



CAREER PATH

# Industrial & Engineering Technology

CAREER CLUSTER

Science, Technology, Engineering and Mathematics

CAREER PATHWAY

Engineering and Technology



## CIVIL ENGINEER

Perform engineering duties in planning, designing, and overseeing construction and maintenance of building structures, and facilities, such as roads, railroads, airports, bridges, harbors, channels, dams, irrigation projects, pipelines, power plants, water and sewage systems, and waste disposal units. Include architectural, structural, traffic, ocean, and geo-technical engineers.

### Knowledge and Skills Needed

In addition to courses required for high school graduation, essential skills and knowledge needed for a career as a civil engineer are reinforced by taking rigorous and relevant courses, as well as participating in work-based experiences and student organization activities.

(See the Sample Personal Plan of Study for suggested coursework, activities, and knowledge and skills to pursue in preparation of an occupation in this Career Cluster.)

### Education Requirements

Occupation	Percent of Missouri employees aged 25 to 44 in the occupation whose highest level of educational attainment is:		
	High School or Less	Some College	Bachelor Degree or More
Civil engineers	2.7%	10.0%	87.3%
Engineers	2.5%	16.1%	81.4%
Architecture and engineering	10.3%	31.0%	58.6%

Most Common Educational Level: Bachelor's degree

Note: Be sure to learn whether your occupation has a specific requirement for education or licensing. Apprenticeships are available for more than 240 occupations. Visit [www.oe.doleta.gov/bat.cfm](http://www.oe.doleta.gov/bat.cfm)

### National and State Wage Information

Location	Pay Period	2007		
		Entry*	Median	Experienced**
United States	Hourly	\$27.34	\$34.48	\$43.30
	Yearly	\$56,900	\$71,700	\$90,100
Missouri	Hourly	\$26.10	\$31.93	\$40.61
	Yearly	\$54,300	\$66,400	\$84,500

Based on (\*) lower 25% and (\*\*) upper 25% percentile of wages

### National and State Employment Trends

Civil Engineer	Employment		Percent Change	Job Openings*
	2006	2016		
United States	256,300	302,400	+ 18 %	11,360
Missouri	5,090	5,580	+ 10 %	130

\*The estimate for Job Openings includes both turnover that results from people who leave the occupation (e.g. quit, retire, death) and new jobs that are created.

### Educational Opportunities

Note: This list may not be all inclusive. For more information about Missouri schools and programs, visit [www.dhe.mo.gov](http://www.dhe.mo.gov)

#### Missouri University of Science and Technology

Rolla, MO  
(573) 341-4111  
[www.mst.edu](http://www.mst.edu)

#### University of Missouri - Columbia

Columbia, MO  
(573) 882-2121  
[www.missouri.edu](http://www.missouri.edu)

#### University of Missouri - Kansas City

Kansas City, MO  
(816) 235-1000  
[www.umkc.edu](http://www.umkc.edu)

#### University of Missouri - St. Louis

St. Louis, MO  
(314) 516-5000  
[www.umsl.edu](http://www.umsl.edu)

#### Washington University

St. Louis, MO  
(314) 935-5000  
[www.wustl.edu](http://www.wustl.edu)



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ELEMENTARY AND SECONDARY  
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