

# COMPUTER TECHNOLOGY (PROGRAMMING) - ASSOCIATE OF APPLIED SCIENCE

## Doña Ana Community College 2025-2026 Catalog (60-63 credits)

Degree requires a minimum of 60-63 credits and a cumulative GPA of 2.0.  
If a student has no basic typing skills, OATS 101 Keyboarding Basics is a prerequisite for all CTEC, CSEC, and OECS courses.

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.

The New Mexico General Education Requirements (<https://catalogs.nmsu.edu/dona-ana/general-education-and-transfer-options/transfer-new-mexico-institutions/>) can be found in the section titled, "Transfer Among New Mexico Institutions of Higher Education".

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60 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>		
Select one course from four of the following six content areas for a total of 12-14 credits <sup>1, 2</sup>		12-14
This degree requires courses from Areas I, III and IV; students must select one course from the remaining areas to complete General Education requirements.		
Area I: Communications		
ENGL 1110G	Composition I (grade of C- or better required) <sup>3</sup>	
Area II: Mathematics		
Area III: Laboratory Sciences		
Select one course from the following:		
CSCI 1115G	Modern Computing in Practice <sup>3</sup>	
ASTR 1120G	The Planets Lecture & Laboratory <sup>3</sup>	
PHYS 1115G	Survey of Physics with Lab <sup>3</sup>	
PHYS 1230G & PHYS 1230L	Algebra-Based Physics I and Algebra-Based Physics I Lab <sup>3</sup>	
PHYS 1240G & PHYS 1240L	Algebra-Based Physics II and Algebra-Based Physics II Lab <sup>3</sup>	
Area IV: Social/Behavioral Sciences		
Select one course from the following:		
CJUS 1110G	Introduction to Criminal Justice <sup>3</sup>	
ECON 1110G	Survey of Economics <sup>3</sup>	
ECON 2110G	Macroeconomic Principles <sup>3</sup>	
ECON 2120G	Principles of Microeconomics Honors <sup>3</sup>	
PSYC 1110G	Introduction to Psychology <sup>3</sup>	
SOCI 1110G	Introduction to Sociology <sup>3</sup>	

GNDR 2110G	Introduction to Women, Gender, and Sexuality Studies <sup>3</sup>	
GNDR 2120G	Representing Women Across Cultures <sup>3</sup>	
Area VI: Creative and Fine Arts		
<i>General Education Elective</i>		
ENGL 2210G or ENGL 2221G	Professional and Technical Communication <sup>3</sup> or Writing in the Humanities and Social Science	3
<b>Core Requirements</b>		
Select one course from the following:		3-4
MATH 1215	Intermediate Algebra <sup>3</sup>	
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>	
OATS 106	Business Mathematics	
OR Appropriate Technology-Related Math Course		
<b>Major Requirements</b>		
<i>Technical Requirements</i>		
CTEC 120 or CTEC 127 or OECS 185	IT Infrastructure Support I or Introduction to Internet of Things or PC Maintenance and Repair I	3
CTEC 130 or OECS 204	Linux Workstation or Linux Operating System	3
CTEC 135 or OECS 207	Windows Workstation or Windows	3
CTEC 140 or OECS 220	Introduction to Database Design or Database Application and Design	3
CTEC 180 or OECS 261 or E T 153 or E T 155 or E T 273	Introduction to Networking <sup>4</sup> or Introduction to Networks or Fundamentals of Networking Communications or Network Operating Systems I or Advanced Networking Communications	3-4
CTEC 220 or OECS 221	Internship or Internship I	3
CTEC 290 or CTEC 285 or OECS 269	Network Security or Connecting Networks or Network Security	3
Select one course from the following:		3-4
CTEC 145 or OECS 235	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 or CSCI 1210	JAVA Programming or Java Programming I or Computer Programming Fundamentals	
CTEC 154 or OECS 192 or CSCI 1240	C++ Programming or C++ Programming I or C++ Programming I	
CTEC 156	Python Programming	
CTEC 158	Visual Basic Programming	
CTEC 245	Fundamentals of Cloud Based Data Systems	
OR Any Appropriate CSCI Course (EXCLUDING C S 110/BCIS 1110 and courses used to fulfill Technical/Major Requirements.)		
<i>Concentration Coursework</i>		

Select 9 credits of programming electives from the following (EXCLUDING courses used to fulfill Technical/Major Requirements.): 9

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
OR Any Appropriate CSCI Course (EXCLUDING BCIS 1110 and courses used to fulfill Technical/Major Requirements.)	

Select 7 credits of approved computer-related electives (EXCLUDING courses used to fulfill Technical/Major Requirements). 7

**Total Credits 60-63**

- Each course selected must be from a different area and students cannot take multiple courses in the same area.
- See the General Education (<https://catalogs.nmsu.edu/dona-ana/general-education-and-transfer-options/transfer-new-mexico-institutions/>) section of the catalog for a full list of courses.
- Courses are identical to those offered at New Mexico State University Las Cruces (main) Campus.
- Some courses not currently taught at DACC. Please refer to Class Schedule for a listing of courses taught at DACC.

## (60-63 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.

Degree requires a minimum of 60 credits and a cumulative GPA of 2.0. If a student has no basic typing skills, OATS 101 Keyboarding Basics is a prerequisite for all CTEC, CSEC, and OECS courses.

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 60 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.

Semester 1		Credits
Area I: Communications - English Composition Level 1		4
ENGL 1110G	Composition I	
Area IV: Social/Behavioral Sciences - Choose one from the following:		3
CJUS 1110G	Introduction to Criminal Justice	
ECON 1110G	Survey of Economics	
ECON 2110G	Macroeconomic Principles	
ECON 2120G	Principles of Microeconomics Honors	

GNDR 2110G	Introduction to Women, Gender, and Sexuality Studies	
GNDR 2120G	Representing Women Across Cultures	
PSYC 1110G	Introduction to Psychology	
SOCI 1110G	Introduction to Sociology	
Choose one from the following:		3-4
MATH 1215	Intermediate Algebra	
MATH 1220G	College Algebra	
MATH 1250G	Trigonometry & Pre-Calculus	
MATH 1350G	Introduction to Statistics	
MATH 1430G	Applications of Calculus I	
MATH 1521G	Calculus and Analytic Geometry II	
OATS 106	Business Mathematics	
OR Appropriate Technology-Related Math Course		
CTEC 120	IT Infrastructure Support I	3
or CTEC 127	or Introduction to Internet of Things	
or OECS 185	or PC Maintenance and Repair I	
CTEC 135	Windows Workstation	3
or OECS 207	or Windows	
<b>Credits</b>		<b>16-17</b>

Semester 2		Credits
General Education - Choose one course from different NM General Education Areas II, V, or VI in the NMSU/DACC Catalog.		3-4
Area III: Laboratory Sciences - Choose one from the following:		4
ASTR 1120G	The Planets Lecture & Laboratory	
CSCI 1115G	Modern Computing in Practice	
PHYS 1115G	Survey of Physics with Lab	
PHYS 1230G	Algebra-Based Physics I	
or PHYS 1230L	or Algebra-Based Physics I Lab	
PHYS 1240G	Algebra-Based Physics II	
or PHYS 1240L	or Algebra-Based Physics II Lab	
CTEC 130	Linux Workstation	3
or OECS 204	or Linux Operating System	
CTEC 140	Introduction to Database Design	3
or OECS 220	or Database Application and Design	
Approved Computer-Related Elective - Choose one from the following:		3
CTEC 145	Introduction to Database Management	
or OECS 235	or Structured Query Language (SQL)	
CTEC 150	Mobile Application Programming	
or OECS 145	or Mobile Application Development	
CTEC 152	JAVA Programming	
or OECS 195	or Java Programming I	
or CSCI 1210	or Computer Programming Fundamentals	
CTEC 154	C++ Programming	
or OECS 192	or C++ Programming I	
or CSCI 1240	or C++ Programming I	
CTEC 156	Python Programming	
CTEC 158	Visual Basic Programming	
CTEC 245	Fundamentals of Cloud Based Data Systems	
OR Any Appropriate CSCI Course (EXCLUDING C S 110/BCIS 1110 and courses used to fulfill Technical/Major Requirements.)		
<b>Credits</b>		<b>16-17</b>

Semester 3		Credits
General Education Elective - Area I: Communications - English Composition Level 2		3
ENGL 2210G	Professional and Technical Communication	
or ENGL 2221G	or Writing in the Humanities and Social Science	

Concentration Courses - Select 9 credits of programming electives from the following (EXCLUDING courses used to fulfill Technical/Major Requirements.): 9

CTEC 145 or OECS 235	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	Python Programming	
CTEC 158	Visual Basic Programming	
OR Any Appropriate C S Course (EXCLUDING BCIS 1110 and courses used to fulfill Technical/Major Requirements.)		

Choose one from the following: 3-4

CTEC 180	Introduction to Networking	
E T 153	Fundamentals of Networking Communications	
E T 155	Network Operating Systems I	
E T 273	Advanced Networking Communications	
OECS 261	Introduction to Networks	

**Credits 15-16**

**Semester 4**

Select 7 credits of approved computer-related electives (EXCLUDING courses used to fulfill Technical/Major Requirements) 7

CTEC 220 or OECS 221	Internship or Internship I	3
CTEC 290 or CTEC 285 or OECS 269	Network Security or Connecting Networks or Network Security	3

**Credits 13**

**Total Credits 60-63**