



# Cybersecurity Certificate

This certificate provides graduates with the skills needed to defend networks and information systems against cyber-attacks. Students receive extensive hands-on experience and develop the knowledge and abilities necessary to succeed in the protection of an organization’s data and operations. It is a rigorous one-year fully online program designed to help students master the fundamentals of cybersecurity by applying industry-accepted and emerging practices to solve real-world security problems. Upon completion of the program, students will be able to evaluate security trends, recognize best practices, and understand Information Technology security products and threats. Some career opportunities associated with this degree include: security analyst, network systems security administrator, security policy analyst, and more.

**Total Units: 29.5**

## First Year

### Summer

**4 Units**

| COURSE                                                                                            | UNITS | PRE-REQS <sup>^</sup>          | SEMESTERS OFFERED* |
|---------------------------------------------------------------------------------------------------|-------|--------------------------------|--------------------|
| <b>CISC 360<sup>1</sup></b> <b>Z</b><br>Information & Communication<br>Technology Essentials (A+) | 4     | Advisory:<br>CISC 302 &<br>310 | F(O,P)             |

**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](#).

<sup>1</sup> or COMPTIA A+ certification

### Semester 1 - 1st Eight Weeks

**6 Units**

## 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

| COURSE                                                                               | UNITS | PRE-REQS <sup>^</sup>                                                                                                                                                                                                                | SEMESTERS OFFERED* |
|--------------------------------------------------------------------------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| <b>CISC 310<sup>2</sup></b> <b>Z</b><br>Introduction to Computer Information Science | 3     | Advisory: Students should be familiar with basic functions of word processing, spreadsheet, and web browser software applications, or they should have successfully completed a Computer Technology course in middle or high school. | F(O,P), S(O)       |
| <b>CISN 303<sup>3</sup></b> <b>Z</b><br>Network Administration - Linux Server        | 3     | Advisory: CISC 323                                                                                                                                                                                                                   | F(O)               |

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<sup>2</sup> or CompTIA ITF+ certification

<sup>3</sup> or CompTIA Linux+ certification

## Semester 1 - 2nd Eight Weeks

6 Units

| COURSE                                                          | UNITS | PRE-REQS <sup>^</sup> | SEMESTERS OFFERED* |
|-----------------------------------------------------------------|-------|-----------------------|--------------------|
| <b>CISN 304<sup>4</sup></b> <b>Z</b><br>Networking Technologies | 3     | Advisory: CISC 356    |                    |
| <b>CISS 310<sup>5</sup></b><br>Network Security Fundamentals    | 3     | Advisory: CISC 310    |                    |

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<sup>4</sup> or CompTIA Network+ certification

<sup>5</sup> or CompTIA Security+ certification

## Semester 2 - 1st 8 weeks

6.5 Units

## Projected growth in US (2021-2031):

35% growth

## Median Salary in California with advanced degree (2021):

\$102,600/yr

## Source:

<https://www.onetonline.org/link/summary/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.

| COURSE                                                                                                                | UNITS | PRE-REQS <sup>^</sup>                                 | SEMESTERS OFFERED* |
|-----------------------------------------------------------------------------------------------------------------------|-------|-------------------------------------------------------|--------------------|
| <b>CISN 341<sup>6</sup></b> <b>Z</b><br>CISCO Networking Academy (CCNA)tm:Switching, Routing, and Wireless Essentials | 3.5   | Corequisite:<br>CISN 304<br>(may be taken previously) |                    |
| <b>CISS 316<sup>7</sup></b> <b>Z</b><br>Cisco Networking Academy(R): CyberOps Associate                               | 3     | Advisory:CISN 304, CISS 300 or 310                    |                    |

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<sup>6</sup> or CISCO CCENT certification

<sup>7</sup> or CCNA CyberOPS certification

## Semester 2 - 2nd 8 weeks

7 Units

| COURSE                                                                                                                     | UNITS | PRE-REQS <sup>^</sup> | SEMESTERS OFFERED* |
|----------------------------------------------------------------------------------------------------------------------------|-------|-----------------------|--------------------|
| <b>CISN 342<sup>8</sup></b> <b>Z</b><br>CISCO Networking Academy (CCNA)tm: Enterprise Networking, Security, and Automation | 3.5   | CISN 342              |                    |
| <b>CISS 327<sup>9</sup></b> <b>Z</b><br>Cisco Networking Academy(R): Network Security                                      | 3.5   | CISN 304, 341         |                    |

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<sup>8</sup> or CCNA Automation and Programmability certification

<sup>9</sup> or CCNA Security certification