



# What can I do with a major in **CIVIL ENGINEERING** from Valparaiso University?

## Description of major:

Civil Engineering is the study of how mathematical and scientific knowledge, experience and theory is practically, economically and efficiently applied in the use of material and natural resources to design and supervise the building of structures and facilities. The five major branches of civil engineering are covered in the coursework and offer students a broad perspective: environmental engineering, geotechnical engineering, structural engineering, transportation engineering, and water resources engineering).

## Relevant skills for a CIVIL ENGINEERING major:

- ◆ Analyze needs
- ◆ Analyze, organize & interpret scientific data
- ◆ Apply theory
- ◆ Be aware of economic considerations and human needs
- ◆ Be accurate in details
- ◆ Calculate
- ◆ Communicate verbally and in writing
- ◆ Define problems
- ◆ Diagnose
- ◆ Draft/draw
- ◆ Estimate costs
- ◆ Have proficiency in mathematics & science
- ◆ Have spatial perception
- ◆ Have abstract reasoning
- ◆ Make appropriate decisions
- ◆ Meet deadlines
- ◆ Organize
- ◆ Perform detailed work
- ◆ Read blueprints
- ◆ Solve problems
- ◆ Supervise others
- ◆ Supervise use of large machinery
- ◆ Survey and map
- ◆ Trouble shoot
- ◆ Use instruments & tools
- ◆ Visualize objects
- ◆ Work in teams
- ◆ Work well with others
- ◆ Work with higher math and others!

## Sample work activities for Graduates in CIVIL ENGINEERING (some may require an advanced degree)

- Air Transport Engineer
- Architect
- Architectural Engineer
- Civil Engineer
- Construction Engineer
- Consulting Engineer
- Cost Engineering/  
Scheduling
- Customer Service  
(engineering-related)
- Design Engineer
- Ecologist
- Engineering Educator
- Environmental Engineer
- Facilities Engineer
- Geological Engineer
- Geologist
- Geotechnical Engineer
- Highway Engineer
- Hydraulics Engineer
- Hydrologist
- Industrial Engineer
- Land Surveyor
- Marketing Representative
- Maintenance Engineer
- Manufacturing Engineer
- Mechanical Engineer
- Mining Engineer
- Petroleum Engineer
- Photogrammetrist
- Pipeline Engineer
- Project Manager
- Public Works Engineer
- Research Engineer
- Safety Engineer
- Sales Engineer
- Sanitary Engineer
- Structural Engineer
- Teacher
- Testing Analyst
- Transportation Engineer
- Urban Planner
- Waste Management Engineer
- and others!

### **Potential hiring institutions for CIVIL ENGINEERING majors:**

- ◆ Airports
- ◆ Construction companies
- ◆ Consulting engineering firms
- ◆ Environmental organizations
- ◆ General contractors
- ◆ Government Agencies
- ◆ Highway/Transportation departments
- ◆ Private laboratories
- ◆ Railroads
- ◆ Transportation firms
- ◆ Utility companies
- ◆ and others!

### **Area of further education for CIVIL ENGINEERING majors:**

- Architecture
- Building Science
- City & Regional Planning
- Civil Engineering
- Construction Engineering
- Education
- Energy & Power Engineering
- Energy Management & Policy
- Engineering
- Engineering Design
- Engineering Management
- Environmental Design
- Environmental Engineering
- Environmental Policy & Resource Management
- Environmental Sciences
- Ergonomics & Human Factors
- Fire Protection Engineering
- Geodetic Sciences
- Geographic Information Systems
- Geography
- Geological Engineering
- Geology
- Geophysics
- Geosciences
- Geotechnical Engineering
- Hazardous Materials Management
- Hydraulics
- Hydrology
- Industrial & Manufacturing Management
- Landscape Architecture
- Law
- Limnology
- Management of Technology
- Materials Sciences
- Mechanical Engineering
- Metallurgical Engineering & Metallurgy
- Mineral/Mining Engineering
- Nuclear Engineering
- Operations Research
- Petroleum Engineering
- Public Policy & Administration
- Structural Engineering
- Surveying Science & Engineering
- Sustainable Development
- Technology & Public Policy
- Transportation & Highway Engineering
- Urban Design & Planning
- Urban Studies
- Water Resources Engineering
- and others!

### **Sources of additional information for CIVIL ENGINEERING majors:**

- ◆ VU Department of Civil Engineering: <http://www.valpo.edu/engineering/civil/index.php>
- ◆ Occupational Outlook Handbook: the US Bureau of Labor Statistics compiles information about various occupations, including the nature of the work, the job outlook, the earnings, and other relevant information. <http://stats.bls.gov/oco/home.htm>
- ◆ American Council of Engineering Companies: Has a member directory to look up potential employers. <http://www.acec.org>
- ◆ American Society of Civil Engineers: represents members of the civil engineering profession worldwide, and is America's oldest national engineering society. ASCE's vision is to position engineers as global leaders building a better quality of life. Site has Career Guidance information, Links to Related Civil Engineering Sites (including specialty associations), as well as Job Listings <http://www.asce.org>
- ◆ Blue Book of Building & Construction: Online database of building & construction contractors. <http://www.thebluebook.com/>
- ◆ Civil Engineering Virtual Library: information directly related to the field of Civil Engineering. <http://www.ce.gatech.edu/WWW-CE/>
- ◆ CivilEngineeringJobs.com: Find civil engineering jobs quickly! <http://www.civilengineeringjobs.com/>

- ◆ Consulting Engineers Council of Illinois: a not-for-profit statewide association of 220 consulting engineering and land surveying firms engaged in the private practice of engineering. Member firms engage in the disciplines of civil, electrical, geotechnical, mechanical, structural, architectural and acoustical engineering, as well as surveying. Information about member firms is all available online. <http://www.cec-il.org>
- ◆ Discover Engineering Online: Promotes the engineering profession as a career choice among young people and to recognize the accomplishments of the world's engineers. <http://www.discoverengineering.org>
- ◆ Engineering Central: engineering job openings - including hard-to-find entry-level engineering job openings. <http://www.engcen.com>
- ◆ Engineering News-Record The Construction Weekly, posting the jobs online and allowing access to terrific information. Search the jobs by job title, keyword, location, or view the ads from specific issues of ENR. Jobs out for bid are also listed at this site. <http://www.enr.com/>
- ◆ EngineerJobs.Com: job listings for engineers and technical professionals. <http://www.engineerjobs.com/>
- ◆ iCivilEngineer.com: directory of internet resources for civil engineering. <http://www.icivilengineer.com/>
- ◆ National Science Foundation Directorate for Engineering: <http://www.nsf.gov/home/eng/>
- ◆ National Society of Black Engineers: a student-managed organization with more than 250 chapters on college campuses and 50 alumni chapters nationwide. Includes Jobs. <http://www.nsbe.org/>
- ◆ Professional & Technical Consultants Association: a professional association of independent consultants and principals who work in small consulting firms in a variety of technical and non-technical fields. Site includes a Directory of Consultants. <http://www.patca.org/>
- ◆ Society of Hispanic Professional Engineers: social-technical organization whose primary function is to enhance and achieve the potential of Hispanics in engineering, math, and science. <http://www.shpe.org/>
- ◆ Society of Women Engineers: promotes the advancement of women as engineering professionals. Includes Career Guidance and a Jobs section. <http://www.swe.org/>
- ◆ US Department of Transportation: Has links to Departments of Transportation for each state. <http://www.dot.gov>

#### **VU Career Center Resource Library Materials:**

- *Alternatives to the Peace Corps: a Directory of Third World and US Volunteer Opportunities*
- *Book of U.S. Government Jobs: Where They Are, What's Available, and How to Get One*
- *Careers for Environmental Types & Others Who Respect the Earth*
- *Careers for Nature Lovers & Other Outdoor Types*
- *Essays that Worked for Law Schools*
- *Graduate Admissions Essays: Write Your Way into the Graduate School of Your Choice*
- *Graduate Programs in Arts and Architecture*
- *Graduate Programs in Engineering and Computer Science*
- *Graduate Programs in Physical Sciences*
- *Graduate Schools in the U.S*
- *GMAT 2003*
- *Great Jobs for Engineering Majors*
- *Great Jobs for Environmental Studies Majors*
- *Guide to America's Federal Jobs*
- *Guide to Undergraduate & Graduate Education in Urban and Regional Planning*
- *Is there An Engineer Inside You?*
- *LSAT 2006*
- *Opportunities in Engineering Careers*
- *Opportunities in Environmental Careers*
- *Opportunities in Federal Government Careers*
- *Opportunities in Forensic Science Careers*
- *Opportunities in Forestry Careers*
- *Opportunities in Government Careers*
- *Opportunities in Law Careers*
- *Peterson's Graduate Programs in Engineering & Applied Sciences*
- *Peterson's Graduate Programs in the Physical Sciences, Mathematics, Agricultural Sciences, the Environment & Natural Resources*
- *Peterson's Game Plan for Getting into Business School*
- *Peterson's Game Plan for Getting into Graduate School*
- *Peterson's Game Plan for Getting into Law School*
- *Peterson's Graduate Programs in Business, Education, Health, Information Studies, Law & Social Work*
- *Peterson's MBA Programs, 2001: U.S., Canadian, and International Business Schools*
- *PhD Factory: Training and Employment of Science and Engineering Doctorates in the United States*
- *Resumes for Engineering Careers*
- *Resumes for Environmental Careers*
- *Resumes for Scientific and Technical Careers and others!*

**For more information about majoring in CIVIL ENGINEERING, contact:**

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**For more questions about your career decisions, please make an appointment with a VU Career Counselor by calling 464-5005, stopping by the Career Center in Alumni Hall or e-mailing us at [Career.Center@valpo.edu](mailto:Career.Center@valpo.edu)**

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