Bachelor of Science - Mechanical Engineering Technology

Academic Year 2022-23 – Recommended Course Sequence

Semester 1
- FALL
  - 17 Cr
  - UN 1015 Composition (3) [f,s,su]
  - UN 1025 Global Issues (3) [f,s,su]
  - Critical and Creative Thinking (3) *
  - MA 1032 Precalculus (4) [f,s,su]
  - HASS Elective (Course from Any List) (3) *
  - CO-CURR ½ UNIT *

Semester 2
- SPRING
  - 14-15 Cr
  - MSE 2100 Intro. to Materials Science & Eng (3) [f,s,su]
  - MET 2110 Applied Statics (3) [f]
  - MA 2110 Calculus with Technology I (4) [f] --or-- MA 1160 Calculus Plus w/ Technology I (5) [f,s,su]
  - MA 2160 Calculus with Technology II (4) [f,s,su]
  - PH 1140 & PH 1141 Applied College Physics I & Lab (4) [s]
  - PH 1200 & PH 1240 Physics by Inquiry II & Applied College Physics II (4) [f] --or-- MA 1161 Calculus Plus w/ Technology II (5) [f,s,su]
  - UN 1015 & UN 1025

Semester 3
- FALL
  - 16 Cr
  - ENG 1101* Eng. Analysis & Problem Solving (3) [f,s,su]
  - Critical Thinking (3) *
  - MA 2130 Machine Tool Fundamentals & Applications (2) [f]
  - MA 1032 Precalculus (4) [f,s,su]
  - HASS Elective (Course from Any List) (3) *
  - CO-CURR ½ UNIT *

Semester 4
- SPRING
  - 17 Cr
  - MET 2130 Applied Dynamics (4) [s]
  - MET 2400 Practical Applications in Parametric Modeling (3) [s]
  - MET 2110 Applied Strength of Materials (3) [s]
  - CO-CURR ½ UNIT *

Semester 5
- FALL
  - 17 Cr
  - EET 1401 Basic Electronics (4) [f,s,su]
  - EET 2233 Electrical Machinery (4) [f]
  - EET 2333 Statistical Methods (4) [f,s,su] --or-- MA 3710 Eng. Statistics (3) [f,s,su]
  - MA 1032 Precalculus (4) [f,s,su]
  - HASS Elective (Course from Any List) (3) *
  - CO-CURR ½ UNIT *

Semester 6
- SPRING
  - 17-18 Cr
  - MET 2342 Machine Design I (3) [f]
  - MET 3451 Machine Design II (3) [s]
  - MET 3400 Applied Fluid Mechanics (3) [f]
  - MET 3700 Applied Thermodynamics (3) [s]
  - Humanities and Fine Arts (3) *
  - Technical Elective (3) *
  - Communication /Composition (3) *

Semester 7
- FALL
  - 14 Cr
  - MA 1032 Precalculus (4) [f,s,su]
  - Critical Thinking (3) *
  - MET 2150 Machine Tool Fundamentals & Applications (2) [f]
  - MA 2130 Machine Tool Fundamentals & Applications (2) [f] --or-- MA 1160 Calculus Plus w/ Technology I (5) [f,s,su]
  - HASS Elective (Course from Any List) (3) *
  - CO-CURR ½ UNIT *

Semester 8
- SPRING
  - 14-16 Cr
  - MA 2130 Machine Tool Fundamentals & Applications (2) [f]
  - MA 2300 Manufacturing Processes (4) [f]
  - MET 3500 Manufacturing Processes (4) [f]
  - EET 3131 Sensors & Instrumentation (3) [f,s,su]
  - MET 3410 Applied Quality Techniques (3) [f]
  - Technical Elective (3) *
  - Technical Elective (1-3)

Total Credits: 128

*Spatial Visualization Test (Prerequisite) required to enroll in ENG 1101

Technical Electives (Prerequisite)
- MET 4355 - 3 [f,s,su] Industrial Systems Simulation
- MET 4550 - 3 (MET 2153 & MET 2400) [f,s,su] Computer Aided Manufacturing
- MET 4660 - 3 (MET 2400 & MET 3242) [f,s,su] Fluids & Power Systems Focus

Other Technical Electives
- EET 3373 - 3 (EET 1411) [f,s,su] Introduction to Prog. Controllers
- ENT XXXX - 1-2 Enterprise Project Work (except 3909, 3967, 4950, 4960)
- MET 4996 - 1-3 ** Undergraduate Research in Mechanical Engineering Technology
- MET 4997 - 1-3 ** Independent Study in Mechanical Engineering Technology
- MET 4998 - 1-6 ** Undergraduate Cooperative Education I
- UN 3002 - 1-2, may be repeated [f,s,su]

** On Demand

March 2022
1. **General Education Requirements**: 24 total credits. Required courses: UN 1015-Composition (3 credits); UN 1025-Global Issues (3 credits); Critical and Creative Thinking (3 credits); Social Responsibility & Ethical Reasoning (3 credits); and 12 HASS credits. Approved lists are available in EERC 426 and linked on the Department of Manufacturing and Mechanical Engineering Technology's "Advising" web page. [https://www.mtu.edu/registrar/pdfs/core-and-hass-list-22-23.pdf](https://www.mtu.edu/registrar/pdfs/core-and-hass-list-22-23.pdf)

2. **UN 1025 Global Issues Language Option**: 3 credits of 3000-level or higher modern language may be substituted directly for UN 1025. Any students with previous language experience in Spanish, French, German, or Mandarin must take the Modern Language Online Placement Test.

3. **HASS (Humanities, Arts, & Social Sciences)**: 12 total credits that include a minimum of 3 credits each in: Communication/Composition, Humanities/Fine Arts, and Social & Behavioral Sciences. Approved lists are available in EERC 426 and are linked on the Department of Manufacturing and Mechanical Engineering Technology's "Advising" web page. [https://www.mtu.edu/registrar/pdfs/core-and-hass-list-22-23.pdf](https://www.mtu.edu/registrar/pdfs/core-and-hass-list-22-23.pdf) Six (6) credits must be 3000 level or higher (does not include HU 3120). HU 3120 is not a HASS course for MET students, but still is a degree requirement. No more than 3 credits may be used from the HASS Restricted List. All 3000-level or higher HASS courses require UN 1015 and UN 1025 as prerequisites.

4. **Math**: Math placement is based on ACT/SAT math score. Students have the option to take the ALEKS placement test in place of the ACT/SAT placement. For more information, see: [https://www.mtu.edu/math/undergraduate/placement/](https://www.mtu.edu/math/undergraduate/placement/) Note: MA 1120 (4 credits) fulfills the requirement for MA 1032; MA 1121 (4 credits) fulfills the requirement for MA 1160/1161.

5. **Engineering Fundamentals**: The Spatial Visualization test is required to enroll in ENG 1101. ENG 1003 is required concurrently with ENG 1101 if the Spatial Visualization test is not passed. MA 1032 or MA 1160 or MA1161 is a concurrent pre-requisite for ENG 1101.

6. **Free Electives**: Any Michigan Tech course(s) or approved transfer course(s) that are 1000-level or above, and are not duplicated or equivalent courses.

7. **Co-curricular Activities**: Mainly physical education courses with some additions. Three units (or six half units) are required for graduation. These units will be included as earned hours and may be used to determine full-time enrollment status. These are in addition to the total credits required for the degree. A co-curricular list is available in EERC 426 and is linked on the Department of Manufacturing and Mechanical Engineering Technology's "Advising" web page. These units are graded pass/fail and are not included in credit hours used for calculation of any grade point averages (cumulative or departmental). [https://www.mtu.edu/registrar/pdfs/co-curricular-courses-22-23.pdf](https://www.mtu.edu/registrar/pdfs/co-curricular-courses-22-23.pdf)

8. **Pre-requisite** courses are noted by a plain arrow. The pre-requisite course must be successfully completed prior to taking the subsequent course.

9. **Concurrent Pre-requisites** are noted by a ‘C’ by the arrow and may be taken at the same time, although it is not necessary to take these courses together if the pre-requisite course is completed first.

10. **Co-requisite** courses are courses that must be taken together in the same semester.

11. **Colored arrows** are used to clarify the sequence of courses.

12. **Transfer, Advanced Placement, or Study Abroad Courses** are not included in credit hours used for GPA calculations. Transfer credit is awarded for Michigan Tech equivalent course work only if a grade of ‘C’ or better (2.00/4.00) or equivalent is earned at a transfer institution. Study abroad credit will be awarded by International Programs and Services based on passing a course according to equivalent international standards. Advanced Placement credit is awarded according to published AP Exam score standards.

This flow chart is not an official list of degree requirements. Adjustments may be required due to curriculum changes.

Advising web page: [https://www.mtu.edu/mmet/undergraduate/advising/](https://www.mtu.edu/mmet/undergraduate/advising/)

March 2022