



ILLINOIS PROFESSIONAL SCIENCE MASTER'S

Bioprocessing & Bioenergy



The 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-renowned scientists and researchers working to develop new technologies;
- build upon decades of research and genetic improvements to agricultural crops and microbes to develop comprehensive bioprocesses;
- gain an understanding of the environmental, ecological, political, and societal implications of bioprocessing and bioenergy; and
- harness the potential 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 interact with industry and government leaders.

The program can be completed in 18-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
- Product and process analysis
- Technical sales
- Biorefinery management
- Value-added co-product marketing
- Green chemical development
- Business analysis
- Analysis for policy or law
- Marketing specialist

Program Advisor

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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 College of ACES.

SCAN ME



Apply Online

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UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN



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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
- Test of English as a Foreign Language (TOEFL) for non-native speakers of English
- Three (3) letters of recommendation.



Sample Program of Study

Year 1: Fall

Science Curriculum

ABE 488	Bioprocessing Biomass for Fuel
ABE 594	Graduate Seminar
CHBE 594	Bioenergy Technology
CPSC 415	Bioenergy Crops

Business Curriculum

- Two 2-hour courses in:
- Business Fundamentals
 - Project Management
- | | |
|---------|--------------------|
| PSM 501 | Industry Seminar I |
|---------|--------------------|

This is a sample curriculum; your courses will depend upon your individual interests and career plans.

[See Course Overview
psm.illinois.edu/bb/overview](https://psm.illinois.edu/bb/overview)

Year 1: Spring

Science Curriculum

ABE 446	Biological Nanoengineering
ACE 516	Environmental Economics
ENG 471	Energy & Sustainable Engineering
FSHN 471	Food and Industrial Microbiology

Business Curriculum

- Two 2-hour courses in:
- Choice of 2 business courses
- | | |
|---------|---------------------|
| PSM 502 | Industry Seminar II |
|---------|---------------------|

Summer Internship

PSM 555	PSM Internship
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Year 2: Fall

Science Curriculum

ABE 594	Graduate Seminar
FSHN 574	Value Added Biotransformation
ETMA 438	Renewable Energy Applications
ETMA 586	Grain Bioprocessing Coproducts

Business Curriculum

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

Students have interned at:

- Abengoa
- Boston Bioprocess
- BP Biofuels, LLC
- Clara Foods
- Forge Biologics
- Illinois & U.S. EPA
- LanzaTech
- Nestle
- and others

Graduates have been hired by:

- Alto Ingredients
- Amyris
- Archer Daniels Midland (ADM)
- Cleantech Group
- DuPont
- Greenaltech
- Ingredion
- Oak Ridge National Laboratory
- Pacific Gas & Electric
- and others

December Graduation

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