

ADVANCED MANUFACTURING SCIENCES MAJOR, B.S.

Mechanical Engineering Technology Concentration | 2025-2026

SAMPLE ACADEMIC PLAN OF STUDY

The following academic plan is a *sample* pathway to completing degree requirements for this major/concentration within four years.

GS – General Studies
ESSJ - Ethnic Studies & Social Justice (3) credit hours
GD – Global Diversity (3) credit hours

Semester 1 - Fall	
Written Communications (GS) ENG 1010 Composing Arguments	3
Oral Communication (GS)	3
Arts & Humanities (GS; ESSJ or GD)	3
Quantitative Literacy (GS) Suggested: MTH 1110 - College Algebra for Calculus	4
AMS 1010 Survey of Advanced Manufacturing & Workplace Prep	3
TOTAL CREDIT HOURS	16

Semester 2 - Spring	
Written Communications (GS) ENG 1020 Research and Argument Writing	3
Historical (GS; ESSJ or GD)	3
MET 1010 Manufacturing Processes OR IND 2830 Manufacturing Materials and Processes	3
MTH 1120 College Trigonometry	3
Arts & Humanities (GS; ESSJ or GD)	3
TOTAL CREDIT HOURS	15

Semester 3 - Fall	
MTH 1410 Calculus I	4
CHE 1100 Principles of Chemistry AND CHE 1150 Principles of Chemistry Laboratory	5
Natural & Physical Sciences (GS) Suggested: MET 1040 Introduction to Engineering	3
ELE 1001 Introduction to Electrical Engineering	3
MET 1200 Technical Drawing OR IND 1450 Technical Drawing and CAD OR CET 1215 Engineering Graphics	3
TOTAL CREDIT HOURS	18

Semester 4 - Spring	
JMP 2610 Introduction to Technical Writing	3
MET 1210 3D Modeling	3
MET 1310 Principles of Quality Assurance	3
MET 2200 Materials of Engineering	3
Natural & Physical Sciences (GS) Suggested: PHY 2010 College Physics I AND PHY 2030 - College Physics I Laboratory	5
TOTAL CREDIT HOURS	17

Semester 5 - Fall	
AMS 3010 Additive Manufacturing Stratasys Cert Prep	3
MET 2010 CNC Machining and Inspection	3
MET 3000 Manufacturing Analysis	4
MET 3215 Composites Manufacturing	3
Social & Behavioral Sciences (GS)	3
TOTAL CREDIT HOURS	16

Semester 6 - Spring	
Social & Behavioral Sciences (GS) Suggested: CET 3120 Engineering Economy	3
CS 1030 Computer Science Principles	4
MET 3410 Geometric Dimensioning and Tolerancing	3
MET 4370 Advanced Composite Structures	3
MET 3630 Lean Manufacturing Systems Engineering	3
TOTAL CREDIT HOURS	16

Semester 7 - Fall	
AMS 4950 Professional Internship	3
CSS 2751 Principles of Cybersecurity	3
Elective – upper division	3
Elective – upper division	3
TOTAL CREDIT HOURS	12

Semester 8 - Spring	
CSS 3753 Computing & Security for Manufacturing	3
MET 3260 Direct Digital Manufacturing	3
MET 4080 Computer Aided Manufacturing	3
Elective – upper division	3
TOTAL CREDIT HOURS	12

Metropolitan State University of Denver reserves the right to withdraw courses; revise the academic calendar; or change curriculum, graduation procedures, requirements and policies that apply to students at any time.