



CAREER PATH Industrial & Engineering Technology

CAREER CLUSTER
Science, Technology, Engineering and Mathematics

CAREER PATHWAY
Engineering and Technology



CHEMICAL ENGINEER

Design chemical plant equipment and devise processes for manufacturing chemicals and products, such as gasoline, synthetic rubber, plastics, detergents, cement, paper, and pulp, by applying principles and technology of chemistry, physics, and engineering.

Knowledge and Skills Needed

In addition to courses required for high school graduation, essential skills and knowledge needed for a career as a chemical 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
Chemical engineers	0.0%	5.9%	91.4%
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

National and State Wage Information

Location	Pay Period	2007		
		Entry*	Median	Experienced**
United States	Hourly	\$31.20	\$39.18	\$48.55
	Yearly	\$64,900	\$81,500	\$101,000
Missouri	Hourly	\$28.71	\$36.74	\$49.54
	Yearly	\$59,700	\$76,400	\$103,000

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

National and State Employment Trends

Chemical Engineer	Employment		Percent Change	Job Openings*
	2006	2016		
United States	30,400	32,800	+ 8%	1,010
Missouri	790	930	+ 18%	40

*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

Missouri University of Science and Technology

Rolla, MO
(573) 341-4111
www.mst.edu

University of Missouri

- Columbia
- Kansas City
Columbia, MO
(573) 882-2121
www.missouri.edu

Washington University in St. Louis

St. Louis MO
(314) 935-5000
www.wustl.edu



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ELEMENTARY AND SECONDARY
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