



Civil Engineering *an introduction*

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Outline

1. What Civil Engineers Do
2. Where Civil Engineers Go
3. Ongoing Research in Civil Engineering
4. Disciplines within Civil Engineering
5. Classes in Civil Engineering
6. Professional Organizations
7. Why Civil Engineering?

Questions?

What Civil Engineers Do



Structures

- Bridges
- Highways
- Airplanes
- Dams
- Buildings
- Automobiles

Systems

- Water
- Urban
- Environmental
- Waste
- Electrical
- Transportation

Management/Planning

- Project
- Policy
- Construction
- Selection
- Logistics
- Cost Analysis

Where Civil Engineers Go



- Work
 - Sverdrup Civil Inc.
 - McCarthy Construction
 - HTNB Consulting
 - PGAV Consulting
 - Army Corps of Engineers
 - City of St. Louis
 - Missouri Department of Transportation

Where Civil Engineers Go

- Work
- Grad School
- Business
- Law
- Architecture
- Medicine
- Government



Ongoing Research

- Structural Engineering Research
- Molecular and Nanoscale Analysis
- Structural Control & Earthquake Engineering
- Research Experience for Undergraduates



Disciplines Within

- Structural Engineering
- Environmental Engineering Science
- Transportation Systems Engineering
- Construction Engineering
- General



Courses



Introductory Courses:

- Intro to Urban Engineering (Fall)
- Intro to Civil Engineering (Spring)
- Intro to Environmental Eng (Spring)
- Surveying
- Engineering Graphics

Courses



Advanced Courses (w/o prerequisites):

- Transportation Engineering (Fall)
- Law and Society

Advanced Courses (w/ prerequisites):

- Intro to Urban Planning
- Design of Steel Structures
- Construction Operations & Mgmt
- Urban Systems Modeling

Professional Organizations



American Society of Civil Engineers

- Steel Bridge
- Concrete Canoe
- Conference
- Networking

Env. Engineering Students Association

- Social Events
- Community Service
- Field Trips
- Team-building

Institute of Transportation Engineers

- Field Trips
- Intelligent Trans. Sys.
- Trans. Eng. Assoc. of Metro. St. Louis

Why Civil?



10.

We built the 7 Wonders of the world.

9.

We have an excuse to carry around mechanical pencils in our shirt pockets.

8.

We work well with our hands.

Why Civil?



7.

FREE body diagrams.

6.

We know how to handle stress and strain in a relationship.

5.

We only take ONE semester of chemistry.

Why Civil?



4.

We have the biggest vibrators on campus.

3.

We play with multi-million dollar Tonka trucks.

2.

When we erect something,
it stays up.

Why Civil?



1.

If we wanted it easy,
we'd be business majors.

Why Civil?

“I really liked architecture but didn't have the artistic ability to pursue it, so civil engineering was the next best thing.”

“That's what my dad did (along with environmental) and I guess I've been prepped since I was a kid (he liked to point out the nuances of new highways and bridges and such.”

Why Civil?



“It's the only engineering where you can continue on to study something other than patent law! I don't anticipate a JD, but this highlights the other Civil skills.”

“The fact that you can pretty much take a BS in this major and do anything with it because it encompasses a broad spectrum of skills and ideas.”

An aerial view of a coastal city. In the foreground, a suspension bridge spans across a body of water. To the right, a wind turbine stands on a green hill. In the upper right corner, an airplane is flying in the sky. The background shows a vast expanse of water and a hazy horizon.

Questions?

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