

**Catalog Year 2019-2020**

AAS, Computerized Machining Technology

* Fall Start

A Major Academic Plan (MAP) is one way to complete a degree in a set number of semesters. The *example* below is an efficient strategy only. Actual plans for individual students will vary based on advisor recommendations and academic needs. Official Program Requirements including Major, General Education, Elective, and university requirements (see pg.2) are based on Catalog Year.

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| **Course Subject and Title** | **Cr.**  | **Min.** **Grade** | **\*GE,** **UU or UM** | **\*\*Sem. Offered** | **Prerequisite** | **Co Requisite** |
| Semester One |
| GE Objective 1: ENGL 1101 English Composition | 3 |  | GE |  |  |  |
| MACH 0110: Machine Tool Lab I (early 8 weeks) | 3 | D- |  | F,S |  | MACH 0111 |
| MACH 0111: Machine Tool Theory I (early 8 weeks) | 2 | D- |  | F,S |  | MACH 0110 |
| MACH 0112: Machine Math I (early 8 weeks) | 3 | D- |  | F,S |  |  |
| MACH 0120: Machine Tool Lab II (late 8 weeks) | 3 | D- |  | F,S |  | MACH 0121 |
| MACH 0121 Machine Tool Theory II (late 8 weeks) | 2 | D- |  | F,S |  | MACH 0120 |
| MACH 0123: Blueprint Reading (late 8 weeks) | 1 | D- |  | F,S |  |  |
|  Total | **17** |  |  |  |  |  |
| Semester Two |
| GE Objective 3: Review options with Advisor | 3 |  | GE |  |  |  |
| MACH 0115: Applied Machining Geometry (early 8 weeks) | 2 | D- |  | F,S |  |  |
| MACH 0221: CAD and CAM Theory I (early 8 weeks) | 3 | D- |  | F,S |  | MACH 0220 |
| MACH 0131: CNC Mill Setup (early 8 weeks) | 2 | D- |  | F,S | MACH 0120 |   |
| MACH 0145: Geometric Dimensioning/Tolerancing I (early 8 weeks) | 1 | D- |  | F,S | MACH 0123 |  |
| MACH 0135: Applied Machining Trigonometry (late 8 weeks) | 2 | D- |  | F,S | MACH 0115 |  |
| MACH 0141: CNC Lathe Setup (late 8 weeks) | 2 | D- |  | F,S | MACH 0110 |  |
| MACH 0220: CAD and CAM Applications I (late 8 weeks) | 3 | D- |  | F,S |  | MACH 0221 |
| MACH 0245: Geometric Dimensioning/Tolerancing II (late 8 weeks) | 1 | D- |  | F,S | MACH 0145 |  |
|  Total | **19** |  |  |  |  |  |
| Summer Semester |
| MACH 0261: CNC Introduction to Theory | 2 | D- |  | F,S,Su |  | MACH 0265 |
| MACH 0265: Introduction to CNC Machine Practice | 4 | D- |  | F,S,Su |  | MACH 0261 |
| MACH 0225: Interpreting Technical Data | 1-16 | D- |  | Su |  |  |
|  Total | **7** |  |  |  |  |  |
| Semester Three |
| GE Objective 2: COMM 1101 Principles of Speech | 3 |  | GE |  |  |  |
| TGE 0158: Employment Strategies | 2 | D- |  | D |  |  |
| MACH 0270: CNC Machining Practice I (early 8 weeks) | 4 | D- |  | F,S |  | MACH 0271 |
| MACH 0271: CNC Programming Theory I (early 8 weeks) | 2 | D- |  | F,S |  | MACH 0270 |
| MACH 0272: CNC Math I (early 8 weeks) | 3 | D- |  | F,S | MACH 0135 |  |
| MACH 0275: CAD and CAM Theory II (late 8 weeks) | 2 | D- |  | F,S | MACH 0220, MACH 0221 |  |
| MACH 0280: CAD and CAM Applications II (late 8 weeks) | 4 | D- |  | F,S | MACH 0220 | MACH 0275 |
|  Total | **20** |  |  |  |  |  |
| Semester Four |
| GE Objectives 5: BIOL, CHEM, GEOL, or PHYS (theory & lab) | 4 |  | GE |  |  |  |
| GE Objective 6: Select from options | 3 |  | GE |  |  |  |
| MACH 0281: CNC Programming Theory II (early 8 weeks) | 1 | D- |  | F,S | MACH 0271 | MACH 0290 |
| MACH 0290: CNC Machining Practice II (early 8 weeks) | 3 | D- |  | F,S | MACH 0270 | MACH 0281 |
| MACH 0285: CAD and CAM Theory III (late 8 weeks) | 2 | D- |  | F,S | MACH 0275 | MACH 0291 |
| MACH 0291: CAD and CAM Applications III (late 8 weeks) | 4 | D- |  | F,S | MACH 0280 | MACH 0285 |
|  Total | **17** |  |  |  |  |  |
| \*GE=General Education Objective, UU=Upper Division University, UM= Upper Division Major\*\*See Course Schedule section of Course Policies page in the e-catalog (or input F, S, Su, etc.)  |

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| **2019-2020 Major Requirements** | **CR** | **GENERAL EDUCATION OBJECTIVES****\* Satisfy 1, 2, 3, 5 and 6**  | **16 Cr.****Min** |
| **Computerized Mach Tech, AAS - MAJOR REQUIREMENTS** | **64** | 1. Written English (6 cr. min) ENGL 1101 (or equivalent) | 3 |
| MACH 0110 Machine Tool Lab I | 3 |   |  |
| MACH 0111 Machine Tool Theory I | 2 | 2. Spoken English (3 cr. min) COMM 1101 | 3 |
| MACH 0112 Machine Math I | 3 | 3. Mathematics (3 cr. min)  | 3 |
| MACH 0115 Applied Machining Geometry | 2 | 4. Humanities, Fine Arts, Foreign Lang. |
| MACH 0120 Machine Tool Lab II | 3 |  |  |
| MACH 0121 Machine Tool Theory II | 2 |  |  |
| MACH 0123 Blueprint Reading | 1 | 5. Natural Sciences **(1 Course including a lab; 4 cr. min)**  |
| MACH 0131 CNC Mill Setup | 2 |  CHEM, GEOL, or PHYS (\*theory and lab) | 4 |
| MACH 0135 Applied Machining Trigonometry | 2 |  |  |
| MACH 0141 CNC Lathe Setup | 2 | 6. Behavioral and Social Science **(1 course; 3 cr. min)** |
| MACH 0145 Geometric Dimensioning and Tolerancing I | 1 |  | 3 |
| MACH 0220 CAD and CAM Applications I | 3 |  |  |
| MACH 0221 CAD and CAM Theory I | 3 | **One Course from EITHER Objective 7 OR 8** |
| MACH 0225 Interpreting Technical Data | 1 | 7. Critical Thinking  |  |
| MACH 0245 Geometric Dimensioning and Tolerancing II | 1 | 8. Information Literacy  |
| MACH 0261 CNC Introduction to Theory | 2 | 9. Cultural Diversity  |
| MACH 0265 Introduction to CNC Machine Practice | 4 |  |  |
| MACH 0270 CNC Machining Practice I | 4 | General Education Elective to reach 15 cr. min.  |
| MACH 0271 CNC Programming Theory I | 2 |   |  |
| MACH 0272 CNC Math I | 3 |  **Total GE** | **16** |
| MACH 0275 CAD and CAM Theory II | 2 | Undergraduate Catalog and GE Objectives by [Catalog Year](https://www.isu.edu/advising/academic-support/general-education/)  |
| MACH 0280 CAD and CAM Applications II | 4 |
| MACH 0281 CNC Programming Theory II | 1 |
| MACH 0285 CAD and CAM Theory III | 2 | **MAP Credit Summary** | **CR** |
| MACH 0290 CNC Machining Practice II | 3 | Major  | 64 |
| MACH 0291 CAD and CAM Applications III | 4 | General Education  | 16 |
| TGE 0158 Employment Strategies | 2 | Free Electives to reach 60 | 0 |
|  |  |  TOTAL | 80 |
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|  |  | **Graduation Requirement Minimum Credit Checklist** | **Confirmed** |
|  |  | Minimum 15 cr. General Education Objectives (Associate) |  |
|  |  | Minimum 60 cr. Total (Associate) |  |  |
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| **Advising Notes** | ***MAP Completion Status (for internal use only)*** |
|  |  | *Date* |
|  | *Department:*  |  |
|  | *CAA or COT:* | TIM 06/11/2019 |
|  | *Registrar:*  |  |
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 Form Revised 1.24.2018