

# ENGINEERING: POLYMER ENGINEERING, MENG

## REQUIREMENTS

### MINIMUM GRADUATE SCHOOL REQUIREMENTS

Review the Graduate School minimum academic progress and degree requirements (<http://guide.wisc.edu/graduate/#policiesandrequirements>), in addition to the program requirements listed below.

### NAMED OPTION REQUIREMENTS

#### MODE OF INSTRUCTION

| Face to Face | Evening/<br>Weekend | Online | Hybrid | Accelerated |
|--------------|---------------------|--------|--------|-------------|
| No           | No                  | Yes    | No     | No          |

#### Mode of Instruction Definitions

**Accelerated:** Accelerated programs are offered at a fast pace that condenses the time to completion. Students typically take enough credits aimed at completing the program in a year or two.

**Evening/Weekend:** Courses meet on the UW–Madison campus only in evenings and/or on weekends to accommodate typical business schedules. Students have the advantages of face-to-face courses with the flexibility to keep work and other life commitments.

**Face-to-Face:** Courses typically meet during weekdays on the UW–Madison Campus.

**Hybrid:** These programs combine face-to-face and online learning formats. Contact the program for more specific information.

**Online:** These programs are offered 100% online. Some programs may require an on-campus orientation or residency experience, but the courses will be facilitated in an online format.

### CURRICULAR REQUIREMENTS

#### Requirement Detail

|   |  |
|---|--|
| Minimum Credit Requirement              | 30 credits   |
| Minimum Residence Credit Requirement    | 16 credits   |
| Minimum Graduate Coursework Requirement | 24 credits must be graduate-level coursework. Refer to the Graduate School: Minimum Graduate Coursework (50%) Requirement policy: <a href="https://policy.wisc.edu/library/UW-1244">https://policy.wisc.edu/library/UW-1244</a> ( <a href="https://policy.wisc.edu/library/UW-1244/">https://policy.wisc.edu/library/UW-1244/</a> ). |

|                          |  |
|--------------------------|--|
| Overall                  | 3.00 GPA required.   |
| Graduate GPA Requirement | Refer to the Graduate School: Grade Point Average (GPA) Requirement policy: <a href="https://policy.wisc.edu/library/UW-1203">https://policy.wisc.edu/library/UW-1203</a> ( <a href="https://policy.wisc.edu/library/UW-1203/">https://policy.wisc.edu/library/UW-1203/</a> ). |

**Other Grade Requirements** Must retake any courses for which a grade below BC is recorded.

**Assessments and Examinations** No formal examination is required.

**Language Requirements** No language requirements.

### REQUIRED COURSES

| Code  | Title                                 | Credits  |
|---|---------------------------------------|----------|
| <b>Core</b>                                   |                                       |          |
| Students must complete the following courses. |                                       |          |
| E P D 636                                     | Introduction to Polymers              | 3        |
| E P D 637                                     | Polymer Characterization              | 3        |
| E P D 639                                     | Plastics Recycling and Sustainability | 3        |
| E P D 640                                     | Introductory Polymer Rheology         | 3        |
| E P D 650                                     | Introduction to Polymers Processing   | 3        |
| <b>Manufacturing/Management Course</b>        |                                       | <b>3</b> |

Students select one of the following:

|            |  |
|------------|--|
| I SY E 618 | Quality Engineering and Quality Management |
| E P D 416  | Engineering Applications of Statistics     |
| E P D 611  | Engineering Economics and Management       |
| E P D 612  | Technical Project Management               |
| E P D 617  | Communicating Technical Information        |
| E P D 678  | Supply Chain Management for Engineers      |

| Electives                          | Credits  |
|------------------------------------|--|
| M E 417                            | Transport Phenomena in Polymer Processing        |
| M E 418                            | Engineering Design with Polymers                 |
| M E 419                            | Fundamentals of Injection Molding                |
| E P D 638                          | Polymer Coatings                                 |
| M E/CIV ENGR/<br>E M A 508         | Composite Materials                              |
| E P D 605                          | Fundamentals of Technical Project Management     |
| or E P D/<br>GEN BUS/<br>OTM 784   | Project Management Essentials                    |
| E P D 606                          | Leading and Managing Technical Teams             |
| or E P D/<br>GEN BUS/<br>M H R 783 | Leading Teams                                    |
| E P D 701                          | Writing for Professionals                        |
| E P D 702                          | Professional Presentations                       |
| E P D 704                          | Organizational Communication and Problem Solving |

|   |  |
|---|--|
| E P D 706   | Change Management                                |
| E P D 708   | Creating Breakthrough Innovations                |
| E P D 710   | Foundations of Engineering<br>Leadership         |
| E P D 712   | Ethics for Professionals                         |
| E P D/ACCT I S/<br>GEN BUS 781  | Financial and Business Acumen                    |
| E P D/GEN BUS/<br>MARKETNG 782  | Marketing for Non-Marketing<br>Professionals     |
| E P D/GEN BUS/<br>M H R 785   | Effective Negotiation Strategies                 |
| M E 514   | Polymer Additive Manufacturing                   |
| M E/E M A 570   | Experimental Mechanics                           |
| M E 699   | Advanced Independent Study                       |
| M E 717   | Advanced Polymer Processing                      |
| M E 718   | Modeling and Simulation in Polymer<br>Processing |
| M E/E M A 722   | Introduction to Polymer Rheology                 |
| Up to 6 credits from other College of Engineering<br>subjects with Advisor approval |  |

**Total Credits** **30**

Students in this program may not take courses outside the prescribed curriculum without faculty advisor and program director approval. Students in this program cannot enroll concurrently in other undergraduate or graduate degree programs.