**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

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|  | **Semester 1 - Fall** |  | **Semester 2 - Spring** |
| **Course** | **Hours** | **Course** | **Hours** |
| 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 | MET 1010 Manufacturing Processes ***OR*** IND 2830 Manufacturing Materials and Processes | 3 |
| Quantitative Literacy (GS) **Suggested:** MTH 1110 - College Algebra for Calculus | 4 | MTH 1120 College Trigonometry | 3 |
| AMS 1010 Survey of Advanced Manufacturing & Workplace Prep | 3 | Arts & Humanities (GS; ESSJ or GD) | 3 |
| **TOTAL CREDIT HOURS** | **16** | **TOTAL CREDIT HOURS** | **15** |

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|  | **Semester 3 - Fall** |  | **Semester 4 - Spring** |
| **Course** | **Hours** | **Course** | **Hours** |
| MTH 1410 Calculus I | 4 | JMP 2610 Introduction to Technical Writing | 3 |
| CHE 1100 Principles of Chemistry ***AND*** CHE 1150 Principles of Chemistry Laboratory | 5 | MET 1210 3D Modeling | 3 |
| Natural & Physical Sciences (GS) **Suggested:** MET 1040 Introduction to Engineering | 3 | MET 1310 Principles of Quality Assurance | 3 |
| ELE 1001 Introduction to Electrical Engineering | 3 | MET 2200 Materials of Engineering | 3 |
| MET 1200 Technical Drawing***OR*** IND 1450 Technical Drawing and CAD***OR*** CET 1215 Engineering Graphics | 3 |  Natural & Physical Sciences (GS) **Suggested:** PHY 2010 College Physics I ***AND*** PHY 2030 - College Physics I Laboratory | 5 |
|  **TOTAL CREDIT HOURS** | **18** |  **TOTAL CREDIT HOURS** | **17** |

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|  | **Semester 5 - Fall** |  | **Semester 6 - Spring** |
| **Course** | **Hours** | **Course** | **Hours** |
| AMS 3010 Additive Manufacturing Stratasys Cert Prep | 3 | Social & Behavioral Sciences (GS) **Suggested:** CET 3120 Engineering Economy | 3 |
| MET 2010 CNC Machining and Inspection | 3 | CS 1030 Computer Science Principles | 4 |
| MET 3000 Manufacturing Analysis | 4 | MET 3410 Geometric Dimensioning and Tolerancing | 3 |
| MET 3215 Composites Manufacturing | 3 | MET 4370 Advanced Composite Structures | 3 |
| Social & Behavioral Sciences (GS) | 3 | MET 3630 Lean Manufacturing Systems Engineering | 3 |
|  **TOTAL CREDIT HOURS** | **16** | **TOTAL CREDIT HOURS** | **16** |

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|  | **Semester 7 - Fall** |  | **Semester 8 - Spring** |
| **Course** | **Hours** | **Course** | **Hours** |
| AMS 4950 Professional Internship | 3 | CSS 3753 Computing & Security for Manufacturing | 3 |
| CSS 2751 Principles of Cybersecurity | 3 | MET 3260 Direct Digital Manufacturing | 3 |
| Elective – upper division | 3 |  MET 4080 Computer Aided Manufacturing | 3 |
| Elective – upper division | 3 | Elective – upper division | 3 |
|  **TOTAL CREDIT HOURS** | **12** | **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.