



 Foundation Course *
 Restricted Course *
 → Prerequisite (Course must be completed prior to enrollment)
 → (C) Concurrent Prerequisite (A prerequisite course that may be taken concurrently)
 → Required Corequisite (Courses must be taken together)
 () Course Credits

*** See notes on back**

128 Total Credits February 2017

1. **General Education Requirements:** 24 total credits. Required courses are UN1015-Composition (3 credits), UN1025-Global Issues (3 credits), a Critical & Creative Thinking course (3 credits), a Social Responsibility & Ethical Reasoning course (3 credits), and 12 HASS (Humanities, Arts, & Social Sciences) credits. The 12 total credits of HASS must include **6 credits of 3000 level or higher coursework (does not include EC3400). EC3400 is not a HASS course for ME students, but is still required for the BSME.** Approved course lists are available in the ME Advising Center and are linked on the ME Advising web page. No more than 3 credits may be used from the HASS Supplemental List. No more than 3 credits may be used from the HASS Creative Endeavor List. All 3000 level or higher HASS courses require UN1015 and UN1025 as non-concurrent prerequisites.
2. **UN 1025 Global Issues Language Option:** 3 credits of 3000-level or higher modern language may be substituted directly for UN1025. A listing of approved courses is located on Modern Language webpage. **Any students with previous language experience in Spanish, French, or German must take the Modern Language Online Placement Test.** Instructions are linked on the ME Advising web page.
3. **Technical electives:** Approved list is available in the ME Advising Center and is linked on the ME Advising web page.
4. **Engineering Fundamentals:** ENG1001 (2 credits) plus ENG1100 (2 credits) is equivalent to ENG1101 (3 credits). ENG1002 or passing spatial visualization test is required for ENG1001 and ENG1101 as a concurrent pre-requisite. ENG1002 or passing the spatial visualization test is also a non-concurrent pre-requisite for ENG1102. MA1160/1161 is a concurrent pre-requisite for ENG1101, and MA1031 or MA1032 are concurrent pre-requisites for ENG1001. MA1160/1161 is a non-concurrent pre-requisite for ENG1102. ENG1102 project content varies by section number.
5. **Math:** Students are placed into an initial math course based on required assessment using the ALEKS software program, or a math placement exam score for credit (AP, IB, CLEP). MA1160 (4 credits) or MA1161 (5 credits) satisfy the Calculus I requirement. MA2320 and MA3520 are offered as full semester courses for students taking these courses in separate semesters. The Math department also teaches MA2321 as an accelerated course (equivalent to MA2320) in the first half of a given semester and MA3521 as an accelerated course (equivalent to MA3520) in the second half of the semester (registration must be for the same section number of both MA2321 and MA3521 in the same semester). MA2320, MA2321, or MA2330 are all equivalent and are approved pre-requisites for MA3520 or MA3521. MA3530 or 3560 are also equivalent to MA3520/3521.
6. **A grade of 'C' or better in MA2160 is required as a pre-requisite for MEEM2110.**
7. **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. Cooperative Education is used as free electives in the BSME curriculum.
8. **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 128 total credits required for the BSME. Co-curricular list is available in the ME Advising Center and is linked on the ME 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, engineering, or departmental).
9. **Prerequisite** courses are noted by a plain arrow. The prerequisite course must be successfully completed **prior** to taking the subsequent course. **Concurrent prerequisites** are noted by a 'C' within 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.
 - a. **The prerequisites for MEEM4901 are: MA3710, MEEM3911, MEEM3201(concurrent) & MEEM3750(concurrent).**
 - b. **The prerequisites for MEEM4911 are: MA3710, MEEM3911, MEEM3201(non-concurrent) & MEEM3750 (non-concurrent).**
10. **Co-requisite** courses are courses that must be taken together in the same semester.
11. **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.
12. **Foundation Courses/Restricted Courses** – The Engineering Grade Point Average (EnGPA) is calculated based only on the below courses (shown shaded on the flow chart). An EnGPA ≥ 2.75 will automatically allow progression into restricted courses MEEM2201, MEEM2700, MEEM2150, MEEM2911 and subsequent MEEM courses. These 2000-level and all 3000-level or 4000-level MEEM courses are restricted from enrollment until the required EnGPA is met or academic advisor approval for enrollment is granted.

CH1150 + CH1151	4 credits
ENG1101 (or ENG1001 + ENG1100)	3/4 credits
ENG1102	3 credits
MA1160/61	4/5 credits
MA2160	4 credits
PH1100 + PH2100	4 credit
UN1015	3 credits

13. Academic Year 2014-2015 flow chart was revised March 2015 to relax some initial pre-requisites after final course development and initial course delivery.

February 2017

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

ME Advising web page: <http://www.mtu.edu/mechanical/undergraduate/advising/>