

## Degree Pathway

### A.A.S. in Mechanical Engineering Technology – Catalog Year 2021-22

The number of credits you take each year will determine when you graduate. To graduate on time, you are strongly encouraged to enroll in at least 30 credits toward your degree during the calendar year, including fall and spring semesters and winter and summer sessions. **This Degree Pathway is designed for students who place into MA-114.** Additional Degree Pathways are available for students who place into other levels of mathematics. Please see the degree website or your advisor for more information.

Courses in **Bold Text** are prerequisites for later courses or only offered in the Fall or Spring semester and should be taken where indicated in the sequence.

#### Fall Semester #1

| Courses   | Credits   | Prerequisites and Corequisites <sup>1</sup>                  |
|---|-----------|--|
| <b>ENGL-101 English Composition I</b><br>(Required Core 1A - English Composition)   | 3         | Prerequisite: Complete developmental requirements in English |
| <b>MA-114 College Algebra and Trigonometry for Technical Students<sup>2</sup></b><br>(Required Core 1B - Mathematical & Quantitative Reasoning) | 4         | Prerequisite: Complete developmental requirements in math    |
| <b>MT-111 Technical Graphics</b>  | 2         | None   |
| <b>MT-122 Manufacturing Process</b>   | 3         | Corequisite: MT-111  |
| <b>MT-293 Parametric Computer Aided Design</b>  | 3         | Corequisite: MT-111  |
| TECH-100 Introduction to Engineering and Technology   | 1         | None   |
| <b>Total credits for the term</b>   | <b>16</b> |  |

#### Spring Semester #1

| Courses   | Credits   | Prerequisites and Corequisites <sup>1</sup>                   |
|---|-----------|---|
| <b>MA-128 Calculus for Technical and Business Students<sup>2</sup></b>                        | 4         | Prerequisite: MA-114 (C or better)                            |
| <b>PH-201 General Physics I<sup>3,4</sup></b> (Required Core 1C – Life and Physical Sciences) | 4         | Prerequisites: MA-114 or MA-119 and MA-121                    |
| MT-124 Metallurgy and Materials   | 3         | Prerequisite: Complete developmental reqs in English and math |
| MT-140 Engineering Analysis   | 1         | Corequisite: PH-201   |
| <b>MT-161 Fundamentals of Computer Numerical Control</b>                                      | 3         | Prerequisite: MT-122 or permission of the Department          |
| Major Elective: Choose from MT-125, MT-346 or MT-514  | 1         | Check individual courses for prerequisites and corequisites   |
| <b>Total credits for the term</b>   | <b>16</b> |   |

## Fall Semester #2

| Courses   | Credits   | Prerequisites and Corequisites <sup>1</sup>                 |
|---|-----------|---|
| ENGL-102 English Composition II<br>(Required Core 1A - English Composition)   | 3         | Prerequisite: ENGL-101 or placement                         |
| <b>MT-341 Applied Mechanics</b>   | 3         | Corequisite: PH-201   |
| MT-491 Computer Controlled Manufacturing  | 2         | Prerequisite: MT-161  |
| <b>MT-492 Introduction to Virtual Automation</b>  | 2         | Corequisite: MT-293   |
| MT-523 Thermodynamics   | 3         | Prerequisites: MA-128 and PH-201 (both C or better)         |
| One History or Social Science course from Flexible Core 2A, 2B, 2D, or 2E –<br>(HIST-100 series, ANTH, CRIM-101 or 102, ECON, PLSC, PSYC, or SOCY) <sup>3</sup> | 3         | Check individual courses for prerequisites and corequisites |
| <b>Total credits for the term</b>   | <b>16</b> |   |

## Spring Semester #2

| Courses   | Credits   | Prerequisites and Corequisites <sup>1</sup>                 |
|---|-----------|---|
| PH-202 General Physics II <sup>3,4</sup><br>(Flexible Core 2E – Scientific World)   | 4         | Prerequisite: PH-201 (C or better)                          |
| MT-345 Strength of Materials  | 3         | Prerequisite: MT-341  |
| MT-369 Computer Applications in Engineering Technology  | 3         | Prerequisite: MT-161  |
| Major Elective: Select from list below  | 3         | Check individual courses for prerequisites and corequisites |
| One History or Social Science course from Flexible Core 2A, 2B, 2D, or 2E –<br>(HIST-100 series, ANTH, CRIM-101 or 102, ECON, PLSC, PSYC, or SOCY) <sup>3</sup> | 3         | Check individual courses for prerequisites and corequisites |
| <b>Total credits for the term</b>   | <b>16</b> |   |
| <b>Total credits required for the A.A.S. degree</b>   | <b>64</b> |   |

## Notes:

1. Prerequisites for a course must be passed before taking the course. Corequisites must be passed before taking the course or taken in the same term as the course.
2. Students may substitute MA-440 and MA-441 for MA-114 and MA-128
3. Students are required to take particular courses in some areas of the Common Core that fulfill both general education and major requirements. If students do not take the required courses in the Common Core, they will have to take additional credits to complete their degree requirements.
4. Students may substitute PH-301 and PH-302 or PH-421 and PH-422 for PH-201 and PH-202.

All students must complete two (2) WI designated classes to fulfill degree requirements.

## Major Elective Courses

| Major Elective Courses   | Credits | Prerequisites and Corequisites  |
|--|---------|---|
| MT-125 Metallurgy and Materials Laboratory                             | 1       | Corequisite: MT-124   |
| MT-162 Microcomputer Programming for Computer Numerical Control        | 3       | Prerequisite: MT-161 or MT-122  |
| MT-163 Computer-Aided Manufacturing (CAM)                              | 3       | Prerequisite: MT-488 and MT-122 or MT-161   |
| MT-164 Computer-Integrated Manufacturing (CIM)                         | 3       | None  |
| MT-346 Strength of Materials Laboratory                                | 1       | Corequisite: MT-345   |
| MT-488 Computer-Aided Design I   | 3       | None  |
| MT-513 Thermo-Fluid Systems  | 3       | Prerequisite: MT-345 with a grade of C or higher; Corequisite: MT-514   |
| MT-514 Thermo-Fluid Systems Laboratory                                 | 1       | Corequisite: MT-513   |
| MT-525 Measurement Techniques in the Thermal Sciences                  | 1       | None  |
| MT-900 Cooperative Education/Design Projects in Engineering Technology | 3       | Open only to matriculated students who have completed at least 12 pertinent credits in an Engineering Technology related curricula. |