

CYBERSECURITY - ASSOCIATE OF APPLIED SCIENCE

Doña Ana Community College 2020-21 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
General Education		
<i>Select one course from four of the following six content areas for a total of 12-14 credits^{1,2}</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 ³	
Area II: Mathematics		
Choose one from the following (3-4 credits):		
MATH 1220G	College Algebra ³	
MATH 1250G	Trigonometry & Pre-Calculus ³	
MATH 1350G	Introduction to Statistics ³	
MATH 1430G	Applications of Calculus I ³	
MATH 1511G	Calculus and Analytic Geometry I ³	
MATH 1521G	Calculus and Analytic Geometry II ³	
MATH 1521H	Calculus and Analytic Geometry II Honors ³	
Area III: Laboratory Sciences		
C S 171G	Introduction to Computer Science ³	
Area IV: Social/Behavioral Sciences		
CJUS 1110G	Introduction to Criminal Justice ³	
<i>General Education Elective - Area I: Communications - English Composition Level 2</i>		
ENGL 2210G	Professional & Technical Communication ³	3
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 OECS 269	Network Security	
CSEC 275	Introductory to Cryptography	3
CSEC 280	Introduction to Cyber Defense	3
CSEC 285	Introduction to Managing Information Security	3
Choose two from the following:		6
CTEC 105	Introduction to Information Technology	
or OECS 105	Introduction to Information Technology	
or BCIS 1110	Introduction to Information Systems	
CTEC 110	Software Applications for Technicians	
or OECS 275	PC Maintenance and Repair II	
CTEC 115	TOPICS IN IT	
or OECS 155	Special Topics - Introductory Computer Technology	
CTEC 122	IT Infrastructure Support II	
or OECS 275	PC Maintenance and Repair II	
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

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

² See the [General Education](#) section of the catalog for a full list of courses.

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

(61-62 credits)**A Suggested Plan of Study**

The contents of this roadmap may vary depending on initial student placement in mathematics and English. This is only a suggested plan of study for students, and is not intended as a contract. Individual student academic plans may vary. Please contact your academic advisor to create a plan that works for you. Course availability may vary from fall to spring semester and may be subject to modification or change.

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Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 61 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.

Course	Title	Credits
Semester 1		
Area I: Communications - English Composition Level 1		4
ENGL 1110G	Composition I	
Area IV: Social/Behavioral Sciences		3
CJUS 1110G	Introduction to Criminal Justice	
CTEC 120 or OECS 185	IT Infrastructure Support I or PC Maintenance and Repair I	3
CTEC 130 or OECS 204	Linux Workstation or Linux Operating System	3
CTEC 140 or OECS 220	Introduction to Database Design or Database Application and Design	3
Credits		16
Semester 2		
General Education Elective - Area I: Communications - English Composition Level 2		3
ENGL 2210G	Professional & Technical Communication	
CTEC 135 or OECS 207	Windows Workstation or Windows	3
CTEC 180 or OECS 261	Introduction to Networking or Introduction to Networks	4
CTEC 230 or OECS 234	Introduction to Linux Server Administration or Linux Server	3
Technical Requirement Elective - Choose one from the following:		3
CTEC 105 or OECS 105 or BCIS 1110	Introduction to Information Technology or Introduction to Information Technology or Introduction to Information Systems	
CTEC 110 or OECS 275	Software Applications for Technicians or PC Maintenance and Repair II	
CTEC 115 or OECS 155	TOPICS IN IT or Special Topics - Introductory Computer Technology	
CTEC 122 or OECS 275	IT Infrastructure Support II or PC Maintenance and Repair II	
CTEC 127 or CTEC 145 or OECS 235	Introduction to Internet of Things or Introduction to Database Management or Structured Query Language (SQL)	
CTEC 150 or OECS 145	Mobile Application Programming or Mobile Application Development	

CTEC 152 or OECS 195	JAVA Programming or Java Programming I	
CTEC 154 or OECS 192	C++ Programming or C++ Programming I	
CTEC 156 or CTEC 158	Python Programming or Visual Basic Programming	
CTEC 220 or OECS 221	Internship or Internship I	
CTEC 280 or OECS 263	Scaling Networks or Network Fundamentals	
CTEC 285 or OECS 264	Connecting Networks or Network Routing Protocols	
CTEC 240 or CTEC 245 or CTEC 255 or OECS 255	Fundamentals of Database Management or Fundamentals of Cloud Based Data Systems or Special Topics or Special Topics	
CTEC 299 or OECS 299	Independent Study or Independent Study	
Credits		16
Semester 3		
Area II: Mathematics - Choose one from the following:		3-4
MATH 1220G	College Algebra	
MATH 1250G	Trigonometry & Pre-Calculus	
MATH 1350G	Introduction to Statistics	
MATH 1430G	Applications of Calculus I	
MATH 1511G	Calculus and Analytic Geometry I	
MATH 1521G	Calculus and Analytic Geometry II	
MATH 1521H	Calculus and Analytic Geometry II Honors	
CTEC 185 or OECS 262	Routing and Switching Essentials or Essentials of Routing and Switching	4
CTEC 235 or OECS 237	Introduction to Windows Server Administration or Windows Server	3
CTEC 290 or OECS 269	Network Security or Network Security	3
Technical Requirement Elective - A list of approved electives can be found in Semester 2.		3
Credits		16-17
Semester 4		
Area III: Laboratory Sciences		4
C S 171G	Introduction to Computer Science	
CSEC 275	Introductory to Cryptography	3
CSEC 280	Introduction to Cyber Defense	3
CSEC 285	Introduction to Managing Information Security	3
Credits		13
Total Credits		61-62