



Biological Engineering Program at Utah State University

Why become a Biological Engineer?

- **Biological engineers will solve today's pressing problems in the areas of human health, sustainable environment, and energy independence.**
- **Employment in biological engineering will grow at over 20% per year in the next decade, at starting salaries of \$52 - \$100,000 +.**
- **Biological Engineering, especially in the area of biofuels, will positively impact the economic recovery, economic output, and energy security of the United States.**
- **Biological Engineering offers many areas of specialization.**
- **Biological Engineers will make a difference in the world.**



Incoming freshmen interning in the Synthetic Biomanufacturing lab during their senior year of High School



Undergraduate Jonathan Valiente conducting on research in the Metabolic Engineering lab.



Graduate Student, Logan Christenson records data from a pilot algae race-way at the Logan Lagoons Research Site.

What do biological engineers do?

- **Engineer living systems to improve quality of life and to create new industry.**
- **Design, build, and test systems in biomedical, biosensors, and bioprocess fields**
- **Engineer bioenvironmental systems for sustainability and security**
- **Develop new technologies based on engineered biological systems**

Coursework topics include:

- **Cellular Engineering (Synthetic Biology)**
- **Metabolic Engineering**
- **Integrated Tissue Engineering**
- **Molecular & Cellular Sensing & Imaging**
- **Biomaterials & Biosurfaces**
- **Biochemical Engineering**
- **Bioprocess Engineering**
- **Synthetic Biophotonics**
- **Biofuels**

Why our students recommend Biological Engineering at USU:

- ✓ **Personalized program**
(10 **students/faculty**)
- ✓ **Small class sizes**
(15 - 25 **students**)
- ✓ **Breadth of topics/Interdisciplinary**
- ✓ **Hands on research opportunities for Freshmen through Seniors**
- ✓ **Growing job market**
- ✓ **Diversity**

For more information visit our website:

www.be.usu.edu

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Dan Nelson presenting his research poster at the Institute of Biological Engineering annual conference, with Dr. Ronald Sims.



Bio-fuels engineering: anaerobic digester for bio-methane, CO₂, liquid nutrients, and soil conditioner products from algae

 **BIOLOGICAL
ENGINEERING**

 **UtahStateUniversity**
COLLEGE OF ENGINEERING