.edu/admissions/advising/)

Program Description:

The Cybersecurity Certificate of Proficiency provides the foundation courses to prepare IT students to apply for entry level information assurance/security technician/practitioners positions that support planning, implementing, upgrading, and monitoring security measures for the protection of computer networks and information systems. Students, through in-depth theory and extensive hands-on activities, will develop skills to ensure appropriate security controls are in place that will safeguard digital files and vital electronic infrastructure, and will develop skills to respond to computer security breaches and viruses. This program includes instruction in computer architecture, programming, and systems analysis; networking; cryptography; security system design; applicable law and regulations; risk assessment and policy analysis; contingency planning; user access issues; investigation techniques; and troubleshooting.

Employers prefer cybersecurity workers who have a college degree. The Cybersecurity Certificate of Proficiency is recommended for those that already possess an AAS or higher college degree in any area and wish to obtain the cybersecurity skills. The Cybersecurity AAS is recommended for those who do not yet possess a college degree. Persons interested in the program should possess a strong foundation in computer hardware/software troubleshooting skills, equivalent to the CompTIA A+ certification.

Pre-employment background screening is required for any candidate seeking employment in the cybersecurity field.

Locations. This program is offered at Forest Park by taking a mixture of face-to-face and online courses.

Related Programs. The Computer and Information Technology Department offers an associate in the following area:

> Cybersecurity, Associate in Applied Science (http://catalog.stlcc.edu/programs/cybersecurity-aas/)

Cost of Attendance. For more information on cost of attendance visit MoSCORES (https://scorecard.mo.gov/Search/).

Program Career and Salary Information. Pursuant to Missouri HB 1606 (2018), information regarding the number of credit hours, program length, employment rate, wage data, and graduates employed in careers related to their program of study at St. Louis Community College can be found at the following URL: https://scorecard.mo.gov/scorecard/ (https://www.google.com/url/?q=https://scorecard.mo.gov/scorecard/&sa=D&ust=1555536894857000&usg=AFQjCNG1xf3E_i2lO96zEytILO-s5xaJCQ). Search using School / Program "St. Louis Community College" and choose the degree or credential type of interest.

The following limitations to the data apply: Information provided is based on the most recent cohorts available. Typically, most recent cohorts for wage and completion data are six years prior to the current academic year. Time to complete a program of study varies depending on the number of credit hours students earn per semester.

Interested in this program? Start the enrollment process by visiting the Apply to STLCC (https://www.stlcc.edu/admissions/apply-to-stlcc/) page.

At the completion of the program, students are expected to:

1. design cybersecurity solutions with current industry standards.
2. communicate as a team to design and develop cybersecurity technologies.
3. use cybersecurity methodologies to develop a business continuity plan.
4. use current digital forensics tools.
5. employ methodologies for data validation and subsequent responses consistent with secure coding principles.
6. use permissions to control and secure access to files.
7. employ operating system logging services for auditing purposes.
8. explain how to secure data as it is traveling across the network.
9. use networking tools.
10. explain effective business continuity plans.

Missouri Civics Examination. Students entering college for the very first time in fall 2019 and who intend to complete an associate's degree must successfully complete a civics examination. Information on who is eligible for a waiver can be found on the STLCC website (https://stlcc.edu/programs-academics/missouri-civics-exam.aspx).

Code	Title	Credit Hours
Program Requirements		
IT 100	Introduction to Cybersecurity	1
IS 153	C# Programming I	4
or IS 187	Java Programming I	
or IS 166	C# and Java Programming I	
IS 165	Computer Applications-Microsoft Project	1
IS 225	Database Management	4
IS 280	Python	3
IS 229	Unix/Linux I	3
IS 237	Fundamentals of Information Assurance/Security - CompTIA Security+	3
IT 234	Principles of Incident Response and Disaster Recovery	3
IT 101	Cisco Networking Academy I: Introduction to Networks	5
IT 120	Enterprise Security Management	3
IT 121	Secure E-Commerce	3
IS 264	Unix/Linux II	3
IT 212	Ethical Hacking	3
IT 214	Systems Security Engineering	3
IT 216	Digital Forensics	3
Total Credit Hours		**45**

Full-Time Academic Plan

PLEASE NOTE: If you originally enrolled at STLCC prior to Spring 2024, you may need to view an archived catalog (https://www.stlcc.edu/programs-academics/course-catalog/) for your correct program requirements. Please speak with an advisor or the program coordinator for more information.

Code	Title	Hours	Prerequisites	Milestones/Notes
First Year				
Fall				
IS 153 or 187 or 166	C# Programming I or Java Programming I or C# and Java Programming I	4	Reading Proficiency	
IS 229	Unix/Linux I	3	Reading Proficiency	
IT 100	Introduction to Cybersecurity	1	Reading Proficiency	
IS 165	Computer Applications-Microsoft Project	1	Reading Proficiency	Offered Online Only
IS 280	Python	3	Reading Proficiency	
	Credit Hours	**12**		
Spring				
IS 237	Fundamentals of Information Assurance/Security - CompTIA Security +	3	IT 102 or IS 229 with a minimum grade of "C" and Reading Proficiency	
IT 101	Cisco Networking Academy I: Introduction to Networks	5	Reading Proficiency	
IS 225	Database Management	4	Reading Proficiency	
	Credit Hours	**12**		
Second Year				
Fall				
IS 264	Unix/Linux II	3	IS 229 with a minimum grade of "C" and Reading Proficiency	Offered Fall and Spring
IT 212	Ethical Hacking	3	IS 229 and IS 237 with minimum grades of "C", and Reading Proficiency	Offered in Fall only
IT 214	Systems Security Engineering	3	IS 237 with a minimum grade of "C" and Reading Proficiency	Offered in Fall only
IT 234	Principles of Incident Response and Disaster Recovery	3	IS 237 with a minimum grade of "C" and Reading Proficiency	Offered in Fall only
	Credit Hours	**12**		
Spring				
IT 216	Digital Forensics	3	IS 229 and IS 237 with minimum grades of "C" and Reading Proficiency	Offered in Spring only
IT 120	Enterprise Security Management	3	IS 237 with a minimum grade of "C" and Reading Proficiency	Offered in Spring only
IT 121	Secure E-Commerce	3	IS 229 and IS 237, both with a minimum grade of "C" and Reading Proficiency	Offered in Spring only
	Credit Hours	**9**		
	Total Credit Hours	**45**		

*Click on the hyperlinked course number to view additional information about the course.

**Students completing a course that has been assigned a MOTR number may transfer that course to any public institution in Missouri. Those who complete CORE 42 requirements will have that verification on their transcript.

*** It is your responsibility to verify that the courses listed above will transfer to the four-year institution of your choice. Maximize your transfer credits/classes by meeting with an academic advisor.

Part-Time Academic Plan

PLEASE NOTE: If you originally enrolled at STLCC prior to Spring 2024, you may need to view an archived catalog (https://www.stlcc.edu/programs-academics/ course-catalog/) for your correct program requirements. Please speak with an advisor or the program coordinator for more information.

Code	Title	Hours	Prerequisites	Milestones/Notes
First Year				
Fall				
IS 153 or 187 or 166	C# Programming I or Java Programming I or C# and Java Programming I	4	Reading Proficiency	
IS 229	Unix/Linux I	3	Reading Proficiency	
IT 100	Introduction to Cybersecurity	1	Reading Proficiency	
IS 165	Computer Applications-Microsoft Project	1	Reading Proficiency	Offered Online Only
	Credit Hours	**9**		
Spring				
IS 237	Fundamentals of Information Assurance/Security - CompTIA Security +	3	IT 102 or IS 229 with a minimum grade of "C" and Reading Proficiency	
IT 101	Cisco Networking Academy I: Introduction to Networks	5	Reading Proficiency	
	Credit Hours	**8**		
Second Year				
Fall				
IS 264	Unix/Linux II	3	IS 229 with a minimum grade of "C" and Reading Proficiency	Offered Fall and Spring
IT 212	Ethical Hacking	3	IS 229 and IS 237 with minimum grades of "C", and Reading Proficiency	Offered Fall Only
IT 214	Systems Security Engineering	3	IS 237 with a minimum grade of "C" and Reading Proficiency	Offered Fall Only
	Credit Hours	**9**		
Spring				
IT 216	Digital Forensics	3	IS 229 and IS 237 with minimum grades of "C" and Reading Proficiency	Offered Spring Only
IT 120	Enterprise Security Management	3	IS 237 with a minimum grade of "C" and Reading Proficiency	Offered Spring Only
IT 121	Secure E-Commerce	3	IS 229 and IS 237, both with a minimum grade of "C" and Reading Proficiency	Offered Spring Only
	Credit Hours	**9**		
Third Year				
Fall				
IT 234	Principles of Incident Response and Disaster Recovery	3	IS 237 with a minimum grade of "C" and Reading Proficiency	Offered Fall Only
IS 280	Python	3	Reading Proficiency	
IS 225	Database Management	4	Reading Proficiency	
	Credit Hours	**10**		
	Total Credit Hours	**45**		

*Click on the hyperlinked course number to view additional information about the course.

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