Dream it. Design it. Build it.

Your future begins here.



VA



IOWA STATE UNIVERSITY Civil, Construction, and Environmental Engineering

www.ccee.iastate.edu/

lowa State has the 7th largest civil, construction, and environmental engineering program in the country. However, our focus is on quality, not size. A collaborative learning environment offers the comfortable feel of a much smaller program.

A Great Education

Graduates from Iowa State's Department of Civil, Construction, and Environmental Engineering (CCEE)

- design and build the infrastructure on which our lives and livelihoods depend.
- conceive and construct bridges, dams, skyscrapers, shopping centers, schools, highways, airports, water and wastewater plants, solid waste containment systems, industrial manufacturing facilities, and countless other critical elements of our built environment.
- are problem solvers who enjoy a strong sense of accomplishment from turning a plan on paper into reality.
- apply math and science to solve complex engineering challenges creatively.

A Great Value

lowa State unquestionably provides one of the best engineering programs in the country. Find information online about tuition, housing, and financial aid, www.financialaid.iastate.edu/.



Solve problems, test ideas, stretch your imagination—do it all in ISU's civil, construction, and environmental engineering program.

Professional Preparation



Our seniors maintain one of the highest passing rates in the nation **(above 95%)** on the **Fundamentals of Engineering Exam.**

This is consistently **20%** to **30% higher** than the national average.

Alumni **industry leaders** regularly provide advice about the curriculum, ensuring that our students study the most **current practices**.

Alumni Success

These successful professionals got their start with a bachelor's degree at Iowa State:

Ben Biller (BSCE 1981, MSCE 1982), as chief operating officer of HNTB Corporation, is a member of its leadership team. Based in Kansas City, Missouri, HNTB provides comprehensive engineering/planning services nationwide.

Craig Denny, PhD (BSCE 1971, MSCE 1973) is the senior principal engineer for Terracon, a large engineering firm founded by Gerald Olson, another alumnus, in Lenexa, Kansas.

Brian Laurenzo (BSConE 1984) is an attorney with Dorsey and Whitney Law Firm in Des Moines and mayor of Johnston, Iowa.

Cork Peterson (BSConE 1966) is the vice president of Peterson Contractors, a leading heavy and highway construction company in Iowa.

Len Rodman (BSCE 1971) is the chief executive officer at Black & Veatch, one of the largest civil engineering companies in the world.

Diane Strawn (BSConE 2002, MSCE 2004) manages federal buildings in central and western Iowa for the U.S. Central Services Administration, overseeing renovation, historic preservation, construction, operations, and maintenance.

"The in-depth and broad-based education I received from Iowa State University as a civil engineer prepared me for a varied career in transportation that has ranged from bridge design, construction management, project development management and finally to research and technology management." **Sandra Larson, Iowa DOT (BSCE 1988)**

The majority of our graduates

- have accepted permanent jobs before graduation.
- are able to select from multiple job offers.
 Competition for our graduates results in generous starting salaries.

Do You Want to Design Projects That Make the World Safer and Cleaner?

Civil engineers plan, construct, and maintain fixed structures, or public works, related to roads, structures, water supply, sewer, flood control, and traffic. Civil engineers include the following:

- Environmental engineers improve society's well-being through water purification, flood control, water quality monitoring, and waste renewal.
- Geotechnical and materials engineers determine that the foundations and materials for buildings and roads are stable.
- Structural engineers design buildings, bridges, and other structures that are subject to extreme temperatures, earthquakes, hurricane-level winds, and other severe environments.
- Transportation engineers use statistical data and computer mapping to move people and goods more efficiently, safely, and comfortably—on land, air, and water.

A bachelor of science degree in **Civil engineering** (BSCE) is available with an **environmental engineering** emphasis or general option.



Measuring lake contaminants will help you understand the challenges of environmental engineering.



"My internship experience with the lowa Department of Transportation has been a great supplement to my classroom education." Liz Thoma (MSCE 2007)

Do You Want to Build Projects That Improve the Quality of Life?

Construction engineers manage people, time, and money to transform abstract ideas into tangible facilities. They allocate resources such as materials, labor crews, and equipment to complete projects on time and within budget. They also plan and design temporary structures (such as concrete formwork) needed to construct the project.

A bachelor of science degree in **CONSTRUCTION ENGINEERING** (BSConE) is available with any of the following emphases:

- Heavy/Highway for managing the construction of critical infrastructure projects, such as the nation's highway system.
- Building for managing the construction of large buildings, such as skyscrapers.
- Mechanical for managing the construction of heating, ventilation, air conditioning, and plumbing systems with buildings.
- Electrical for managing the design and construction of electrical systems in buildings.



Testing classroom theories in the field is one way to identify your engineering niche.



During your first year, take advantage of junior or senior mentors to accelerate your learning.



Our professors

- are not just academics. More than 80% of them have professional engineering experience and are registered engineers in Iowa and/or other states.
- bring a global perspective to their courses. More than a third of the faculty have international experience.

What are the Professors Like?

A major strength of our program is that the majority of our department courses are taught by faculty, not by graduate students.

Our award-winning professors

- have open-door policies and encourage students to stop by.
- draw on examples from their real-world experiences to help you understand engineering concepts and practices. They understand that real projects don't always go by the book.
- are respected academically and professionally. Their expertise is Sought around the world. Many of them are industry and expert witness consultants.



Your instructors will care about giving you a first-rate educational experience.

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What about Classmates?

Iowa State has one of the top 25 "learning community" programs in the country (*U.S. News and World Report*, 2005). In learning communities, small groups of classmates with similar interests cultivate teamwork and leadership skills, learn project management techniques, and act as peer mentors, all while fostering lifetime friendships. Experience these benefits in any of the following communities:

- Civil Engineering Keystone Learning Community
- Cornerstone Construction Engineering Learning Community
- Women in Science and Engineering (WISE)

You can also connect with classmates by joining one or more of our department's award-winning student organizations. These groups work directly with industry leaders and connect with area businesses:

- American Society of Civil Engineers (ASCE)
- Associated General Contractors (AGC) (won national AGC chapter of the year in 2005)
- Associated Schools of Construction (ASC) competition
- Chi Epsilon (civil engineering honor society)
- Design/Build Institute of America (DBIA)
- Geo-Engineering Society
- Iowa State University Water Quality Club
- Mechanical Contractors Association of America (MCAA)
- Sigma Lambda Chi (construction engineering honor society)
- Transportation Student Association (a chapter of the Institute of Transportation Engineers)

Plus, you will have opportunities to team up with your classmates in regional and national activities like the concrete canoe and steel bridge competitions.

Is Academic Help Available? You bet!

Many resources will help you succeed:

- Faculty and academic advisers
- Tutoring and help facilities
 - Chi Epsilon (civil engineering) help room
 - Academic Success Center
 - Math help room
 - Writing and Media Help Center
- New CCEE student lounge/study space



Your work with faculty in a team-learning environment may lead to new industry standards.



As part of a "learning community," you will thrive on the interaction with other students who share your interests.



Our students

- get their hands dirty. About a third of our courses include field trips; more than 40% include lab work. The vast majority of our students have at least 3 months' professional engineering experience at graduation.
- serve the community. From Hurricane Katrina recovery to Habitat for Humanity affordable-housing projects, our students donate their knowledge and skills to many worthwhile projects.

Courses Packed with Hands-On Learning

You'll take **field trips** to see projects in progress, tour facilities, and talk to alumni. You'll work on projects in state-of-the-art **teaching** and **research laboratories:**

- C6—the first of only three, six-sided virtual reality labs in the world
- Two mobile labs that test pavements and soils around the country
- Two structures labs where you can test bridge beams and concrete specimens during extreme loadings
- Two environmental labs where you can measure contaminants in river water
- State-of-the-art computer labs with industry software

Through **Undergraduate assistantships**, you can work directly on **research** with faculty. This is a great way to get a first-hand look at a research career, present at conferences, and/or prepare for graduate school.

We encourage students to get on-the-job training through internships and co-ops. You'll gain valuable work experience while earning a good salary.

During your senior capstone design course, you'll work on a real-world civil or construction engineering project, pulling together everything you've learned and putting your skills to the test.



Hands-on training prepares you to enter the workforce.



You will have many opportunities to see for yourself how construction sites operate.

University Life

Iowa State is a prestigious **major university** with a **friendly hometown personality**. Our 26,000 students choose from 100+ majors and study with **world-class scholars**.

The park-like campus is safe and easy to walk. All engineering classes are in one block of buildings that includes the new \$68 million Engineering Teaching and Research Complex. Most engineering facilities have wireless Internet access.

Campus life is an adventure:

- A diverse student body
- Lecturers from around the world
- More than 500 student organizations
- Opportunities to study abroad
- Big 12 sports
- VEISHEA ("vee-sha"), Iowa State's spring festival
- Intramural sports
- Annual Iowa Games (four days of sports competition)
- Celebrated entertainment, from international symphonies, to Broadway musicals, to popular concerts

Community Life

Ames, Iowa, is a **charming Small city** with **big-city energy**. It is located between Minneapolis, Omaha, and Kansas City, about 40 miles from the Des Moines International Airport.

You'll enjoy our hundreds of acres of parks, public lakes/nature preserves, and miles of bike paths, plus ethnic dining spots, a community theater, the Octagon Center for the Arts, and a variety of cultural festivals and art shows.



Whether walking to class or meeting friends, you will enjoy lowa State's central campus, rated among the 25 most beautiful in the country.



Experience one-of-a-kind VEISHEA, the largest studentrun celebration in the country.

Our CE and ConE students receive more than \$250,000 in scholarships annually.



Alumnus Harry Blizzard (BSCE 1956) recently established several annual scholarships for Iowa State engineering students.

Scholarship Opportunities

Generous industry partners and alumni contribute to a substantial scholarship program. Every year, more CE and ConE students receive financial support.

Don't worry about applying for a scholarship. You will automatically be considered when you're admitted as an incoming freshman.

Concurrent and Advanced Degrees

Already thinking about graduate studies? Accelerate your program and earn both a bachelor's and master's degree in civil or construction engineering in only five years.

Interested in a business-oriented engineering career? Pursue concurrent BSCE and master of business administration (MBA) degrees.

Of course, our traditional four-year program thoroughly prepares able students for Iowa State's advanced degree programs in civil engineering (MS and PhD), with emphases in construction, environmental, geotechnical, structural, or transportation engineering.

Your new challenges may inspire you to pursue graduate studies.



Whether you need scholarship information or advice about your schedule (or just a listening ear), your adviser is ready to help.

www.ccee.iastate.edu/

CCEE

For information about degree options or program requirements, contact Ted or Rhonda:

Ted Millen Civil engineering academic adviser tmillen@iastate.edu, 515-294-4658

Rhonda Wiley-Jones Construction engineering academic adviser rwiley@iastate.edu, 515-294-2183

"We care about helping you succeed!"

IOWA STATE UNIVERSITY **College of Engineering**

Discovery with Purpose

The Department of Civil, Construction, and Environmental Engineering is part of Iowa State's prestigious College of Engineering and contributes to its accomplishments:

Small class sizes—an average of **27** students or fewer



93% of introductory engineering courses taught by professors

\$59,000,000 in annual research

2nd in the nation in esteemed "R&D 100" research and development awards



12th in the nation in start-up companies launched from research

State-of-the-art facilities, including the nearly

Center of Excellence

\$68,000,000 Engineering Teaching and Research Complex,

completed in 2003

Information Assurance Center, designated a charter

by the National Security Agency

Mechatronics Lab with tools for integrating mechanical, electrical, and information technologies



IOWA STATE UNIVERSITY

Civil, Construction, and Environmental Engineering

Department of Civil, Construction, and Environmental Engineering

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