Taking two factors into account—size and concentration of industry—Central Ohio’s dominant industries include the Health Industries, the Business & Financial Services Industries, the Information Technology and Telecommunications Industries, and the Transportation and Logistics industries. Not having substantial employment in the manufacturing industries differentiates Central Ohio’s economy from other major regions of the State. Of about 1.4 million workers in Central Ohio, only 82,000 or 6% are production workers.

On the other hand, an amalgamated industry grouping called Advanced Materials is presented in the top industries list. The main manufacturing sectors within Central Ohio’s Advanced Materials Industries include motor vehicle parts manufacturing, plastic product manufacturing, and machine shops. Special Die and Tool, Die Set, Jig, and Fixture Manufacturing and testing laboratories are two sectors leading job growth in Advanced Materials.

The bubble chart presents the location quotient (LQ) for the top industries. Economists commonly cite LQs over 1.25 as indicating competitive advantage. A regional LQ of 1.25 means regional employment is 25% higher than the national average in the selected industries. The chart shows that all of Central Ohio’s top industries are close to an LQ of 1.0, indicating a mix similar to the national average. The LQ for Transportation & Logistics is 1.39, having the largest LQ among these industries. Except for Advanced Materials, all industries are expected to become more concentrated over the next five years.
Regional and State Supply Challenges

The US Department of Labor’s *Occupational Supply and Demand System* relates occupations with postsecondary courses. In this way, the demand for occupations can be related to the supply of graduates. Gaps are created by both oversupply and undersupply. The chart below indicates substantial undersupply of Computer Systems and Engineering graduates, along with financial, insurance, and Human Resource-related occupations. Analysis of Computer Systems programs indicates that related occupations are in demand in five of Central Ohio’s six top industries. The demand for Industrial Engineers is not being met by educational institutions in the region either. On the other hand, Central Ohio is a statewide supplier in Veterinary Medicine. Central Ohio helps alleviate the state’s demand for Optometrists and Dentists, because the region has an oversupply while the State has an undersupply.

![chart showing undersupply and oversupply of various occupations in Central Ohio.](chart)

*Computer Engineering & Computer Science totals are adjusted to reflect Ohio State University Computer Engineering completers reported as Computer Science & Electrical, Computer, & Electronics Engineering completers. Estimate based on 2010 Completers. 2010 CIPs more accurately reflect Computer Engineering & Computer Science program completers.*

Note: A retention factor was applied to the completers total. According to the Performance Report for Ohio’s Colleges & Universities, 2006, the in-state retention rate for those with a bachelor’s degree or higher was roughly 73% for Ohio & 87% for individuals with an associate’s degree. In Engineering, the retention factor is 68% for those with a bachelor’s degree, 44% for those with a master’s degree, and 28% for those with a doctoral degree.

*Source: EMSI Complete Employment - 1st Quarter 2011, accessed June 2011*
Occupational Concentration

The table below presents a comparison of occupational groups in terms of their relative concentration in Central Ohio, the projected job growth, and annual openings. It shows the same information for the Columbus MSA. Central Ohio includes 16 counties while the MSA includes 8 counties. Occupations that require an associate’s degree or more are presented in the table. Central Ohio’s strongest concentrations of employment are in Actuarial Science (LQ=2.88) and in Materials Engineering (LQ=1.98); in fact, concentrations are notable in Computer Engineering and Industrial Engineering as well. These findings go hand-in-hand with the fact that Central Ohio boasts a major insurance industry, as well as the fact that Central Ohio has a robust Research and Development Industry in the Physical, Engineering, and Life Sciences, employing 5,935 people as compared to 3,100 employed in Northeast Ohio and 3,676 in Southwest Ohio in 2011.

Data for the Columbus Metropolitan Statistical Area (MSA) demonstrates the concentration of labor in the MSA within Central Ohio. The table shows that nearly 100% of the Computer Engineers, Computer Systems professionals, and Actuaries are located in the MSA rather than being more widely dispersed into the larger Central Ohio region. The MSA contains nearly 90% of Veterinarians, Pharmacists, Accounting and Finance professionals, Human Resource Managers, and Insurance Industry professionals.

Information Technology (IT) jobs are growing rapidly in Central Ohio and high demand skills are constantly changing in this industry. The chart (right) indicates substantial under supply of Computer Systems and Engineering graduates, creating a supply and demand mismatch. According to OhioMeansJobs.com, there are 6,680 jobs open in the IT space right now in several key job categories throughout Central Ohio. According to a May 2011 employer survey, employers are experiencing challenges in filling critical IT occupations. Employers are seeking candidates from outside of the region and the state. However, employers report difficulties in attracting top talent to the area from outside Ohio.