

# CYBERSECURITY - ASSOCIATE OF APPLIED SCIENCE

## Doña Ana Community College 2023-2024 Catalog (61-62 credits)

**NOTE:** Degree requires a minimum of **60 credit hours** and a cumulative GPA of 2.0.

**NOTE:** Students must earn a final grade of C- or better in all Major Requirements courses and achieve a cumulative grade-point average of at least 2.0. A grade of C- or better is required in ENGL 1110G Composition I and designated Mathematics courses.

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 61-62 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

Prefix	Title	Credits
<b>General Education</b>		
<i>Select one course from four of the following six content areas for a total of 12-14 credits<sup>1, 2</sup></i>		12-14

This degree requires courses from Areas I, II, III, and IV; students do not need to take additional courses to complete the General Education requirements.

Area I: Communications - English Composition Level 1		
ENGL 1110G	Composition I <sup>3</sup>	
Area II: Mathematics		
Choose one from the following (3-4 credits):		
MATH 1220G	College Algebra <sup>3</sup>	
MATH 1250G	Trigonometry & Pre-Calculus <sup>3</sup>	
MATH 1350G	Introduction to Statistics <sup>3</sup>	
MATH 1430G	Applications of Calculus I <sup>3</sup>	
MATH 1511G	Calculus and Analytic Geometry I <sup>3</sup>	
MATH 1521G	Calculus and Analytic Geometry II <sup>3</sup>	
MATH 1521H	Calculus and Analytic Geometry II Honors <sup>3</sup>	
Area III: Laboratory Sciences		
C S 171G	Modern Computing in Practice <sup>3</sup>	
Area IV: Social/Behavioral Sciences		
CJUS 1110G	Introduction to Criminal Justice <sup>3</sup>	

*General Education Elective - Area I: Communications - English Composition Level 2*

ENGL 2210G	Professional & Technical Communication <sup>3</sup>	3
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### Major Requirements

CTEC 120	IT Infrastructure Support I	3
or OECS 185	PC Maintenance and Repair I	
CTEC 130	Linux Workstation	3
or OECS 204	Linux Operating System	
CTEC 135	Windows Workstation	3
or OECS 207	Windows	
CTEC 140	Introduction to Database Design	3
or OECS 220	Database Application and Design	
CTEC 230	Introduction to Linux Server Administration	3
or OECS 234	Linux Server	

CTEC 235	Introduction to Windows Server Administration	3
or OECS 237	Windows Server	
CTEC 180	Introduction to Networking	4
or OECS 261	Introduction to Networks	
CTEC 185	Routing and Switching Essentials	4
or OECS 262	Essentials of Routing and Switching	
CTEC 290	Network Security	3
or CTEC 285	Connecting Networks	
or OECS 269	Network Security	
CSEC 275	Introductory to Cryptography	3
or CSEC 283	Ethical Hacking and Penetration Testing	
CSEC 280	Introduction to Cyber Defense	3
CSEC 285	Introduction to Managing Information Security	3
Choose two from the following:		6
CTEC 115	TOPICS IN IT	
or OECS 155	Special Topics - Introductory Computer Technology	
CTEC 127	Introduction to Internet of Things	
CTEC 145	Introduction to Database Management	
or OECS 235	Structured Query Language (SQL)	
CTEC 150	Mobile Application Programming	
or OECS 145	Mobile Application Development	
CTEC 152	JAVA Programming	
or OECS 195	Java Programming I	
CTEC 154	C++ Programming	
or OECS 192	C++ Programming I	
CTEC 156	Python Programming	
CTEC 158	Visual Basic Programming	
OECS 195	Java Programming I	
or CTEC 152	JAVA Programming	
CTEC 220	Internship	
or OECS 221	Internship I	
CTEC 280	Scaling Networks	
or OECS 263	Network Fundamentals	
CTEC 285	Connecting Networks	
or OECS 264	Network Routing Protocols	
CTEC 240	Fundamentals of Database Management	
CTEC 245	Fundamentals of Cloud Based Data Systems	
CTEC 255	Special Topics	
or OECS 255	Special Topics	
CTEC 299	Independent Study	
or OECS 299	Independent Study	

**Total Credits** **61-62**

<sup>1</sup> Each course selected must be from a different area and students cannot take multiple courses in the same area.

<sup>2</sup> See the General Education (<http://catalogs.nmsu.edu/dona-ana/general-education-and-transfer-options/transfer-new-mexico-institutions/>) section of the catalog for a full list of courses.

<sup>3</sup> Courses are identical to those offered at New Mexico State University Las Cruces (main) Campus.