

MECHANICAL DRAFTING AND SOLID MODELING - ASSOCIATE OF APPLIED SCIENCE

Doña Ana Community College [2026-2027](#) Catalog

(60 credits)

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

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 and III; students must select one course from the remaining areas to complete General Education requirements.		
Area I: Communications - English Composition Level 1		
ENGL 1110G	Composition I ³	
Area II: Mathematics		
MATH 1220G	College Algebra ^{3,4}	
Area III: Laboratory Sciences		
PHYS 1230G & PHYS 1230L	Algebra-Based Physics I and Algebra-Based Physics I Lab ³	
<i>General Education Elective - Area I: Communications - Oral Communications</i>		
COMM 1115G	Introduction to Communication ³	3
Core Requirements		
MATH 1250G	Trigonometry & Pre-Calculus ³	4
Major Requirements		
<i>Technical Requirements</i>		
DRFT 109	Computer Drafting Fundamentals	3
DRFT 114	Introduction to Solid Modeling	3
DRFT 124	Introduction to Geometric Dimensioning and Tolerancing	3
DRFT 164	Intermediate Mechanical Drafting/Solid Modeling	3
DRFT 214	Advanced Plans and Sheet Sets from 3D Models	3
DRFT 288	Portfolio Development	3
MAT 102	Print Reading for Industry	3
MAT 105	Introduction to Manufacturing	3
Advisor approved electives (AERT, DRFT, ENGR, E T, MAT, M E, or WELD)		15
Total Credits		60

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 (<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.

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

⁴ MATH 1220G College Algebra is required for the degree but students may need to take any prerequisites needed to enter MATH 1220G first.

(60 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 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	
DRFT 109	Computer Drafting Fundamentals	3
MAT 102	Print Reading for Industry	3
MAT 105	Introduction to Manufacturing	3
Credits		13
Semester 2		
Area II: Mathematics		3
MATH 1220G	College Algebra	
General Education - Choose one course from NM General Education Areas IV, V, or VI in the NMSU/DACC Catalog.		3
DRFT 114	Introduction to Solid Modeling	3
DRFT 124	Introduction to Geometric Dimensioning and Tolerancing	3
DRFT 164	Intermediate Mechanical Drafting/Solid Modeling	3
Credits		15
Semester 3		
SUMMER		
General Education Elective - Area I: Communications - Oral Communications		3
COMM 1115G	Introduction to Communication	
Advisor Approved Elective (AERT, DRFT, ENGR, E T, MAT, M E, or WELD)		3
Credits		6
Semester 4		
Area II: Mathematics		4
MATH 1250G	Trigonometry & Pre-Calculus	

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DRFT 214	Advanced Plans and Sheet Sets from 3D Models	3
Advisor-Approved Elective (AERT, DRFT, ENGR, E T, MAT, M E, or WELD)		3
Advisor-Approved Elective (AERT, DRFT, ENGR, E T, MAT, M E, or WELD)		3
Credits		13
Semester 5		
Area III: Laboratory Sciences		4
PHYS 1230G & PHYS 1230L	Algebra-Based Physics I and Algebra-Based Physics I Lab	
DRFT 288	Portfolio Development	3
Advisor-Approved Elective (AERT, DRFT, ENGR, E T, MAT, M E, or WELD)		3
Advisor-Approved Elective (AERT, DRFT, ENGR, E T, MAT, M E, or WELD)		3
Credits		13
Total Credits		60