

# AUTOMATION AND MANUFACTURING TECHNOLOGY - ASSOCIATE OF APPLIED SCIENCE

## Doña Ana Community College 2024-2025 Catalog (61 credits)

NOTE: Students must earn a final grade of C- or better in all required Technical Requirements 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 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>Choose one course from four of the following six content areas for a total of 12-14 credits</i> <sup>1,2</sup>		12-14
This degree requires courses from Areas I, II, III and IV; students do not need to take any additional General Education courses to meet the requirement		
Area I: Communications - English Composition Level 1		
ENGL 1110G	Composition I <sup>3</sup>	
Area II: Mathematics		
MATH 1250G	Trigonometry & Pre-Calculus <sup>3</sup>	
Area III: Laboratory Sciences - Choose one from the following:		
PHYS 1230G & PHYS 1230L	Algebra-Based Physics I and Algebra-Based Physics I Lab <sup>3</sup>	
PHYS 1310G & PHYS 1310L	Calculus -Based Physics I and Calculus -Based Physics I Lab <sup>3</sup>	
Area IV: Social/Behavioral Sciences - Choose one from the following:		
PSYC 1110G	Introduction to Psychology <sup>3</sup>	
SOCI 1110G	Introduction to Sociology <sup>3</sup>	
<i>General Education Elective - Area I: Communications - English Composition Level 2</i>		
ENGL 2210G	Professional and Technical Communication Honors	3
<b>Core Requirement</b>		
<i>Technical Requirements</i>		
DRFT 114	Introduction to Solid Modeling	3
ELT 110	Electronics I	4
ELT 135	Electronics II	4
ELT 160	Digital Electronics I	4
ELT 205	Semiconductor Devices	4
ELT 225	Computer Applications for Technicians	3
ELT 235	Digital Electronics II	3
MAT 102	Print Reading for Industry	3
MAT 105	Introduction to Manufacturing	3

MAT 110	Machine Operation and Safety	3
MAT 265	Special Topics	4
AERT 211	Electromechanical Devices	4
or AERT 121	Introduction to the Aerospace Workplace	
Choose one from the following:		1
MAT 221	Cooperative Experience I	
OECS 101	Computer Basics	
OETS 102	Career Readiness Certification Preparation	
<b>Total Credits</b>		<b>61</b>

<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 (<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.

<sup>3</sup> Courses are identical to those offered at New Mexico State University Las Cruces (main) Campus. Students planning to continue their studies at NMSU should choose these courses whenever possible.

## (61 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.

NOTE: Students must earn a final grade of C- or better in all required Technical Requirements 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 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.

<b>Semester 1</b>		<b>Credits</b>
Area I: Communications - English Composition Level I		4
ENGL 1110G	Composition I	
Area II: Mathematics		4
MATH 1250G	Trigonometry & Pre-Calculus	
ELT 110	Electronics I	4
ELT 225	Computer Applications for Technicians	3
<b>Credits</b>		<b>15</b>
<b>Semester 2</b>		
Area IV: Social/Behavioral Sciences - Choose one from the following:		3
PSYC 1110G	Introduction to Psychology	
SOCI 1110G	Introduction to Sociology	
General Education Elective - Area I: Communications - English Composition Level 2		3
ENGL 2210G	Professional and Technical Communication Honors	
DRFT 114	Introduction to Solid Modeling	3
ELT 135	Electronics II	4
ELT 160	Digital Electronics I	4
<b>Credits</b>		<b>17</b>

**Semester 3**

ELT 205	Semiconductor Devices	4
ELT 235	Digital Electronics II	3
MAT 105	Introduction to Manufacturing	3
MAT 110	Machine Operation and Safety	3
Choose one from the following:		1
MAT 221	Cooperative Experience I	
OECS 101	Computer Basics	
OETS 102	Career Readiness Certification Preparation	
<b>Credits</b>		<b>14</b>

**Semester 4**

Area III: Laboratory Sciences - Choose one from the following:		4
PHYS 1230G & PHYS 1230L	Algebra-Based Physics I and Algebra-Based Physics I Lab	
PHYS 1310G & PHYS 1310L	Calculus -Based Physics I and Calculus -Based Physics I Lab	
MAT 102	Print Reading for Industry	3
MAT 265	Special Topics	4
AERT 211 or AERT 121	Electromechanical Devices or Introduction to the Aerospace Workplace	4
<b>Credits</b>		<b>15</b>
<b>Total Credits</b>		<b>61</b>