

Department of Biological and Agricultural Engineering

In the Department of Biological and Agricultural Engineering we embrace natural solutions. By applying engineering principles and the fundamentals of biology-based systems and tools, we're managing natural resources to address the grand challenges related to providing food, water, fiber and energy to our growing world. The scope of BAE ranges in scale from the molecular to the ecosystem level, for the safe, efficient, and environmentally sound production, processing and management of agricultural, biological and natural resources. From bioenergy to food processing and water management, we're engineering solutions for a sustainable future.

The BAE department provides excellent educational opportunities at the undergraduate level with programs that are well recognized as among the finest in the United States. Most recently, NC State BAE was No. 4 among biological and agricultural engineering programs nationally.

Department highlights:

- All of the resources of a large department but with the added value of a personalized, community environment.
- There is a broad range of departmental clubs and initiatives to become involved with including the Pack Pullers Quarter Scale Tractor Competition Team, the American Society of Agricultural and Biological Engineers Student Chapter, ASABE Robotics Team, Bioprocessing competition teams, and the Fountain Wars Design Competition Team.
- BAE students have the opportunity to learn abroad including a trip led by BAE faculty to Spain to study ancient Roman engineering.
- Students in BAE gain valuable hands on experience in the machine shop and the natural environment.

For more information about our department, including contact information, visit our website (<http://bae.ncsu.edu>).

Faculty

Department Head

Lingjuan Wang-Li, *Professor, Interim Department*

Director

John Classen, *Director of Graduate Programs*

Professors

François Birgand

Michael Burchell, *Department Extension Leader*

Jay Cheng

Andy Hale, *Undergraduate Coordinator*

Steven Hall, *William White Distinguished Professor*

Bill Hunt, *William Neal Reynolds Distinguished University Professor & Extension Specialist*

Praveen Kolar

Sanjay Shah

Mohamed Youssef

Wenqiao (Wayne) Yuan

Associate Professors

Celso Castro Bolinaga

Natalie Nelson

Mahmoud Sharara, *Extension Specialist*

Jason Ward, *Extension Specialist*

Assistant Professors

Frank Bai

Lucie Guertault

Daniela Jones

Chad Poole, *Extension Specialist*

William Joe Sagues

Ryan Sartor

Chadi Sayde

Lirong Xiang

Lecturer

Tommy Stephenson

Associate Extension Professor

Barbara Doll

Grant Ellington

Plans

- Biological and Agricultural Engineering Technology (BS) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/biological-agricultural-engineering/biological-agricultural-engineering-technology-bs/>)
- Biological and Agricultural Engineering Technology (BS): Agricultural Systems Management Concentration (<http://catalog.ncsu.edu/>)

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- Biological and Agricultural Engineering Technology (BS): Environmental Systems Management Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/biological-agricultural-engineering/biological-agricultural-engineering-technology-bs-environmental-systems-management-concentration/>)
- Biological and Agricultural Engineering Technology (Minor) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/biological-agricultural-engineering/agricultural-environmental-technology-minor/>)
- Biological Engineering (BS): Agricultural Engineering Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/biological-agricultural-engineering/biological-engineering-bs-agricultural-engineering-concentration/>)
- Biological Engineering (BS): Bioprocessing Engineering Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/biological-agricultural-engineering/biological-engineering-bs-bioprocessing-engineering-concentration/>)
- Biological Engineering (BS): Ecological Engineering Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/biological-agricultural-engineering/biological-engineering-bs-ecological-engineering-concentration/>)
- Biological Engineering (BS): Environmental Engineering Concentration (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/biological-agricultural-engineering/biological-engineering-bs-environmental-engineering-concentration/>)
- Biological, Agricultural, and Ecological Engineering (BS) (<http://catalog.ncsu.edu/undergraduate/agriculture-life-sciences/biological-agricultural-engineering/biological-engineering-bs/>)