

# ENGINEERING

## What can you do with a PhD in Engineering?

Special High-Tech Research Positions  
Program Manager/Director of Engineering  
College/University Teaching and Research  
Consulting

### Who might you work for?

State and Local Government Agencies  
Federal Government  
Professional, Scientific, and Technical  
Services Sector

**Aerospace engineers** design, develop, and test aircraft, spacecraft, and missiles and supervise the manufacture of these products.

**Chemical engineers** apply the principles of chemistry to solve problems involving the production or use of chemicals and biochemicals.

**Civil engineers** design and supervise the construction of roads, buildings, airports, tunnels, dams, bridges, and water supply and sewage systems.

**Electrical engineers** design, develop, test, and supervise the manufacture of electrical equipment.

**Industrial engineers** determine the most effective ways to use the basic factors of production - people, machines, materials, information, and energy - to make a product or provide a service.

**Mechanical engineers** research, design, develop, manufacture, and test tools, engines, machines, and other mechanical devices.

## What does CWU have to offer?

- The **McNair Scholars Program**
- The **Science Talent Expansion Program (STEP)**, which focuses on increasing the total number of students obtaining STEM (Science, Technology, Engineering, and Mathematics) degrees at CWU and the number of traditionally underrepresented students in STEM under-graduate majors. STEP provides academic and social support as well as challenging and stimulating activities that help develop critical thinking and problem-solving skills that are essential for success in STEM careers.
- A Science Honors Program
- A student chapter of the Associated General Contractors of America (AGC)
- A student chapter of the National Association of Home Builders
- Sigma Lambda Chi: National honor society for Construction Management students
- Student Mentoring Program
- A student chapter of the American Society of Mechanical Engineers (ASME): <http://www.asme.org/>
- A student chapter of the Institute of Electrical and Electronic Engineers (IEEE): <http://www.ieee.org/>

## Featured PhD Holders:

### Henry Samueli

**PhD in Electrical Engineering,  
UC - Los Angeles**

Co-Founder, Chairman and Chief Technology Officer of the BroadCom Corporation. Dr. Samueli is a major businessman and philanthropist, and is a named inventor on 22 U.S. patents.

### Kristi S. Anseth

**PhD in Chemical Engineering,  
University of Colorado, Boulder**

Dr. Anseth is a Howard Hughes Medical Institute Investigator, Tisone Professor and Distinguished Professor of Chemical and Biological Engineering at the U of Colorado, Boulder. She is a dedicated teacher, recognized on the national level for her excellence in teaching and research. She designs new biomaterials for medical and biological applications.

\* From *Making a Difference: A Selection of Graduate Degree Holders and Their Contributions to the Public Good*. Council of Graduate Schools, 2008.