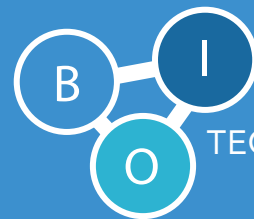


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TECHNOLOGY



## THE ESSENTIALS OF BIOTECHNOLOGY

Biotechnology can be defined as an activity that harnesses the actions of living things, any technology based on biology that uses living systems and organisms to develop products or processes. Although traditionally, biotechnology is used in food production, it can also be applied to medicine and agricultural efforts to reduce humankind's environmental footprint. The uses of biotechnology includes a vast range of applications, from medical devices, nutritional products and agricultural applications, to stem cells and alternative fuels.

## ECONOMIC IMPACT

A cluster of states in the Midwest (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Ohio and Wisconsin) have proven to be leaders in biotechnology research, development and academic activities, boasting more than 377,900 employees in more than 16,800 establishments across the nine states. And Illinois is at the core, leading the way with the number of people employed in this field, corporate profitability, employee wages and overall growth. Illinois has the largest number of bioscience companies among the nine-state cluster.

Company revenue for Illinois biotechnology companies has increased from \$48.3 billion in fiscal year 2001 to \$77.7 billion in FY 2006 and then to \$151.3 billion in 2011, directly and indirectly impacting the

### BIOTECHNOLOGY ACTIVITIES: A CROSS-COUNTRY COMPARISON

	Midwest Super Cluster	Illinois	California	East Coast Cluster
Employment (2011)	377,924	81,115	230,177	253,236
Establishments (2011)	16,856	3,572	7,543	7,117
Research/Development Expenditures (2010)	\$6,589M	\$608M	\$4,708M	\$3,711M
NIH Research/Development Expenditures (2011)	\$3,424M	\$708M	\$2,542M	\$2,359M

SOURCE: 2013 Illinois Biotechnology Industry Organization

regional and global economy. This growth effects employees' salaries in this field, which in turn can affect their spending power to boost other businesses, resulting in a higher contribution to the state's tax dollars.

Just as the state of Illinois is committed to fueling the growth of biotechnology, **Triton College is committed to educating and training our students to pursue a career in this booming market with its new Biotechnology Laboratory Technician associate degree.**



## JOB OUTLOOK IN ILLINOIS

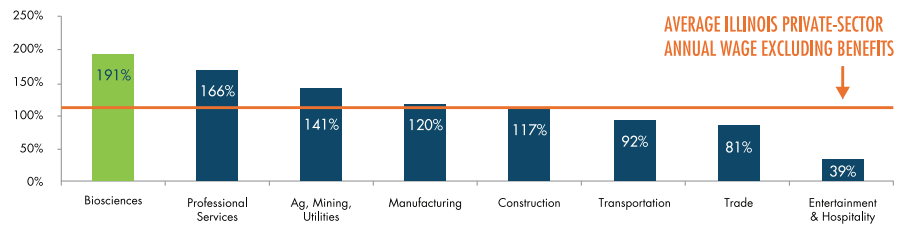
A market that has amassed \$151 billion in revenue in Illinois for the year 2011, biotechnology is on the rise – both in the stock market and in providing gainful employment.

In Illinois alone, more than 80,000 people are directly employed at biotechnology establishments throughout the state. Within 400 miles of Chicago, there are more than 15,500 biotechnology establishments employing more than 360,000 people. The top five counties in Illinois that has the greatest number of biotechnology companies are Lake County; Cook County, which has a high concentration of device and diagnostic companies; and DuPage County, Rock Island County and Vermilion County, which all three has a big concentration of agricultural and industrial firms. Bioscience industry segments include:

- Agricultural Feedstock and Chemicals
- Drugs and Pharmaceuticals
- Medical Devices and Equipment
- Research, Testing and Medical Laboratories
- Biotechnology-Related Distribution

The salary for a biotechnology career is just as impressive. Illinois residents employed by biotechnology companies earn a staggering 91 percent more than the average Illinois resident, making \$97,293 per year compared to about \$50,920 respectively (excluding benefits). The average total compensation (wages and benefits) of people working at biotechnology firms across the nation was \$121,616 in 2011.

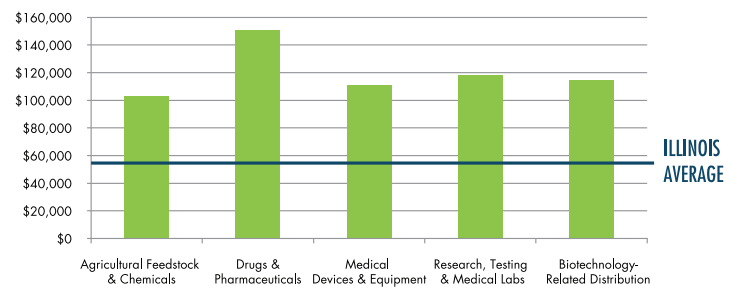
### Average Annual Wage by Industry—2011



The bioscience industry average wage is more than \$97,000, exceeding the private sector average wage in Illinois by more than \$45,000.

SOURCE: 2013 Illinois Biotechnology Industry Organization

### Average Total Compensation by Biotechnology Segment—2011



SOURCE: 2013 Illinois Biotechnology Industry Organization



A person with a two-year Biotechnology Laboratory Technician Associates of Applied Science can expect to earn about \$39,000 per year for an entry-level position.

## TRITON IS FUELING THE MINDS AND CAREERS OF THE FUTURE

Triton College's Biotechnology Laboratory Technician associate degree will advance students' understanding of science and the nature of the different STEM fields and increase the relevance of technician education through the development of a robust and coherent sequence of courses focused on the understanding of biotechnology, its theoretical framework and the development of the technical skills necessary to enter the competitive, high performance workplace.

The degree will align curriculum that incorporates problem-based learning and innovative pedagogy, and it will serve as an educational pipeline for students within the biotechnology industry by creating pathways that will link them to work-based educational experiences with employers in the biotechnology industry as well to a Bachelor of Science degree at a four-year institution.

"The Economic Engine of Biotechnology in Illinois," Illinois Biotechnology Industry Organization, 2013.  
<http://www.ibio.org/?page=ileconomicreport>

TO LEARN MORE ABOUT TRITON'S BIOTECHNOLOGY PROGRAM, CONTACT:

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Triton College is an Equal Opportunity/Affirmative Action institution.