People just like you who use problem-solving skills and imaginations to design and create things that make a world of difference

...creative thinkers who ask

- “How can we develop a better recycling system to protect the environment?”
- “How can we design a school that withstands an earthquake?”
Become an engineer to…

Build your future!

Make the world a better place

- Develop new technologies that change the world
- Improve society
- Reduce pollution
- Make life more convenient

Tap into your

- Creativity
- Passion
- Curiosity
Architectural Engineering  Civil Engineering  Environmental Engineering
It is *more* than designing and constructing buildings, bridges, dams, roads, utilities:

- **21st Century Engineers have new constraints:**
  - Sustainability
  - Resource limitation (energy, water, and materials)
  - Environmental impacts
  - Natural and man-made hazards
  - Greater public participation

- **You will practice on a global scale**
What do you think was the average grade for U.S. Infrastructure (bridges, roads, water, wastewater, etc.)?

2009, ASCE Report Card

http://www.infrastructurereportcard.org/
What do you think was the average grade for U.S. Infrastructure (bridges, roads, water, wastewater, etc.)?

- A
- B
- C
- **D**
- F

Need $2.2 Trillion over next 5 yrs

2009, ASCE Report Card

civil.port.ac.uk
smi-online.co.uk
http://www.infrastructurereportcard.org/
Civil engineers... Provide access to clean water!

- 1B people lack access to safe water
- 1B people live on less than $1/day
- only 2.5% global water is “fresh”
- <0.007% water readily available via rivers, lakes, streams
Architectural engineers... Can save energy!

GREEN BUILDING INITIATIVES

- Leadership in Energy and Environmental Design (LEED) Green Building Rating System™
- U.S. Conference of Mayors Climate Protection Agreement
- The “Chicago Standard” for Buildings

Buildings consume 40% of energy in the US
Buildings generate 8% of carbon dioxide in the US
Bernard Amadei, civil engineering professor and founder of Engineers Without Borders

- **Challenge:** Creating sustainable solutions to meet basic needs in rural communities
- **Projects:** Water, sanitation, food, energy & shelter
- At the request of communities, who work side-by-side with engineering students
Bioaerosols

Helping victims of Katrina

Mark Hernandez, civil engineering professor

- Project: tested air for bioaerosols after Hurricane Katrina
- Research: environmental microbiology in emerging engineering and health issues
# Typical Starting Salaries

**With a CU BS engineering degree**

<table>
<thead>
<tr>
<th>Field</th>
<th>Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architectural Engineer</td>
<td>$50,923</td>
</tr>
<tr>
<td>Civil Engineer</td>
<td>$50,021</td>
</tr>
<tr>
<td>Environmental Engineer</td>
<td>$48,980</td>
</tr>
<tr>
<td><strong>versus</strong></td>
<td></td>
</tr>
<tr>
<td>Anthropology</td>
<td>$28,000</td>
</tr>
<tr>
<td>Elementary Education</td>
<td>$32,400</td>
</tr>
<tr>
<td>Communications</td>
<td>$34,000</td>
</tr>
</tbody>
</table>

Civil engineers expected to have much faster than average employment growth -- 24% over the next decade (U.S. Bureau of Labor Statistics (BLS))
Will I spend all my time in an office?

• More than other engineering fields, civil & architectural engineering serves humanity
• The first responsibility is to protect and enhance public safety and quality of life – participation of the public and their representatives is key
• Projects are linked to the physical environment and involve significant activities in the field
  – gathering information for designs
  – supervising construction
  – operating facilities
CU-Boulder…
do you know?

- The *only* top 25-ranked Civil and Architectural Department in Colorado
- The top-ranked engineering college in the mountain time zone
- We founded Engineers Without Borders (now with 300+ chapters worldwide)

*Source: Rankings from U.S. News and World Report*
Choose from 330 Study Abroad Programs in 70+ countries around the world.

Explore other cultures...

International Certificates in Engineering
Dream big. Love what you do.

Civil, Architectural, Environmental Engineering

Make a world of difference!

Thank you!