Missouri's STEM Occupations

2014 STEM Labor Demand Analysis

Across the United States there is a high demand for a labor force educated and skilled in science, technology, engineering, and mathematics (STEM) disciplines. STEM occupations are high-paying occupations, most having average wages considerably higher than the U.S. average. STEM occupations are concentrated in economic development target industries such as computer systems design, scientific research and development and high-tech manufacturing. Although educational requirements vary, most of these occupations require a bachelor's degree or higher.

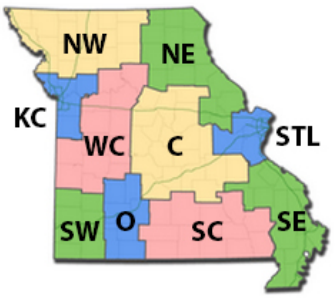
MERIC utilized the Standard Occupational Classification Policy Committees' definition of STEM to identify what jobs classify as STEM occupations (*see notes*). According to a US Census Bureau report, 6 percent of the United States workforce in 2011 was employed in STEM jobs, half of them were computer occupations. In Missouri, Kansas City and St. Louis had over 7 percent of their workforce employed in STEM occupations in 2011.[1]

According to BLS the most concentrated STEM occupation in Missouri is *Agricultural & Food Science Technicians*, which is relatively a small occupation when compared to other STEM jobs. Missouri also has concentrations in larger STEM occupations (1,000+) such as *Applications Software Developers*, *Computer Occupations, All Other*, and *Computer Systems Analysts*.

MERIC used a job analysis tool to determine the number of STEM and Non-STEM job ads available in Missouri from February 1, 2014 – July 31, 2014. There were over 200,000 job ads available, 17 percent were STEM occupations. The St. Louis region had the highest percentage of STEM openings at 18%, followed by Kansas City (12%) with Central and Ozark regions tied for third (8%). The top five industry employers with the most STEM job openings are The Boeing Company, Monsanto, Enterprise Rent-a-Car, Washington University, and Charter Communications.

[1]Liana Christin Landivar, 2013, "The Relationship Between Science and Engineering Education and Employment in STEM Occupations," American Community Survey Reports, ACS-23, U.S. Census Bureau, Washington, DC.

Missouri Workforce Investment Area Regions



The Workforce Investment Area (WIA) region with most job openings in STEM occupations was St. Louis. Within the past 6 months there were over 17,000 STEM job openings posted for the St. Louis WIA. Top STEM job ads for the Missouri WIA regions were mostly *Applications Software Developers* and *Computer Occupations, All Other*.

Central (C) *8% of Jobs
Computer Occupations, All Other
Applications Software Developers
Computer User Support Specialists
Sales Reps, Scientific, Technical
Computer Systems Analysts

Kansas City (KC) *12% of Jobs
Applications Software Developers
Computer Occupations, All Other
Computer Systems Analysts
Computer User Support Specialists
Computer Systems Administrators

Northeast (NE) *5% of Jobs
Civil Engineers
Computer Occupations, All Other
Chemical Engineers
Clinical Psychologists
Computer User Support Specialists

Northwest (NW) *7% of Jobs
Computer Occupations, All Other
Computer User Support Specialists
Mechanical Engineers
Architect and Engineer Managers
Computer Systems Analysts

Ozark (O) *8% of Jobs
Applications Software Developers
Computer Occupations, All Other
Computer User Support Specialists
Computer Systems Analysts
Sales Reps, Scientific, Technical

South Central (SC) *4% of Jobs
Clinical Psychologists
Engineers, All Other
Computer Network Architects
Applications Software Developers
Sales Reps, Scientific, Technical

Southeast (SE) *6% of Jobs
Clinical Psychologists
Civil Engineers
Computer Systems Analysts
Sales Reps, Scientific, Technical
Industrial Engineers

Southwest (SW) *5% of Jobs
Computer User Support Specialists
Applications Software Developers
Computer Occupations, All Other
Computer Systems Analysts
Computer Systems Administrators

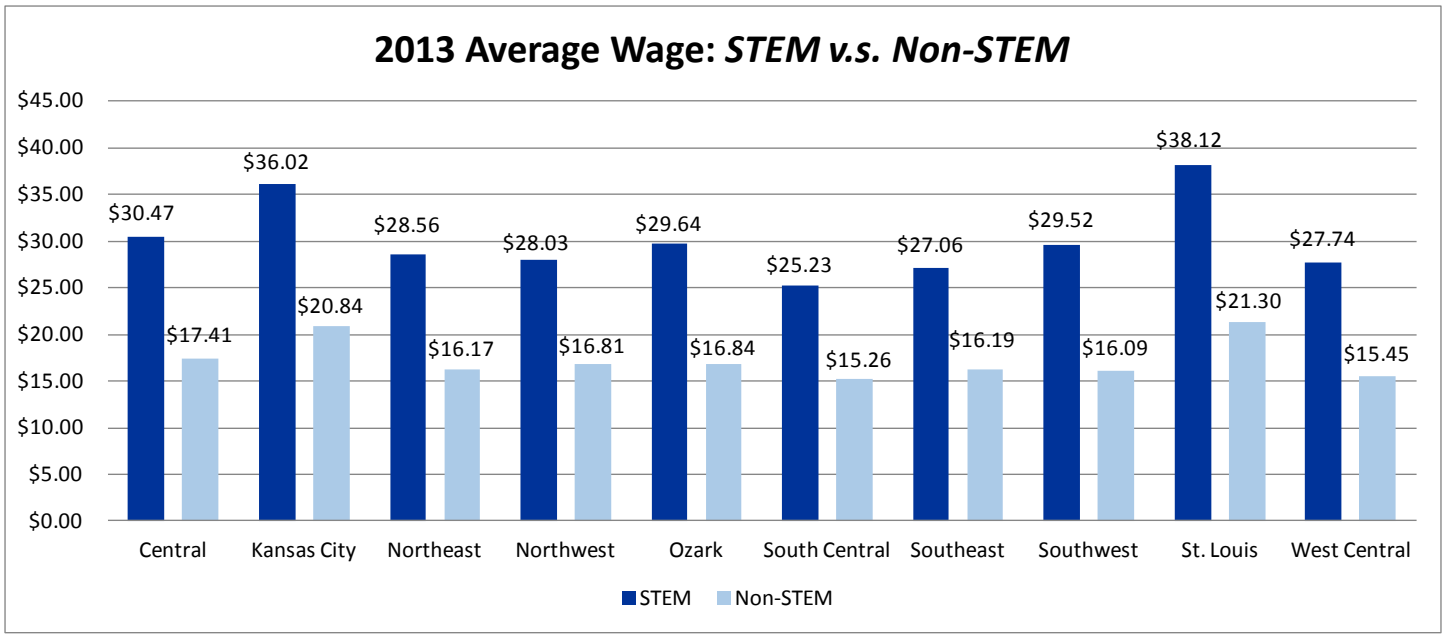
St. Louis (STL) *18% of Jobs
Applications Software Developers
Computer Occupations, All Other
Computer Systems Analysts
Computer User Support Specialists
Computer Systems Administrators

West Central (WC) *6% of Jobs
Computer Occupations, All Other
Mechanical Engineers
Engineers, All Other
Industrial Engineers
Electrical Engineers

Source: Burning Glass Technologies, Labor/Insight Tool (February 1, 2014 – July 31, 2014).
*Percentage of STEM job ads out of all job ads within Workforce Investment Area.

Wage Data: STEM vs. Non-STEM

According to the U.S. Bureau of Labor Occupational Employment Statistics, the average wage for STEM jobs in Missouri is $35.50 an hour, $19.30 more than the average wage for non-STEM jobs.



Source: U.S. Bureau of Labor Statistics (2013).

Notes:

The Standard Occupational Classification Policy Committee (SOCPC) is a group of representatives from nine federal agencies. The SOCPC organized at the request of the Office of Management and Budget to create guidelines for the classification of STEM workers.

Burning Glass Technologies, Labor/ Insight tool: Data for this analysis has been extracted using Burning Glass Technologies, Labor/Insight™ tool that collects information from over 17,000 web sources, including job boards, newspapers, large and small employer websites. Missouri Economic Research and Information Center (MERIC) uses this data to compile and publish reports for the State and Labor Market Regions. While this analysis presents a broad picture of hiring activity and serves as a measure of labor demand, it does not capture openings that are filled through other networks.