

Student ID: _____

Catalog: _____

Student Name: _____

Program: Individualized Degree, B.S.

Advisor Name: _____

Minimum Credits Required: _____

Individualized Degree Program; Advanced Manufacturing Sciences, Additive Manufacturing, B.S.

The interdisciplinary Advanced Manufacturing Sciences (AMS) Additive Manufacturing IDP program combines the fields of advanced manufacturing, computer science, mechanical engineering, and electrical engineering. With hands-on laboratory classes and sound theoretical coursework, this four-year professional undergraduate program will prepare you for an innovative career in advanced manufacturing. This is an extended major which means you do not need a catalog minor.

Degree/Graduation Requirements

- Multicultural Course
 - Students may fulfill the multicultural requirement by taking approved courses within one of the following categories: arts and humanities, historical, natural and physical sciences, or social and behavioral sciences.
- Senior Experience
 - AMS 4950 - Senior Experience Professional Internship

General Requirements

General Study Requirements

- Written Communication 6
 - Recommended Courses: ENG 1010 – Composing Arguments (3), ENG 1020 – Research & Argument Writing (3)
- Oral Communications 3
- Quantitative Literacy 3
- Arts and Humanities 6
- Historical 3
- Natural & Physical Sciences 6
- Social and Behavioral Sciences 6
 - Select one course from Social and Behavioral Sciences course list (3)
 - Recommended Course: CET 3120 Engineering Economy (3)
- Global Diversity (Can also satisfy a General Studies category, above.) 3

Students may fulfill the global diversity requirements by taking approved courses within one of the following categories: arts and humanities, historical, natural and physical sciences, or social and behavioral sciences.

Total of required credits for General Studies: 33-36

Overview of Major Requirements

Core classes (47 credits)

Additive classes (43 credits)

See below for courses

Major Requirements

Advanced Manufacturing Core Courses

- AMS 4950 - Senior Experience Professional Internship (3)
- AMS 1010 - Survey of Advanced Manufacturing and Workplace Preparation (3)
- AMS 3010 - Additive Manufacturing Stratasys Certification Preparation (3)
- JMP 2610 - Introduction to Technical Writing (3)
- EET 1001 - Electronics: An Introduction (3)

- MET 1010 - Manufacturing Processes (3)
OR
- IND 2830 - Manufacturing Materials & Processes (3)

- IND 1450 - Technical Drawing and CAD (3)
OR
- CET 1215 - Engineering Graphics (3)
OR
- MET 1200 - Technical Drawing I (3)

- MET 1310 - Principles of Quality Assurance (3)
- MET 2010 - CNC Machining and Inspection (3)
- MET 3000 - Manufacturing Analysis (4)
- MET 3630 - Lean Manufacturing Systems Engineering (3)
- MTH 1120 - College Trigonometry (3)
- CS 1030 - Computer Science Principles (4)
- CSS 2751 - Principles of Cybersecurity (3)
- CSS 3753 Computing & Security for Manufacturing (3)

Total Core Credits: 47 credit hours, 16 upper division

Additive Manufacturing Courses

- CS 1050 - Computer Science I (4)
- CS 2050 - Computer Science II (4)
- CS 3510 - Computer Graphics (4) IND 3000 - Design Thinking (3)
- IND 3660 - Computer Aided Modeling (3)
- MET 1210 - 3D Modeling (3)
- MET 3260 - Direct Digital Manufacturing (3)
- MET 3410 - Geometric Dimensioning and Tolerancing (3)
- MET 3735 - Computer Integrated Manufacturing (3)
- IND 3950 - History of Industrial Design (3)
- MTH 1410 - Calculus I (4)
- MTH 2140 - Computational Matrix Algebra (2)
- MTH 2410 - Calculus II (4)

Total Additive Manufacturing Credits: 43 credit hours, 22 upper division

Total Credits: 123 credit hours, 41 upper division

Contact the Center for Individualized Learning here: [CIL Website](#) and [CIL Contact Form](#)

