We recommend Margie’s Travel to anyone who will listen to us. They anticipated every need and solved every potential stressor.

-Henriette Andersen

Henriette Andersen and her family had never left the town of Raleigh and wanted to go on a winter adventure, but they were nervous about getting ill or lost in another country. Our agent put together a fool-proof vacation, including checklists, trusted contacts in the vacation spot, and other resources. The family returned rejuvenated and eager for more travel.

UNDERGRADUATE RESEARCH OPPORTUNITIES

- Biofuel process engineering
- Engineered tissue disease models
- Food & agricultural intensification
- Gene therapy vector engineering
- Lab-on-chip diagnostics
- Metabolic engineering
- Micro- & nanoscale biophotonics
- Nanomaterial in plants & microbes
- Neural tissue engineering
- Synthetic biology engineering
- Sustainable waste-to-bioproducts

BIOLOGICAL ENGINEERING

**Biosynthetic**
Design, build, and integrate novel genes into cells engineered to produce gene products like proteins to augment function and treat disease

**BioAg/Environmental**
Engineer new devices and nanomaterials to select strains and cultivars to treat water and soil and sustainably enhance crop productivity

**Biomedical**
Engineer cells, tissues, and devices to model, diagnose, and treat disease. Engineer devices and clinical practices to restore and improve human health

**Bioprocess**
Design, build, and operate bioreactors and systems to grow cells and harvest cell products like DNA and biochemicals to improve health and sustainable energy

CLUBS AND ORGANIZATIONS

- Engineering Ambassador Program
- Engineering Council
- Engineers Without Borders
- Institute of Biological Engineering
- National Society of Black Engineers
- Society of Hispanic Professional Engineers
- Society of Women Engineers

STUDENTS

- 15-20 students in class
- 40% females in the department
- 100% pass national Fundamentals of Engineering exam
- All seniors do capstone research in local companies
- Most student research options
- Get great jobs in top companies!

FACULTY

-Foster Agblevor
Biofuel Processes

-David Britt
Bio-Agriculture

-Yu Huang
Tissue Engineering

-Charles Miller
Synthetic Biology

-Keith Roper
Photonics & Genes

-Ron Sims
Waste to Bioproducts

-Tim Taylor
Food/Bioprocesses

-Elizabeth Vargis
Disease modeling

-Jixun Zhan
Metabolic Engineering

-Anhong Zhou
Cell Biomarkers
OUR MISSION:
- Human centered engineering -
  Apply engineering principles with
  math, physics and biological sciences
  to design and engineer nature’s
  factories (cells, tissues, organisms) to
  produce innovative products that
  improve human health.

Students get hands-on experience in
our courses in biochemical
engineering, synthetic biological
engineering, metabolic engineering,
biophotonics, biofuels, tissue
engineering, biomaterials engineering,
and biosensors.

WHY STUDY USU BIOLOGICAL ENGINEERING?

- Nationally Ranked: #25 in the U.S.
  (2018 U.S. News & World Report)
- Experienced faculty
  >26 years bioindustry experience
  >14 years in federal agencies/labs
- Great student experiences
  - Core classes with hands-on labs
  - Teamwork in small classes (15-20)
  - Most undergraduates do research
  - Senior capstone in industry!
- Most network & leadership options
- Diversity: 40% female students
- Top jobs in a growing market
  >40 Utah firms hire our students
  >21% job growth in the 21st century

Be a Biological Engineer!
BE the FUTURE!

Contact the Scholarship
Department with any
questions about financial
assistance
<scholarships@usu.edu>

Contact Keith Roper with
questions about biological
engineering at USU
<keith.roper@usu.edu>

Be a Biological Engineer!
BE the FUTURE!