

# RENEWABLE BIOPRODUCTS, MINOR

Requirements for a minor may be completed at any campus location offering the specified courses for the minor. Students may not change from a campus that offers their major to a campus that does not offer their major for the purpose of completing a minor.

## Program Requirements

Requirement	Credits
Requirements for the Minor	18

### Requirements for the Minor

A grade of C or better is required for all courses in the minor, as specified by Senate Policy 59-10 (<https://senate.psu.edu/students/policies-and-rules-for-undergraduate-students/59-00-minors-and-certificates/>).

In addition, at least six credits of the minor must be unique from the prescribed courses required by a student's major(s).

Code	Title	Credits
<b>Prescribed Courses</b>		
<i>Prescribed Courses: Require a grade of C or better</i>		
ABSM 300	Introduction to Agricultural and Biorenewable Products	3
ABSM 350	Introduction to Life Cycle Assessment	3
ABSM 411	Bioproducts Science and Technology	3
<b>Additional Courses</b>		
<i>Additional Courses: Require a grade of C or better</i>		
Select 9 credits from the following:		9
ABSM 402	Foundations of Sustainable Business	
ABSM 417	Processing and Manufacturing Systems for Bioproducts	
ABSM 423	Deterioration and Protection of Bioproducts	
BE 404	Engineering Properties of Food and Biological Materials	
BE 464	Bioenergy Systems Engineering	
BE 465	Food and Biological Process Engineering	
BE 468	Microbiological Engineering	
BME 444	Surfaces and the Biological Response to Materials	
BME 446	Polymers in Biomedical Engineering	
CHE 442	Polymer Processing Technology	
CHE 443	Introduction to Polymer Science	
CHEM 480	Chemistry and Properties of Polymers	
EGEE 439	Alternative Fuels from Biomass Sources	
MATSE 441	Polymeric Materials I	
MATSE 445	Thermodynamics, Microstructure, and Characterization of Polymers	
MATSE 446	Mechanical and Electrical Properties of Polymers and Composites	
MATSE 447	Rheology and Processing of Polymers	