Frequently Asked Questions

Q: How do I sign up for a minor?

- Answer: There is a blue *Curriculum Add/Drop Form* you must fill out and have signed by the minor advisor. Changes are official for a semester when the form is submitted to the Registrar's Office by Wednesday of week 2.

Q: How do I drop a minor?

- Answer: The blue *Curriculum Add/Drop Form* is for dropping a minor. You do not need any approval signatures; just fill it out and take it to the Registrar's Office.

Q: Do credits from a minor double count towards my major?

- Answer: Yes, they may, but you must earn at least 6 credits at the 3000 – 4000 level that do not double count towards your major, except as free electives.

Q: Can I minor in more than one thing?

- Answer: Yes. The six credits not double counting (see above) must be unique for each minor.

Q: When are the courses offered?

- Answer: The course schedule is on the web: *http://www.mtu.edu/registrar/*
  Note that many courses are on an alternate year schedule.

Michigan Technological University
Department of Chemical Engineering

Faculty Involved with the Polymer Science & Engg Minor:

- **Dr. Julia King** ***jaking@mtu.edu***
- **Dr. Gerard Caneba** ***caneba@mtu.edu***
- **Dr. Megan Frost (BE)** ***mcfrost@mtu.edu***
- **Dr. Patricia Heiden (CH)** ***paheiden@mtu.edu***
- **Dr. Bruce Lee (BE)** ***bplee@mtu.edu***
- **Dr. Faith Morrison** ***fmorriso@mtu.edu***
- **Dr. Mahesh Gupta (MEEM)** ***mahesh@mtu.edu***

Chemical Engineering Advising
Email: cmadvise@mtu.edu
ChemSci 202M 906-487-4327

Advisors:
Ms. Katie Torrey
Dr. Faith Morrison

Department of Chemical Engineering
Michigan Technological University
1400 Townsend Drive
Houghton, MI 4993101295
906-487-3132

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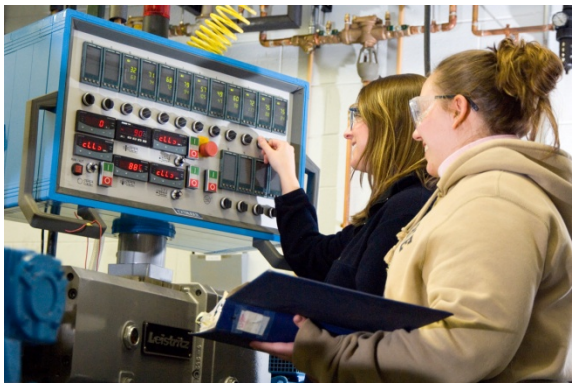
Minor in Polymer Science and Engineering at Michigan Tech



The minor in Polymer Science and Engineering prepares students for careers in the field of polymer science, polymer engineering, or polymer and composite manufacturing. This minor helps to meet the demand for graduates with a breadth of understanding of the chemical and mechanical properties of polymers, plastics, and composites. The students who are interested in this program are those who want to work in polymer-related organizations, including the largest chemical companies in the world, several of which are based in Michigan.

Required credits: 16-17cr
Required classes: See other side

Michigan Tech

Degree Services
Registrar's Office

Minor in Polymer Science and Engineering

ECMM

Name (please print): _____
(Last) (First) (Middle)

Student Number: _____

Primary Major: _____ Expected Major Completion Term: _____

There are two tracks to the Polymer Science and Engineering Minor, the Polymer Science Track and the Polymer Engineering Track. Please select <u>one</u> for completion.

Required Courses – *Polymer Science Track*

Select 10 credits

_____ CH 2410 Organic Chemistry I (3) **and**
_____ CH 2420 Organic Chemistry II (3)

_____ CH 2411 Organic Chemistry Laboratory I (1)

_____ CM/CH 4610 Intro to Polymer Science (3) **OR**
BE 4300 Adv Polymeric Biomaterials (3) **OR**
MY 4600 Intro to Polymer Engineering (3)

Elective Courses - *Select 7 credits*

_____ BE 4000 Independent Study (1-3)*

_____ CM/CH 4620 Polymer Chemistry (3)

_____ CM/CH 4631 Polymer Science Laboratory (2)

_____ CH 4690 Current Topics in Polymer Chem (var)

_____ CH 4710 Biomolecular Chemistry I (3)

_____ CH 4990 Undergrad Research - Chemistry (1-3)*

_____ CM 4060 Undergrad Research in Polymer Engineering (1-3)

_____ CM 4650 Polymer Rheology (3)

_____ CM 4655 Polymer Rheology Lab (1)

_____ MEEM 3999 Mech Eng Undergrad Research*

_____ MEEM 4635 Design with Plastics (3)

_____ MEEM 4999 Mech Eng Senior Research Thesis*

Polymer Science Track
Credits Required = 17
Total Credits _____

Required Courses – *Polymer Engineering Track*

Select 9-11 credits

_____ MEEM 2150 Mechanics of Materials (3) **OR**
ENG 2120 Statics/Mechanics of Materials (4) **OR**
BE 3300 Statistics and Dynamics (3)

_____ MEEM3210 Fluid Mechanics (3) **OR**
CM 3110 Transport Processes I (3) **OR**
ENG 3200 Thermodynamics/Fluid Mech (4) **OR**
MY 3110 Materials Processing II (4) **OR**
MEEM 3201 Energy-Thermal-Fluids II (4)

_____ CM/CH 4610 Intro to Polymer Science (3) **OR**
MY 4600 Intro to Polymer Engineering (3) **OR**
BE 4300 Advanced Polymer Biomaterials (3)

Elective Courses – *Select 6-7 credits*

_____ BE 4000 Independent Study (1-3)*

_____ BE 4335 Smart Polymers (3)

_____ CH 4990 Undergrad Research - Chemistry (1-3)*

_____ CM 4060 Undergrad Research in Polymer Engineering (1-3)

_____ CM/CH 4631 Polymer Science Laboratory (2)

_____ CM 4650 Polymer Rheology (3)

_____ CM 4655 Polymer Rheology Lab (1)

_____ MEEM 3999 Mech Eng Undergrad Research*

_____ MEEM 4170 Failure of Material in Mech (3)

_____ MEEM 4403 Computer-Aided Design Meth (4)

_____ MEEM 4635 Design with Plastics (3)

_____ MEEM 4999 Mech Eng Senior Research Thesis*

_____ MY 4155 Composite Materials (3)

Polymer Engineering Track
Credits Required = 16 – 17
Total Credits _____

* Topic must be approved.

Courses listed in this minor have the following prerequisites (shown in parenthesis). Concurrency is illustrated by the letter C: CM4610 (CH1122 or (CH1160 and CH1161)), CM4620 (CH2420), CM4631 (CM4610 C), MEEM4403 (ENG1102), MEEM4170 (MEEM3501), MEEM3210 (MEEM2200 and MEEM2700(C) and (MA3520 or MA3521 or MA3530 or MA360)), MEEM2150 (MEEM2110), CM4655 (CM4610 (C) or CH4610 (C) or CM4650 (C)), CM4650 ((CM3110 or MEEM 3210 or ENG3200 or MY3110 or CE3600) and (MA3520 or MA3521 or MA3530 or MA3560)), CH2420 (CH2410), MY4155 (MY2100), MEEM4635 (MY2100 and MEEM2150 and MEEM3210 and MEEM3230(C)), CH2411 (CH2410(C) and CH1122 or (CH1160 and CH1161)), CM3110 (CM2120 and (MA3520 or MA3521 or MA3530 or MA3560) and MA3160 an PH2100), MY3110 (MY2110 and MY3100 and (MA3520 or MA3521 or MA 3530 or MA3560)), MY4600 (MY2100), CH4610 (CH1122 or (CH1160 and CH1161)), ENG3200 (MA2160 and CH1112 or (CH1150 an CH1151) and PH2100 and ENG1102), ENG2120 (MA2160 an PH2100 an ENG1102), CH4631 (CH4610 (C) or CM4610 (C)), CH2410 (CH1122 or (CH1160 and CH1161))

Student Date Minor Advisor Signature Date