



# CIVIL ENGINEERING



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Engineering  
Accreditation  
Commission



# *Building* A NEW PERSPECTIVE

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Civil Engineering involves the design, construction, and maintenance of systems and structures upon which society depends every day – from buildings and the plants that power them, to the roads, bridges, tunnels, and waterways that connect them. Civil engineering also encompasses the control of the environment for the maintenance and improvement of our quality of life.

# PROGRAM *highlights*

The CBU civil engineering program is design-oriented and laboratory intensive, emphasizing hands-on experience and teamwork. We offer an education that balances theory and practice with emphasis on the traditional areas of structural, transportation, geotechnical, environmental, and construction engineering. Here are some of the highlights of the civil & environmental engineering program at CBU:

- **Technical electives** help you customize your education. Courses in Traffic Engineering, Environmental Site Assessment, Open Channel Hydraulics, Bridge Engineering, Wind & Earthquake Engineering, Construction Management, and many more are available.
- A **Capstone Experience** challenges students to apply what they have learned in a comprehensive design project often done in conjunction with an internship and a professional engineering practitioner. This three-semester experience requires students to



At CBU, you learn the skills you need to become a successful engineer through lectures, hands-on experiences in the lab, and interactions that you can have with the faculty. CBU challenges and encourages you to excel in your goals, and during this process, you will make lifelong connections with your fellow Civil and Environmental Engineers.

**Sam Das, EI ('23)**  
*Civil Engineering*



engage in a complete design cycle from concept development through analysis, design, report writing, and presentation.

- Our **ASCE Student Chapter** provides students with opportunities to enhance leadership skills, build relationships with peers and alumni, and network with business leaders through conferences and seminars.
- At the **Mid-South ASCE Symposium**, students compete with over 13 engineering schools in Tennessee and Arkansas. Designing, building, and testing a **concrete canoe & steel bridge** gives students the opportunity to apply practical application of the engineering principles learned in the classroom, along with important team and project management skills they will need in their careers. Competitions in **surveying, technical paper writing and presentation, and mystery events** help students develop skills in oral presentation, written communication, and real-time problem solving.
- **Paid internships** are a large part of the civil engineering student's experience, connecting classroom principles in a "real-world" environment. The majority of our students have a paid internship in their junior and senior year that often leads to a full-time position within the company.



I am thankful for the time that I spent at CBU. The Department of Civil & Environmental Engineering provided me with an education I will forever be grateful for; it has provided numerous professional and academic opportunities. While at CBU, I participated in undergraduate research, professional clubs and societies, networking with future employers, and much more.

**Sarah Swain, EI ('22)**  
*Civil Engineering*



## IN THE WORKFORCE

As a civil engineer, you have many subspecialty areas to choose from:

- **Structural Engineers** are concerned with the design and analysis of buildings, bridges, transmission towers, and other types of infrastructures.
- **Transportation Engineers** design highways, interchanges, high-speed railroad systems, traffic signal systems, and airports.
- **Geotechnical Engineers** explore the subsurface conditions of a site, stabilize slopes, and design foundations.
- **Environmental Engineers** design systems to minimize pollution caused by wastewater, storm water, hazardous materials, chemicals, and air & noise.
- **Water Resource Engineers** design dams and channels to prevent erosion and flooding caused by heavy rains.
- **Construction Engineers** use advanced technology to minimize the cost of building and maintaining the world's infrastructure.
- **Urban and Regional Planning Engineers** design and manage urban infrastructure, including zoning, land use, and community facilities.
- **Forensic Engineers** analyze failed structures, determining causes of failures, and providing expert testimony in legal cases.
- **Railway Engineers** develop rail infrastructure, ensuring safe and efficient rail operations, and upgrading existing rail systems.

# Why CBU?

- Affordable Tuition
- Internship/Co-Op Opportunities
- International Competitions
- 100% Employment Rate in 6 months (mechanical engineering major as of 2024)
- CBU offers exceptional return on investment: Ranked **#3** in the “Best Value Schools” according to *US News & World Report*
- **#13** out of 136 in Regional Universities South
- **#13** in “Best Undergraduate Teaching”
- **#12** in “Top Performers on Social Mobility”
- 91% of our full-time students receive financial assistance

## LOCATED IN THE HEART OF MIDTOWN MEMPHIS

- Less than 2 miles from Overton Park, a 342-acre public park in Midtown Memphis
- Walking distance to the Cooper-Young and Overton Square Arts & Entertainment Districts

### **Bottom line — CBU graduates succeed.**

More than 90 percent of our recent class was employed or attending graduate school within six months of graduation. In fact, more than 80 percent already had jobs or placement in graduate schools when they crossed the stage at graduation.



CHRISTIAN BROTHERS UNIVERSITY

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**For more information, contact**

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