

ADVANCED MANUFACTURING SCIENCES MAJOR, B.S.

Aerospace Concentration | 2021-2022

Courses	Credit Hours	Notes
General Studies/AMS Required Prerequisites	34	
Historical (Multicultural or Global Diversity)	3	
Art and Humanities (Multicultural or Global Diversity)	6	
Oral Communication	3	
ENG 1010 - Composing Arguments (Written Communications)	3	
MTH 1109 - College Algebra Stretch, Part II (Quantitative Literacy) OR MTH 1110 - College Algebra for Calculus (Quantitative Literacy)	4	
ENG 1020 - Research and Argument Writing (Written Communications)	3	
Natural & Physical Sciences: (6) credit hours required		
PHY 2010 - College Physics I (Natural & Physical Sciences)	4	
PHY 2030 - College Physics I Lab (Natural & Physical Sciences)	1	
ECO 2020 - Principles of Microeconomics (Social & Behavioral Sciences)	3	
CET 3120 - Engineering Economy (Social & Behavioral Sciences)	3	
AMS Core Courses	37	
AMS 1010 - Survey of Advanced Manufacturing & Workplace Prep	3	
AMS 3010 - Additive Manufacturing Stratasys Cert Prep	3	Prerequisite(s): IND 1450 or CET 1215 or MET 1200 with a grade of "C" or better, or permission of instructor; Fall Semester only
AMS 4950 - Professional Internship	3	
CSS 1751 - Computing and Security for Manufacturing	3	
EET 1001 - Electronics: An Introduction	3	Prerequisite(s): High school algebra
IND 1450 - Technical Drawing and CAD OR CET 1215 - Engineering Graphics OR MET 1200 - Technical Drawing I		
JMP 2610 - Introduction to Technical Writing	3	
MET 1010 - Manufacturing Processes (Recommended) OR IND 2830 - Manufacturing Materials and Processes	3	
MET 1310 - Principles of Quality Assurance	3	Prerequisite(s): Intermediate algebra or equivalent with a grade of "C" or better
MET 2010 - CNC Machining and Inspection	3	
MET 3000 - Manufacturing Analysis	4	
MTH 1120 - College Trigonometry	3	
Aerospace Concentration Courses	24	
AES 1050 - Introduction to Space	3	
AES 2607 - Introduction to Aerospace Systems Simulation	3	
AES 3600 - Space Flight Operations I	3	Prerequisite(s): At least junior standing or Permission of instructor
AES 3610 - Elements of Spacecraft Design I	3	Prerequisite(s): AES 3600 and Junior Standing or Permission of Instructor
AES 4601 - Space Flight Operations II	3	Prerequisite(s): AES 3600; Spring Semester only
AES 4602 - Aerospace Commercialized Operations OR AES 3530 - Aerodynamics OR AES 3620 - Aerospace Systems Project and Mission Scheduling	3	Prerequisite(s): AES 3600 and AES 4601 No Prerequisites Prerequisite(s): AES 3600 and Junior Standing or Permission of Instructor
AES 4603 - Aerospace Operations Systems Analysis and Design	3	Prerequisite(s): AES 4601; Fall Semester only
AES 4620 - Elements of Spacecraft Design II	3	Prerequisite(s): AES 3610 and Junior Standing or Permission of Instructor
AMS Advisor Approved Electives (25) credit hours with a minimum of (9) upper-division; Discuss options with Academic Advisor before registering for classes		
MET 3630 - Lean Manufacturing Systems Engineering (Recommended)	3	This course will transfer to School of Mines as part of 4+1 Master's Program
TOTAL PROGRAM HOURS	120	