

B.S. Mechanical Engineering Technology Degree

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

Please use the University's [official degree audit](#).

First Year

Fall

COURSE	Credit
CH 1150 University Chemistry I -AND-	3
CH 1151 University Chemistry Lab I	1
ENG 1101 Engineering Analysis and Problem Solving	3
MA 1032 Precalculus	4
UN 1015 Composition	3
Arts and Culture (Course from List)	3
TOTAL	17

Spring

COURSE	Credit
MA 1160 Calculus with Technology I -OR-	4
MA 1161 Calculus Plus with Technology I	5
MET 2400 Practical Applications in Parametric Modeling	3
MSE 2100 Introduction to Materials Science & Engineering	3
PH 1140 Applied College Physics I -AND-	3
PH 1111 College Physics I Laboratory	1
Foundations of the Human World (Course from List)	3
TOTAL	17-18

Second Year

Fall

COURSE	Credit
MA 2160 Calculus with Technology II	4
MET 2110 Applied Statics	3
MET 2153 Machine Tool Fundamentals and Applications	2
PH 1200 Physics by Inquiry II -AND-	1
PH 1240 Applied College Physics II	3
SHAPE (Course from List)	3
TOTAL	16

Spring

COURSE	Credit
EET 1121 Circuits I -AND-	3
EET 1122 Circuits I Lab	1
MET 2130 Applied Dynamics	4
MET 2150 Applied Strength of Materials	4
Intercultural Competency (Course from List)	3
Activities (Course from List)	1
TOTAL	16

Third Year

Fall

COURSE	Credit
EET 2233 Electrical Machinery	4
HU 3120 Technical and Professional Communication	3
MET 3242 Machine Design I	3
MET 3400 Applied Fluid Mechanics	3
MET 3500 Manufacturing Processes	4
TOTAL	17

Spring

COURSE	Credit
EET 3131 Sensors and Instrumentation	3
MA 2720 Statistical Methods -OR-	4
MA 3710 Engineering Statistics	3
MET 3451 Machine Design II	3
MET 3700 Applied Thermodynamics	3
MET 4460 Product Design and Development	2
TOTAL	14-15

Fourth Year

Fall

COURSE	Credit
MET 4210 Applied Quality Techniques	3
MET 4300 Applied Heat Transfer	3
MET 4575 Senior Project I -OR-	2
ENT 4950 Enterprise Project Work V Capstone	2
Technical Elective	3
Essential Education Experience (Course from List)	3
Activities (Course from List)	1
TOTAL	15

Spring

COURSE	Credit
EC 3400 Economic Decision Analysis	3
MET 4360 Thermal-Fluids Laboratory	1
MET4675 Senior Project II -OR-	2
ENT 4960 Enterprise Project Work VI Capstone	2
MET 4999 Professional Practice Seminar	1
Technical Elective	3
Technical Elective	1-3
Activities (Course from List)	1
TOTAL	12-14

GRAND TOTAL = 126 Credits

Technical Electives (Choose 7-9 Credits)

Computer-Aided Engineering Focus

COURSE	Credit
MET 4355 Industrial Digital Twin Systems [spring]	3
MET 4550 Computer Aided Manufacturing [spring]	3
MET 4660 CAE and FEA Methods [fall]	3

Fluids and Power Systems Focus

COURSE	Credit
MET 4377 Applied Fluid Power [fall]	3
MET 4378 Advanced Hydraulics: Electro-hydraulic Components and Systems [spring]	3
MET 4390 Internal Combustion Engines [fall]	3

Manufacturing Focus

COURSE	Credit
MET 4510 Lean Manufacturing and Production Planning [spring]	3
MET 4585 Facilities Layout and Safety Design [fall]	3
MET 4780 Advanced Manufacturing [spring]	3

Other Technical Electives

COURSE	Credit
EET 3373 Introduction to Programmable Controllers [fall, summer]	3
EET 4311 Control Systems [fall, summer]	3
ENT XXXX Enterprise Project Work (<i>except 3959, 3967, 4950, 4960</i>)	var 1-2
MET 4996 Special Topics in Mechanical Engineering Technology [on demand]	var 1-3
MET 4997 Independent Study in Mechanical Engineering Technology [on demand]	var 1-3
MET 4998 Undergraduate Research in Mechanical Engineering Technology [on demand]	var 1-6
OSM 4350 Advanced Project Management [spring]	3
UN 3002 Undergraduate Cooperative Education I [fall, spring, summer] – <i>may be repeated</i>	var 1-2

NOTES

1. **General Education Requirements:** Approved lists are available in EERC 319 and 426 and linked on the Department of Manufacturing and Mechanical Engineering Technology's "Advising" web page.
2. **Math:** Math placement is based on ACT/SAT/AP math score or transfer credit.
3. **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.
4. **Pre-requisite** course must be successfully completed **prior** to taking the subsequent course.
5. **Concurrent Pre-requisites** 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.
6. **Co-requisite** courses are courses that **must** be taken together in the same semester.
7. **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 coursework 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.