

BIOLOGICAL SYSTEMS ENGINEERING, DOCTOR OF PHILOSOPHY

College of Engineering

The Graduate Program in Biological Systems Engineering

Integrated B.S./M.S., M.S., M.Engr., D.Engr., and Ph.D. in Biological
Systems Engineering

Designated Ph.D. emphasis available in Biotechnology

Graduate students in Biological Systems Engineering focus on finding economically and environmentally sustainable solutions to many of the most important global issues of our time—the safety, security and abundance of our food, detection of pathogens, development of bioenergy and other sustainable energy systems, control of insect-borne disease and damage, as well as the preservation of our land, air and water resources.

We enjoy the strategic advantage of being located in California, the national leader in agricultural production and crop diversity, and a major center for biotechnology. With the unique status of belonging to both the College of Engineering and the College of Agricultural & Environmental Sciences, the program benefits from a wide diversity of collaborations across multiple disciplines. We interact with colleagues in both engineering and the life sciences to create multidisciplinary approaches to our teaching and research. Students benefit from this dynamic environment that combines the strengths of nationally ranked engineering, agricultural, and environmental programs.

Financial support is available in the form of research assistantships, teaching assistantships, fellowships and financial aid.

Research Highlights

- Automation & Control
- Bioenvironmental engineering
- Renewable energy
- Industrial biotechnology
- Food safety
- Biosensors
- Bioprocess engineering
- Bioinstrumentation
- Ergonomics, health & safety
- Aquacultural engineering
- Ecological systems engineering
- Food engineering
- Forest & fiber engineering
- Postharvest engineering
- Remote sensing
- Robotics & autonomous systems
- Soil & water engineering
- Machine systems & precision agriculture

Research Facilities & Partnerships

- Agricultural Ergonomics Research Center
- Fish Conservation & Culture Laboratory
- GIS Visualization Lab
- Energy & Efficiency Institute
- Bodega Marine Lab
- Western Center for Agricultural Equipment

Complete information is available on the departmental website (<https://bae.ucdavis.edu/>).