

ADVANCED MANUFACTURING SCIENCES MAJOR, B.S.

Aerospace 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		Semester 2 - Spring	
Written Communications (GS) ENG 1010 Composing Arguments	3	Written Communications (GS) ENG 1020 Research and Argument Writing	3
Oral Communication (GS)	3	Historical (GS; ESSJ or GD)	3
Arts & Humanities (GS; ESSJ or GD)	3	Arts & Humanities (GS; ESSJ or GD)	3
Quantitative Literacy (GS) Suggested: MTH 1110 - College Algebra for Calculus	4	MET 1010 Manufacturing Processes OR IND 2830 Manufacturing Materials and Processes	3
AMS 1010 Survey of Advanced Manufacturing & Workplace Prep	3	MTH 1120 College Trigonometry	3
TOTAL CREDIT HOURS	16	TOTAL CREDIT HOURS	15
Semester 3 - Fall		Semester 4 - Spring	
AES 1050 Introduction to Space	3	AES 2607 Introduction to Aerospace Systems Simulation	3
ELE 1001 Introduction to Electrical Engineering	3	AES 3530 Aerodynamics	3
JMP 2610 Introduction to Technical Writing	3	MET 1310 Principles of Quality Assurance	3
Natural & Physical Sciences (GS) Suggested: MET 1040 Introduction to Engineering	3	Natural & Physical Sciences (GS) Suggested: PHY 2010 - College Physics I AND PHY 2030 College Physics I Laboratory	5
MET 1200 Technical Drawing OR IND 1450 Technical Drawing and CAD OR CET 1215 Engineering Graphics	3	Social & Behavioral Science (GS)	3
TOTAL CREDIT HOURS	15	TOTAL CREDIT HOURS	17
Semester 5 - Fall		Semester 6 - Spring	
AES 3600 Space Flight Operations I	3	AES 4601 Space Flight Operations II	3
AMS 3010 Additive Manufacturing Stratasys Cert Prep	3	CS 1030 - Computer Science Principles	4
MET 2010 CNC Machining and Inspection	3	Social & Behavioral Sciences (GS) Suggested: CET 3120 Engineering Economy	3
MET 3000 Manufacturing Analysis	4	MET 3630 Lean Manufacturing Systems Engineering	3
AES 3850 Human Factors and Physiology of Flight	3		
TOTAL CREDIT HOURS	16	TOTAL CREDIT HOURS	13
Semester 7 - Fall		Semester 8 - Spring	
AES 3610 Elements of Spacecraft Design I	3	AMS 4950 Professional Internship	3
AES 4603 Aerospace Operations System Analysis and Design	3	AES 4620 Elements of Space Craft Design II	3
CSS 2751 - Principles of Cybersecurity	3	CSS 3753 Computing & Security for Manufacturing	3
Elective	3	Elective	3
Elective	3	Elective	3
TOTAL CREDIT HOURS	15	TOTAL CREDIT HOURS	15