



# Chem & Bio Engineering

**Chemical and biological engineers harness organic and inorganic forms of matter to improve the world.** Whether it's optimizing the composition of a substance or developing new products that are stronger and more reliable, chemical and biological engineers develop exciting new technologies for a variety of industries, including energy, agriculture, and environmental science.

## **Where do Chemical & Biological Engineers Work?**

Chemical and biological engineers work in a variety of organizations, including:

- National research labs
- Pharmaceutical companies
- Industrial manufacturing
- Food engineering research

## **Explore Our Chemical & Biological Curriculum**

### **Grades 3-5:**

Acid Attack  
Stretching to Compare Properties: The Plastic Test  
Acid Rain Effects

### **Grades 6-8:**

Red Cabbage Chemistry  
Chromatography Lab  
Edible Algae Models

### **Grades 9-12:**

Bio-Engineering: Making and Testing Model Proteins  
Bridging to Polymers: Thermoset Lab  
Creepy Silly Putty

## **Chemical & biological engineering spans many disciplines, but is generally broken into a few subfields:**

chemistry, chemical processes, petrochemical engineering, nanotechnology, plastics, materials engineering biology, biochemical engineering, environmental health engineering, bioinformatics

## **What do Chemical & Biological Engineers Study?**

Chemical and biological engineers work to solve challenges involving chemical, biological, and physical phenomena. Areas of academic study include a range of natural sciences and systems, such as human physiology, plant biology, environmental science, organic and physical chemistry, depending on the topic of focus, and a focus on key engineering concepts such as mass balances, properties of materials, computer modeling and product design.