



Advanced Manufacturing
Sciences Institute

ADVANCED MANUFACTURING SCIENCES MAJOR, B.S.

Operations Management Concentration | 2026-2027

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
GD - Global Diversity

Semester 1 - Fall	
Course	Hours
Written Communication (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	
Course	Hours
Written Communication (GS) ENG 1020 Research and Argument Writing	3
Arts & Humanities (GS; ESSJ or GD)	3
BUS 1850 Introduction to Business	3
MET 1010 Manufacturing Processes (Recommended) OR IND 2830 Manufacturing Materials and Processes	3
MTH 1120 College Trigonometry	3
TOTAL CREDIT HOURS	15

Semester 3 - Fall	
Course	Hours
Natural & Physical Sciences (GS)	3
CIS 1010 Introduction to Computers (Elective: prereq for CIS 2010)	3
CEE 1001 Introduction to Computer & Electrical Engineering	3
MET 1200 Technical Drawing OR IND 1450 Technical Drawing and CAD OR CET 1215 Engineering Graphics	3
MET 1310 Principles of Quality Assurance	3
TOTAL CREDIT HOURS	15

Semester 4 - Spring	
Course	Hours
CS 1030 Computer Science Principles	4
CIS 2010 Foundations of Information Systems	3
JMP 2610 Introduction to Technical Writing	3
Natural & Physical Sciences (GS)	3
Social & Behavioral Science (GS)	3
TOTAL CREDIT HOURS	16

Semester 5 - Fall	
Course	Hours
AMS 3010 Additive Manufacturing Stratasys Cert Prep	3
CSS 2751 Principles of Cybersecurity	3
MET 3000 Manufacturing Analysis	4
MGT 3000 Organizational Management	3
MET 2010 CNC Machining and Inspection	3
TOTAL CREDIT HOURS	16

Semester 6 - Spring	
Course	Hours
Social & Behavioral Sciences (GS) Suggested: CET 3120 Engineering Economy	3
Historical (GS; ESSJ or GD)	3
CSS 3753 Computing & Security for Manufacturing	3
MGT 3530 Human Resources Management	3
MET 3630 Lean Manufacturing Systems Engineering	3
TOTAL CREDIT HOURS	15

Semester 7 - Fall	
Course	Hours
MGT 3550 Operations Management	3
MGT 4550 Project Management	3
Elective - upper division	3
Elective - upper division	3
Elective - upper division	3
TOTAL CREDIT HOURS	15

Semester 8 - Spring	
Course	Hours
AMS 4950 Professional Internship	3
MGT 4360 Service Operations Management	3
MGT 4050 Purchasing and Supply Chain Management	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.