The Cybersecurity program is designed to prepare students for the high growth profession of information security, by offering training on the cutting-edge skills and knowledge sought by the industry, aiming to provide students opportunities for career change or advancement. Graduates of the program will have a comprehensive understanding of the current security challenges in the cyberspace, and will be equipped with the knowledge and skills needed to help design and implement policies and systems able to support a dependable organization's information infrastructure. Possible career opportunities include entry level cybersecurity analyst, cybersecurity specialist, and cybersecurity engineer, etc.

For Associate of Arts degree, students need to complete the following core requirements (which is also the same as the Certificate of Achievement), with additional units of electives in the program and **minimum 18 units of general education** (depending on which GE plan students are following). Please schedule an appointment with a counselor to go over the study plan.

CORE REQUIREMENTS

Required Courses		Units
CIS 170L	Cybersecurity Fundamentals	3.5
CIS 170P	Introduction to Ethical Hacking	3.5
CIS 170R	Computer and Digital Forensics	3.5
CIS 170S	Network Defense	3.5
or CIS 170I	Cisco Network Security	(3.5)

PROGRAMMING REQUIREMENT
select at least **3 units** from the following electives:

Required Courses		
CIS 103	Computer Programming Logic	3.5
CIS 164	JavaScript Programming	3.5
CIS 181	Python Programming	3.5
CIS 183	Java Programming	3.5
CIS 185	Discrete Structures	3.0
CIS 189C	Special Topics in Programming	3.0

NETWORKING REQUIREMENT
select at least **3 units** from the following electives:

Required Courses		Units
CIS 170A	Networking Fundamentals	3.5
CIS 170B	Network+ Certification	3.5
CIS 170E	Router Configurations and Protocol	3.5
CIS 170F	Advanced Switching and Routing	3.5
CIS 170H	TCP/IP Fundamentals	3.0
CIS 170I*	Cisco Network Security	3.5
CIS 170S*	Network Defense	3.5
CIS 200A	Apple Mac OS Support Essentials	3.5
CIS 212	Introduction to Microsoft Windows Administration	3.5
CIS 213F	Microsoft Windows Server Administration	3.5
CIS 214	Unix and Linux Operating Systems	3.5

* These courses cannot be double counted for required courses.

ELECTIVES
Select at least **17 units** from the following courses not already taken in the left categories

Required Courses		Units
CIS 58A	PC Operating Systems A+ Certification	3.5
CIS 58B	PC Core Hardware A+ Certification	3.5
CIS 101	Introduction to Computer Info Systems	3.0
CIS 103	Computer Programming Logic	3.5
CIS 164	JavaScript Programming	3.0
CIS 170A	Networking Fundamentals	3.5
CIS 170B	Network+ Certification	3.5
CIS 170E	Router Configurations and Protocol	3.5
CIS 170F	Advanced Switching and Routing	3.5
CIS 170H	TCP/IP Fundamentals	3.0
CIS 170S	Network Defense	3.5
CIS 171A	Introduction to Cloud Computing	3.0
CIS 171B	Amazon Web Services-Data Storage	3.0
CIS 171C	Amazon Web Services-Computing Services	3.0
CIS 171D	Amazon Web Services-Security	3.0
CIS 181	Python Programming	3.5
CIS 183	Java Programming	3.5
CIS 200A	Apple Mac OS Support Essentials	3.5
CIS 212	Introduction to MS Windows Admin	3.5
CIS 213F	Microsoft Windows Server Administration	3.5
CIS 214	Unix and Linux Operating Systems	3.5

TOTAL PROGRAM UNITS   **37-38**

COMPUTER AND INFORMATION SCIENCE
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For **Certificate of Achievement**, students need to complete the following requirements:

CERTIFICATE OF ACHIEVEMENT

PROGRAM REQUIREMENTS (CORE)

Required Courses		Units
CIS 170L	Cybersecurity Fundamentals	3.5
CIS 170P	Introduction to Ethical Hacking	3.5
CIS 170R	Computer and Digital Forensics	3.5
CIS 170S	Network Defense	3.5
or CIS 170I	Cisco Network Security	(3.5)

TOTAL UNIT REQUIREMENTS   **14.0**

PROGRAMMING REQUIREMENT
select at least **3 units** from the following electives:

Required Courses		
CIS 103	Computer Programming Logic	3.5
CIS 164	JavaScript Programming	3.5
CIS 181	Python Programming	3.5
CIS 183	Java Programming	3.5

NETWORKING REQUIREMENT
select at least **3 units** from the following electives:

Required Courses		Units
CIS 170A	Networking Fundamentals	3.5
CIS 170B	Network+ Certification	3.5
CIS 170E	Router Configurations and Protocol	3.5
CIS 170F	Advanced Switching and Routing	3.5
CIS 170H	TCP/IP Fundamentals	3.0
CIS 170I*	Cisco Network Security	3.5
CIS 170S*	Network Defense	3.5
CIS 200A	Apple Mac OS Support Essentials	3.5
CIS 212	Introduction to Microsoft Windows Administration	3.5
CIS 213F	Microsoft Windows Server Administration	3.5
CIS 214	Unix and Linux Operating Systems	3.5

* These courses cannot be double counted for required courses.

CERRITOS COLLEGE

For more information, please refer to the current General Catalog: **www.cerritos.edu/catalog**

Connect with a counselor by calling (562) 860-2451, ext. 2231 or use Online Counseling at: **www.cerritos.edu/counseling/online-orientation.htm**

RECOMMENDED STUDY PLAN

SEMESTER 1 (FOUNDATIONS)

Course #	Course Name	Units
CIS 58A (1st 9-week)	PC Operating Systems A+ Certification	3.5
CIS 58B (2nd 9-week)	PC Core Hardware A+ Certification	3.5
CIS 170A (1st 9-week) or Summer	Networking Fundamentals	3.5
ENGL 100	Freshman Composition	3.5
MATH 112 (for free tuition program) or MATH 104	Elementary Statistics or Survey of Mathematics	3.5

SUMMER 1

Course #	Course Name	Units
READ 101	Lit & Learning Strat College Success	3.0
GE: Natural Science	Select your own	3.0

SEMESTER 2

Course #	Course Name	Units
CIS 170E	Router Configurations and Protocol	3.5
CIS 200A	Apple Mac OS Support Essentials	3.5
CIS 213F	Microsoft Windows Server Administration	3.5
CIS 212	Introduction to MS Windows Admin	3.5
CIS 214	Unix and Linux Operating Systems	3.5

After successful completion of these courses, students will be eligible for the **Certificate of Achievement in IT Support Specialist** and **Certificate of Achievement in Network / Systems Administration**.

SEMESTER 3

Course #	Course Name	Units
CIS 170I	Cisco Network Security	3.5
CIS 170L	Cybersecurity Fundamentals	3.5
CIS 181	Python Programming	3.5
GE: Social & Beh Bio Sci	Select your own	3.0
Health & Wellness	Select your own	1.0

SEMESTER 4

Course #	Course Name	Units
CIS 170P	Introduction to Ethical Hacking	3.5
CIS 170R	Computer and Digital Forensics	3.5
GE: Fine Arts & Humn	Select your own	3.5
GE: Any	Select your own	1.0

After successful completion of these courses, students will be eligible for the **Certificate of Achievement** and **Associate of Science in Cybersecurity.**