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| Student ID: _____ | Catalog: _____ |
| Student Name: _____ | Program: Individualized Degree, B.S. |
| Advisor Name: _____ | Minimum Credits Required: _____ |

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

The interdisciplinary Advanced Manufacturing Sciences (AMS) Composites 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.

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
 - PHY 1020 – Physics of Advanced Materials (1), PHY 2311 – General Physics I (4), 2321 – General Physics I Laboratory (1)
- Social and Behavioral Sciences 6
- 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)
- Composite classes (46 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

Composite Manufacturing Courses

- CET 2150 - Mechanics I-Statics (3)
- CET 3135 - Mechanics of Materials with Laboratory (4)
- CET 3170 - Intro. to Structural Analysis (3)
- CHE 1800 - General Chemistry I (4)
- IND 1130 - Plastics: Materials & Fabrication (3)
- IND 3000 - Design Thinking (3)
- IND 3100 - Composites: Materials & Fabrication (3)
- IND 3660 - Computer Aided Modeling (3)
- IND 4210 - Utilization of Composites in Manufacturing (3)
- MET 2200 - Materials of Engineering (3)
- MET 3215 - Composites Manufacturing (3)
- MET 4370 - Advanced Composite Structures: Design, Damage, Repair & Testing (3)
- MTH 1410 Calculus I (4)
- MTH 2410 Calculus II (4)

Total Composite Manufacturing Credits: 46 credit hours, 25 upper division

Total Credits: 126 credit hours, 41 upper division

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

