POLYMER PROCESSING & MANUFACTURING, CAPSTONE CERTIFICATE

The Polymer Processing & Manufacturing capstone certificate is fully online and covers advanced analysis and modeling of plastics extrusion, injection molding, and other processes; mold and equipment design; along with materials consideration.

HOW TO GET IN

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APPLICANT REQUIREMENTS

This capstone certificate is geared toward those with an academic background in Engineering (Chemical, Mechanical, Materials, Biomedical, Biological Systems, Civil, Etc). Admitted applicants entering the program are expected to have completed an undergraduate degree in an Engineering Field, or Chemistry, Biochemistry, Food Science or Physics. Applications are accepted for Fall, Spring, and Summer on a rolling basis.

Division of Continuing Studies (DCS) is the admitting office for all University Special students, including capstone certificate students. However, the department offering the capstone certificate program makes the final admission decision upon review of all applicant materials.

- Hold a BS degree or equivalent credential from an accredited college or university.
- A minimum undergraduate grade-point average (GPA) of 3.00 on the equivalent of the last 60 semester hours (approximately two years of work) or a master's degree with a minimum cumulative GPA of 3.00.
  - Applicants from an international institution must have a strong academic performance comparable to a 3.00 for an undergraduate or master's degree.
- International degree-seeking applicants must demonstrate English proficiency by providing official results of an English proficiency exam. Scores must be within two years of the anticipated start of enrollment.
  - TOEFL: 92 internet (iBT)
  - IELTS: 7.0
  - Duolingo English Test: 125

Exceptions to standard admission requirements are considered by the admissions committee on an individual basis. Applicants may be admitted with deficiency, but will be expected to complete the necessary leveling courses.

ADMISSION

Applications are accepted for admission to all three terms (fall, spring, summer).

- Fall deadline: Aug 1
- Spring deadline: Dec 1
- Summer deadline: June 1

APPLICATION STEPS

1. Submit an online application for admission (https://acsss.wisc.edu/apply/) as a University Special student, selecting UNCS Capstone Certificate and the program: Polymer Processing & Manufacturing. This application is received and processed by DCS with final decision held for approval from the specific capstone certificate coordinator.
2. Submit the following materials to gradadmissions@interpro.wisc.edu (studentservices@interpro.wisc.edu):
   a. Resume/CV that includes educational history and professional experience
   b. Transcripts of all previous college work
   c. Two letters of recommendation submitted by the recommender. Use this recommendation form (https://uwmadison.box.com/s/104t5ce1rvo4qaccsbepe1qlwhd1sakw/).
3. After a decision has been made, the Graduate Advisor will contact you by email to inform you of the decision and inform you of next steps.

REQUIREMENTS

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GRADE REQUIREMENTS

Students must maintain a 3.00 GPA in the capstone to continue to the next class.

REQUIRED COURSES

Students must complete 9 credits from the following list.

Code	Title	Credits
E P D 640	Introductory Polymer Rheology	3
E P D 650	Introduction to Polymers Processing	3
M E 419	Fundamentals of Injection Molding	3
M E 514	Polymer Additive Manufacturing	3
M E 717	Advanced Polymer Processing	3
E P D 639	Plastics Recycling and Sustainability	3
M E 718	Modeling and Simulation in Polymer Processing	3
M E 417	Transport Phenomena in Polymer Processing	3
M E 418	Engineering Design with Polymers	3
E P D 636	Introduction to Polymers	3

MINIMUM REQUIREMENTS FOR CAPSTONE CERTIFICATE COMPLETION

- Students must earn a minimum grade of C in each course used to meet Capstone Certificate requirements.
- Courses in which a student elects the pass/fail or audit option will not count toward completion of Capstone Certificate requirements.

- All of the Capstone Certificate credits must be earned "in residence" (which includes on campus and distance-delivered courses) at UW-Madison.
- All of the Capstone Certificate credits must be earned while enrolled in the Capstone Certificate program.

Individual Capstone Certificate programs may have additional requirements for completion, which will be listed above as/if applicable.

LEARNING OUTCOMES

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1. Explain the common synthetic strategies for the fabrication of polymers.
2. Evaluate issues in manufacture and processing to make a material or compound.
3. Analyze outcomes of polymer materials based on properties such as viscoelasticity.