

GRADUATE PROGRAM FACT SHEET

BIOLOGICAL & ECOLOGICAL ENGINEERING

The graduate program in Biological & Ecological Engineering deals with diverse issues in the design and analysis of a wide range of biological, ecological and hydrologic systems. Focus areas are in bioprocessing, include agricultural, biological, ecological biosystems analysis and water resource engineering and /watershed analysis.

Research topics in Biological and Ecological Engineering encompass sustainable fuel production, innovative water treatment systems, sustainable technologies for agriculture, design of sensors and sensor networks for environmental monitoring, river engineering, water resource/water quality engineering, landscape-level analysis of natural, agricultural, and human systems, and similar areas applying engineering analysis and design to ecological and water resource systems to address emerging environmental and human needs. Several of the research topics under *Water Resources Engineering are also applicable to Biological & Ecological Engineering.

*Water Resource Engineering (WRE) at OSU is an interdisciplinary program separate from BEE, with advisors in the BEE department. If you want to pursue a WRE degree, you should apply to the Water Resources Graduate Program's Water Resources Engineering program, NOT the Biological and Ecological Engineering program.

Biological & Ecological Engineering | M.S., MENG, PhD

The graduate program in BEE deals with diverse issues in the design and analysis of a wide range of biological, ecological and water resource systems. Research teams address emerging societal issues including optimizing water and energy flows, sensing and modeling the environment, mitigating climate change impacts, and designing sustainable systems for water use/ treatment, bioenergy production, agricultural production, and water resource systems.

Water Resource Graduate Program | M.S., PhD

The interdisciplinary Water Resources Graduate Program at Oregon State University awards M.S. and PhD degrees and brings together faculty and students from six colleges and multiple departments, including the Biological & Ecological Engineering department. The degrees are designed to allow flexibility in coursework, while insuring an outstanding foundation and specialization in your area of interest.



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Graduate Students



1

BEE Fellowship



1

University Distinguished Faculty:
John Selker

Get to know Biological & Ecological Engineering online:



Learn more at: bee.oregonstate.edu/biological-and-ecological-engineering/programs/graduate



**Oregon State
University**

Graduate Student Support

- Five to Eight (domestic and international) new PhD students per year receive full funding to support their studies. Some Masters students also receive funding.
- Financial support includes scholarships, Minor Fellowship, Graduate Research Assistants and Graduate Teaching Assistants.
- The department and University also award several graduate fellowships and scholarships to outstanding students. For more information see the Graduate School's Financing Your Education website at gradschool.oregonstate.edu/finance.
- The Coalition of Graduate Employees (CGE) represents the interests and rights of Oregon State University's graduate employees through the bargaining and maintenance of a fair working contract. CGE strives to create a community of graduate employees empowered to advocate for collective issues.
- Many ways to network; EcoE Club, Hydrofiles, winter seminar courses, spring awards ceremony, BBQ, fall welcome luncheon, Food Drive and more.

How to Apply

The online application, a downloadable application form, and contact information are available from the [Graduate School](#). You may also write to the Graduate School, Oregon State University, 2900 SW Jefferson Way, Corvallis, Oregon 97331; telephone them at 541-737-4881, or email at graduate.school@oregonstate.edu.

A student wishing to be admitted to any graduate program at Oregon State University must complete an application form, pay the application fee, and submit photocopies of all official transcripts. International students must also submit recent TOEFL scores and certify sufficient funding to complete the required degree. The Office of Admissions provides [a more complete listing of required documents and application steps](#). Detailed information for both [domestic applicants](#) and [international applicants](#) is also available.

Program Requirements

• Undergraduate Fundamentals

One year, Calculus Equivalent : MTH 251,252, (306 or 254)

Applied Differential Equations Equivalent: MTH 256

One year, University-level Physics Equivalent:
PH 211,212,213

One year, Chemistry for engineering majors Equivalent:
CH 201, 202, 205, 211, 212

• Three letters of recommendation

• Academic transcripts from each institution you attended

• A Statement of Objectives

Alumni Spotlight

Dr. Deepak Kumar is an Assistant Professor in the Department of Chemical Engineering at the State University of New York College of Environmental Science and Forestry (SUNY-ESF). Building upon his experience and skills gained during his Ph.D. in BEE at OSU, his research at ESF (sites.google.com/view/kumar-sbbl/) focuses on sustainable production of biofuel and high-value products (food ingredients, bioplastics, bioproducts) from agro-processing waste using combined experimental and modeling approaches.

