

Coatings and Polymeric Materials

Coatings and Polymeric Materials Minor

Students wishing to prepare for a career as a mechanical engineer in the plastics and coatings industries, or for a career in a manufacturing industry as a mechanical engineer with expertise in the fields of plastics and coatings, are encouraged to pursue a minor in Coatings and Polymeric Materials (<http://www.ndsu.edu/bulletin/colleges/scimath/cpm>) (CPM). Numerous career opportunities for mechanical engineers with this specialized training are available in the coatings industry, which manufactures paints and coatings to enhance and preserve such items as automobiles, ships, steel structures, machines, and household appliances. Many other opportunities are available in various manufacturing industries where more and more components previously fabricated from metals are now made from plastics and fiber-reinforced composite materials. Due to the unique nature of this program, the demand for graduates far exceeds the supply.

Minor Requirements

Coatings and Polymeric Materials Minor

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Required Credits: 16

Required Courses

Select 16 credits from the following:	16
CHEM 341	Organic Chemistry I
CHEM 341L	Organic Chemistry I Laboratory
CHEM 342	Organic Chemistry II
CHEM 342L	Organic Chemistry II Laboratory
CPM 451	Laboratory, Chemical, Radiation, and Biological Safety
CPM 472	Environment and Chemical Industries
CPM 473	Polymer Synthesis
CPM 474	Coatings I
CPM 475	Coatings II
CPM 483	Polymer Practicum
CPM 484	Coatings I Laboratory
CPM 485	Coatings II Laboratory
CPM 486	Corrosion and Materials
CPM 487	Corrosion and Materials Laboratory
CPM 497	
Total Credits	16

Minor Requirements and Notes

- A minimum of 8 credits must be taken at NDSU.
- If CHEM 341 Organic Chemistry I/CHEM 341L Organic Chemistry I Laboratory and CHEM 342 Organic Chemistry II/CHEM 342L Organic Chemistry II Laboratory are required for Major degree, the credits cannot also count toward a minor in Coatings and Polymeric Materials. CHEM 353 Majors Organic Chemistry Laboratory I and CHEM 354 Majors Organic Chemistry Laboratory II can be

substituted for CHEM 341L Organic Chemistry I Laboratory and CHEM 342L Organic Chemistry II Laboratory.

- Chemistry majors taking CPM minor are required to have CPM 473 Polymer Synthesis.
- One CPM Laboratory Course (CPM 484 Coatings I Laboratory, CPM 485 Coatings II Laboratory, CPM 483 Polymer Practicum, CPM 487 Corrosion and Materials Laboratory)