



BIOPROCESSING & BIOENERGY

The Illinois Professional Science Master's (PSM) program in bioprocessing & bioenergy is perfect if you want to:

- find yourself on the cutting edge of multidisciplinary technology in the emerging and rapidly changing field of industrial biotechnology;
- learn from world-renown scientists and researchers working to develop new technologies;
- build upon decades of research and genetic improvements to agricultural crops and microbes to develop comprehensive bioprocessing expertise;
- gain an understanding of the environmental, ecological, political, and societal implications of bioprocessing and bioenergy; and
- harness the science of bio-based products and energy (biofuels, electricity, biogas, etc.) to create new technologies and effect change.

The science core in bioprocessing and bioenergy is complemented by a business curriculum that includes technology management, marketing, entrepreneurship, process management, regulatory policy, and more. A cross-disciplinary industry seminar series offers opportunities to personally interact with industry and government leaders.

The program can be completed in 16-months of full-time study on the Urbana-Champaign campus. Summer enrollment is required while completing the internship. A thesis is not required.

CAREER OPPORTUNITIES

- Bioprocessing feedstock development (e.g., grains, biomass, algae, wastewater)
- Research and development
- Business analysis
- Product and process analysis
- Technical sales
- Analysis for policy or law
- Biorefinery management
- Value-added co-product marketing
- Green chemical development
- Marketing specialist

SPECIALIZATIONS

- Plants, Soil, and Feedstock
- Production, Processing and Use
- Environmental, Economics, Policy Law
- Tools and Methods

Faculty Coordinator

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Coordinated by the University of Illinois Integrated Bioprocessing Research Laboratory (IBRL) and Department of Agricultural and Biological Engineering, in cooperation with the Graduate College.

Applications may be submitted online. For additional information, visit the University of Illinois PSM website at psm.illinois.edu or email PSMdegree@illinois.edu.

ADMISSION REQUIREMENTS

- Bachelor's degree from a regionally accredited U.S. Institution or a comparable degree from a recognized institution abroad,
- Grade point average of 3.0 or higher (4.0 scale) for the last 60 hours of undergraduate work and for any graduate work,
- Graduate Record Examination (GRE),
- Test of English as a Foreign Language (TOEFL) for non-native speakers of English, and
- Three (3) letters of recommendation.

SAMPLE PROGRAM OF STUDY

Year 1: Fall

Science Curriculum

ABE 488	Bioprocessing Biomass for Fuel
ACES 409/509	Bioenergy Systems
CPSC 415	Bioenergy Crops

Business Curriculum

- Two 2-hour courses in
- Business Fundamentals, and
 - Management and Marketing
- PSM 501 Industry Seminar I

Year 1: Spring

Science Curriculum

ACE 516	Environmental Economics
ACES 501	Advanced Bioenergy Topics
CHBE 594	Bioenergy Technology
TSM 486	Grain Bioprocessing Coproducts

Business Curriculum

- Two 2-hour courses in
- Project Management, and
 - Finance
- PSM 502 Industry Seminar II

Summer Internship

PSM 555	PSM Internship
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Year 2: Fall

Science Curriculum

ABE 498	Sustainable Biosystems Lab
ACE 501	Risk and Info: Theory and Application
TSM 438	Renewable Energy Applications

Business Curriculum

- One 2-hour course in Science and Regulatory Policy
- PSM 503 Industry Seminar III

December Graduation

*This is a **sample curriculum**; your courses will depend upon your individual interests and career plans. For additional course offerings, visit: <http://psm.illinois.edu/bioenergy>*

Students have interned at:

- Abengoa,
- BP Biofuels, LLC,
- Clean Energy Trust,
- Dow AgroSciences,
- Illinois EPA,
- Illinois Green Business Assoc.,
- U.S. Dept. of Agriculture,
- U.S. EPA,
- and others.

Graduates have been hired by:

- Archer Daniels Midland (ADM),
- BCS, Incorporated,
- Cleantech Group,
- DuPont,
- Greenaltech,
- Ingredion,
- Oak Ridge National Laboratory,
- Pacific Gas & Electric,
- and others.

