CITY COLLEGES®
OF CHICAGO

CYBERSECURITY, ASSOCIATE IN APPLIED SCIENCE

College(s): DA, KK, OH, WR

Program Code: 0433

The Cybersecurity Associate in Applied Science program provides the required knowledge and skill set for students pursuing entry-level career opportunities in Cybersecurity. With a hands-on approach to learning in this program, students acquire comprehensive Cybersecurity technical knowledge required in entry-level cybersecurity jobs.

Program Requirements

Code	Title	Hours
General Education Coursework		
ENGLISH 101	Composition	3
Fine Arts and Humanities [1]		3
Social and Behavioral Sciences [1]		3
Physical Sciences and Life Sciences		3
Mathematics (Math 118 or higher) [2]		3
Required Program Core		
CIS 103	Fundamentals of Programming	3
CIS 116	Operating System I	3
CIS 255	Operating Systems II	3
COMPSFI 101	Networking Essentials	3
or NET TEC 121	Internetworking I	
COMPSFI 102	Information Security Essentials	3
COMPSFI 202	Cybercrime and Incident Response	3
COMPSFI 212	Scripting for Cybersecurity	3
COMPSFI 213	Ethical Hacking	3
COMPSFI 214	Information Securtiy Systems Analysis	3

Code	Title	Hours
NET TEC 122	Internetworking II	3
or NET TEC 240	Operating Systems/Server I	
NET TEC 245	Cloud Computing and Services	3
Required Work-Based Learning Courses		
CIS 260	Computer Information Systems Field Project	3
or CIS 265	Computer Information Systems Internship	
Program Electives		
Select a minimum of 9 credit hours of program electives (p. 1)		9
Total Hours		**60**

[1] One course must satisfy the Human Diversity (HD) requirement
[2] MATH 125 Introductory Statistics recommended

Program Electives

Code	Title	Hours
BUSINES 111	Introduction To Business	3
CIS 111	Computer Operations	3
CIS 142	C++ Object Oriented Programming I	3
CIS 144	Java Object Oriented Programming I	3
CIS 181	Web Development I/Basic Web Technologies	3
CIS 182	Web Development II/Client Side Scripting	3
CIS 242	C++ Object Oriented Programming II	3
CIS 244	Java Object Oriented Programming II	3
CIS 260	Computer Information Systems Field Project	3
CIS 265	Computer Information Systems Internship	3
CIS 281	Web Development III/Server Side Programming	3
COMPSFI 101	Networking Essentials	3
COMPSFI 205	Cyber Forensics	3
COMPSFI 215	Information Security Domain	3

COMPSFI 216	Info Security Program Management	3
COMPSFI 231	Internetworking Security	3
NET TEC 121	Internetworking I	3
NET TEC 122	Internetworking II	3
NET TEC 240	Operating Systems/Server I	3

Pathway

This is an **example course sequence** for students interested in pursuing Cybersecurity. This does not represent a contract or guarantee course availability. If this pathway is followed as outlined, students will earn a Basic Certificate (BC), an Advanced Certificate (AC), and an Associate in Applied Science (AAS) Degree in Cybersecurity.

Semester-by-Semester Program Plan for Full-Time Students

All plans can be modified to fit the needs of part-time students by adding more semesters.

Semester 1		Hours
CIS 116	Operating System I	3
CIS 103	Fundamentals of Programming	3
COMPSFI 101 or NET TEC 121	Networking Essentials or Internetworking I	3
Mathematics (Math 118 or higher) [1,2]		3
ENGLISH 101	Composition [1]	3
	Hours	**15**
Semester 2		
CIS 255	Operating Systems II	3
COMPSFI 102	Information Security Essentials	3
COMPSFI 202	Cybercrime and Incident Response	3
Social and Behavioral Sciences course [1,3]		3
Program Elective (p. 2) [4]		3
	Hours	**15**
Semester 3		
COMPSFI 212	Scripting for Cybersecurity	3
COMPSFI 213	Ethical Hacking	3
NET TEC 122 or NET TEC 240	Internetworking II or Operating Systems/Server I	3
Physical Sciences or Life Sciences course [1]		3
Program Elective (p. 2) [4]		3
	Hours	**15**
Semester 4		
NET TEC 245	Cloud Computing and Services	3
COMPSFI 214	Information Securtiy Systems Analysis	3
CIS 260 or CIS 265	Computer Information Systems Field Project or Computer Information Systems Internship	3
Fine Arts or Humanities course [1,3]		3
Program Elective (p. 2) [4]		3
	Hours	**15**
	Total Hours	**60**

[1] General Education course
[2] MATH 125 Introductory Statistics recommended
[3] One course must satisfy the Human Diversity (HD) requirement
[4] Program Elective (p. 2)

Program Electives

Code	Title	Hours
BUSINES 111	Introduction To Business	3
CIS 111	Computer Operations	3
CIS 142	C++ Object Oriented Programming I	3
CIS 144	Java Object Oriented Programming I	3
CIS 181	Web Development I/Basic Web Technologies	3
CIS 182	Web Development II/Client Side Scripting	3
CIS 242	C++ Object Oriented Programming II	3
CIS 244	Java Object Oriented Programming II	3
CIS 260	Computer Information Systems Field Project	3
CIS 265	Computer Information Systems Internship	3
CIS 281	Web Development III/Server Side Programming	3
COMPSFI 101	Networking Essentials	3
COMPSFI 205	Cyber Forensics	3
COMPSFI 215	Information Security Domain	3
COMPSFI 216	Info Security Program Management	3
COMPSFI 231	Internetworking Security	3
NET TEC 121	Internetworking I	3
NET TEC 122	Internetworking II	3
NET TEC 240	Operating Systems/Server I	3

Choose your courses with your College Advisor.

Careers

This program can prepare students for the jobs listed below. Click on each one to learn more, including average earnings, annual job openings, and how much education people in that field have. For additional guidance and resources on career options, current City Colleges students and alumni can contact the Career Services Office (https://www.ccc.edu/departments/Pages/Career-Services.aspx).

Information Security Analysts
Job Description

Plan, implement, upgrade, or monitor security measures for the protection of computer networks and information. Assess system vulnerabilities for security risks and propose and implement risk mitigation strategies. May ensure appropriate security controls are in place that will safeguard digital files and vital electronic infrastructure. May respond to computer security breaches and viruses.

Salary Based on Experience Level

Take a look at the average hourly/annual earnings for this career in Cook County

Lightcast earnings figures are based on OES data from the BLS and include base rate, cost of living allowances, guaranteed pay, hazardous-duty pay, incentive pay (including commissions and bonuses), on-call pay, and tips.

Annual Wages

Entry-Level 10th Percentile	$70,243
Median 50th Percentile	$121,181
Senior-Level 90th Percentile	$183,449

Hourly Wages

Entry-Level 10th Percentile	$34
Median 50th Percentile	$58
Senior-Level 90th Percentile	$88

Annual Job Openings

156 annual openings in Cook County

National Education Attainment

Here, you can see the level of education that people in this career complete.

Degree Program	% of Jobs
A high school diploma or less	0.00%
A certificate	7.16%
Some college	2.01%
An Associate degree	12.87%
A Bachelor's degree	75.16%
A Master's or Professional degree	2.80%
A Doctoral degree or more	0.00%

77.96% continue their education beyond an associate degree