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CONNECTING TO YOUR FUTURE

This newsletter, by the Western Wisconsin Workforce Development Board, Inc., was created to provide career and labor market information to educators and students.



Special thanks to Firstlogic for sponsoring this edition of the Connecting to Your Future!

Engineering a Career

Did you know the snowboard was invented by an engineer?



“The future begins with engineers”, notes the American Engineering Campaign website! Could your future begin with engineering or a related career? Do you enjoy science and math? Do you enjoy using your creativity?

Engineers take abstract ideas and apply science and mathematics to build products to meet the need of mankind. Most engineers specialize, and there are lots of options depending upon your area of interest. The National Society of Professional Engineers (NSPE) lists 19 major branches of engineering while the Federal Government's Standard Occupational Classifications provides details on 17 engineering specialties. Here are just a few examples:

- Aerospace Engineers
- Biomedical Engineers
- Civil Engineers
- Computer Software Engineers
(see the Occupational Spotlight)
- Environmental Engineers
- Marine Engineers

A bachelor's degree is required for most entry-level jobs. The job outlook for engineers is expected to be good. Earnings for engineers vary based upon experience and specialty, but a salary survey sponsored by the NSPE indicated that entry-level engineers command salaries above those their peers in other professions.

The U.S. Department of Labor's Bureau of Labor Statistics has indicated that starting salaries for engineers is significantly higher than those of college graduates.

If you think you'd prefer a shorter training program, check schools that offer two-year degree programs in engineering technology or related programs. Occupational demand and earnings will vary.

Learn more about engineering careers by looking at the websites for work!

Sources:

- US Department of Labor, Occupational Outlook Handbook, 2006-07 Edition, Engineers, on the Internet at <http://www.bls.gov/oco/ocos027.htm> (visited March 7, 2006)
- <http://www.nspe.org/media/salariesurvey2005.asp>
- <http://www.nspe.org/media/mr1-faqus.asp>

The Youth Council, acting under the direction of the Western Wisconsin Workforce Development Board, Inc. (WDB), is working to establish a comprehensive youth development system that provides effective learning environments linking education, employment, leadership development, mentoring, and sustained support for youth to achieve economic self-sufficiency. The WDB is a business-led Board that formulates strategies to address workforce development issues in western Wisconsin. For more information contact Ann Wales, WDB Administrative Coordinator, at (608) 789-5600, Walesa@wwtc.edu, or visit our website at www.wvjocenter.org.

Websites For Work

www.discoverengineering.org

This is a great website with lots of great links for students to learn more about engineering!

www.americanengineeringcampaign.org

Learn 10 “fun and exciting” facts about engineering, the top 20 greatest engineering achievements of the 20th century, and more at the National Society of Professional Engineers site on the media relations pages with links to more NSPE info.

www.engineering-colleges.info

An online guide to US colleges offering accredited undergraduate degree programs in engineering. The site also provides information and resources on engineering studies and careers.

<http://worknetwisconsin.gov>

<http://bls.gov/oco/>



COMPUTER SOFTWARE ENGINEERS

Occupational Spotlight

General Description

Computer software engineers design and develop the software systems that control computers. They apply the principles and techniques of computer science, engineering, and mathematical analysis to the design, development, testing, and evaluation of the software and systems that enable computers to perform their many applications.

Computer applications software engineers and computer systems software engineers may focus on different kinds of work. Applications software engineers may analyze users need and design, construct and maintain general computer applications software or specialized utility programs using different programming languages. Systems software engineers may coordinate the construction and maintenance of a company's computer systems and plan their future growth. They may also set-up a company's intranets or networks that link computers within the organization.

Computer software engineers must continually strive to gain and update skills in conjunction with rapid changes in computer technology and employer needs. Employers often prefer to hire individuals with a bachelor's degree in computer science or computer engineering with a graduate degree being required for some jobs.

Firstlogic, Inc. located in La Crosse, is one local employer that employs computer software engineers. They specialize in enterprise-wide information quality solutions and services for e-business, data warehousing, and print and small mail applications.

Job Outlook and Earnings

The US Department of Labor's Bureau of Labor Statistics projects computer software engineers to be one of the fastest growing occupations over the 2004-2014 period. Starting salary offers for graduates with a bachelor's degree in computer engineering averaged \$52,464 in 2005 according to the National Association of Colleges and Employers.

In Wisconsin in 2004, the statewide annual wage level for entry-level Computer Systems Software Engineers was \$48, 434 and was \$48, 379 for Computer Applications Software Engineers.

Some related occupations include: computer systems analysts, computer database administrators, computer programmers, computer hardware engineers, computer support specialists and systems administrators.

Sources

- Bureau of Labor Statistics, US Department of Labor, Occupational Outlook Handbook, 2006-07 Edition, Computer Software Engineers, on the Internet at <http://www.bls.gov/oco/ocos267.htm> (visited March 7, 2006)
- <http://worknet.wisconsin.gov/>

