



Cyber Defense Certificate

This certificate is designed to provide the skill sets needed to defend a network. Students will be introduced to the basic tools and techniques that can be used to protect a network and communication assets from cyber threats.

Total Units: 24

First Year

Semester 1

6 Units

COURSE	UNITS	PRE-REQS [^]	SEMESTERS OFFERED*
CISN 304 Z Networking Technologies	3	Advisory: CISC 310	F(O,P), S(O)
CISC 310 ¹ Z Introduction to Computer Information Science	3		F(O), S(O), Su(O)

Z At least one section of this course is offered with free textbooks and is labeled as zero textbook costs (ZTC). If it is a GE area class or elective, there may be several ZTC offerings to fulfill the GE requirement. Use the Free Textbook filter to find these courses. Learn more on the [ZTC page of the college website](#).

¹ Recommended since this is an advisory course to other courses in the program.

Semester 2

6 Units

COURSE	UNITS	PRE-REQS [^]	SEMESTERS OFFERED*
CISN 300 Network Systems Administration	3	Advisory: CISC 310	S(O), Su(O)
CISS 310 Network Security Fundamentals	3	Advisory: CISN 300 & 304	F(O), S(O), Su(O)

Career

Options/Outlook:

Plan, implement, upgrade, or monitor security measures for the protection of computer networks and information. 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. **Career opportunities may require more than two years of college study.**

A sample of reported job titles:

Security analyst, network system security administrator, security policy analyst, information security analyst, data security administrator information security officer, information security specialist, information system security analyst, IT security analyst, IT specialist, network security analyst.

Projected job openings in US (2021-2031):

19,500

Projected growth in US (2021-2031):

Year 2

Semester 3

6 Units

COURSE	UNITS	PRE-REQS^	SEMESTERS OFFERED*
CISS 315 Ethical Hacking	3	CISS 310; Advisory CISS 300	F(O)
CISS 353 Management of Information Security	3	CISS 310	F(O)

Semester 4

6 Units

COURSE	UNITS	PRE-REQS^	SEMESTERS OFFERED*
CISS 321 Z Scripting for Cyber Security	3	CISS 315; Advisory: CISN 304 or 341	S(O)
CISS 360 Computer Forensics and Investigation	3	Advisory: CISC 302 & 310	S(O)

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^You must have passed the prerequisite course(s) with a "C" or better; Corequisite must be taken during the same semester; Advisory means it is recommended but not required to enroll in the course.

*(O) = online available (P) = partially online

35% growth

Median Salary in California with advanced degree (2021):

\$102,600/yr

Source:

<https://www.onetonline.org/link/summary/15-1212.00?redir=15-1122.00>

About this map:

This program map represents one possible pathway to complete the program. Please see a counselor to create an education plan that is customized to meet your needs. This map is not a guarantee of course

availability or financial aid applicability.

Zero Textbook Costs (ZTC):

The Zero Textbook Costs designation and logo are added to any course that provides free access to all required instructional materials. These are typically shared with students through Canvas. Courses that are designated as ZTC may still require students to purchase supplemental materials such as lab coats, a calculator, art supplies, etc. See full definitions and searching tips on the [Zero Textbook Costs page](#) of the college website.