

# ONLINE COURSES



## Curious? Find out more...

### Are you interested in:

- Renewable Energy
- Renewable Resources
- Food Sustainability
- Renewable Materials
- Water Sustainability
- Recycling

### Want to complete liberal education credits completely online?

The University of Minnesota's Department of Bioproducts and Biosystems Engineering offers **8 online courses**, taught by outstanding faculty.

## BBE 1002

### Biorenewable Resources

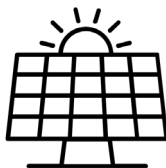
- Meets Technology & Society CLE Theme
- Fall / Spring
- Environmental, technological, social, and economic implications of the use of biorenewable, wood and agriculture-based biomass resources and products.



## BBE 2201

### Renewable Energy and the Environment

- Meets Technology & Society CLE Theme
- Fall / Spring / Summer
- Cover elements of renewable energy technologies and policies; the social, environmental, and economic effects of using renewable & non-renewable sources.
- [www.bbe2201.cfans.umn.edu](http://www.bbe2201.cfans.umn.edu)



## BBE 3201

### Sustainability of Food Systems: A Life Cycle Perspective

- Meets Global Perspective CLE Theme
- Fall / Spring / Summer
- Reviews the consequences and diversity of global food system; current topics in food sustainability.



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## **BBE 4001**

### **Chemistry of Biomass and Biomass Conversion to Fuel and Products**

- Meets Environment CLE Theme
- Fall
- Application of chemical principles to sustainable utilization of biomass for renewable materials, chemicals, plastics, energy and other products.



## **BBE 4305 / 5305**

### **Pulp and Paper Technology**

- Spring
- Pulp and paper manufacturing and applications



## **SSM 3301**

### **Global Water Resource Use and Sustainability**

- Meets Environment CLE Theme
- Fall / Spring
- Is water a birthright? Explore the many facets of water, Earth's most abundant resource. Examine the complexities of scarcity, water quality, and protection.



## **ESPM 3601**

### **Sustainable Housing:**

### **Community, Environment, and Technology**

- Meets Technology and Society CLE Theme
- Fall / Spring
- The role of technology, environment and community on sustainable housing.



## **ESPM 3605 / 5605**

### **Recycling: Extending Raw Materials**

- Meets Technology and Society CLE Theme
- Spring
- Principles and practice of recycling and the impact of technology, energy and environment for sustainable material utilization

#### **FOR MORE INFORMATION, CONTACT:**

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#### **HOW TO REGISTER:**

[onestop.umn.edu/academics/online-classes](https://onestop.umn.edu/academics/online-classes)

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Department of  
**BIOPRODUCTS AND  
BIOSYSTEMS ENGINEERING**

UNIVERSITY OF MINNESOTA