

# Biosciences Career Pathway

**4,898** Employers

**56,000** Workers

**\$59,400** Average Wage

## What are Career Pathways?

Career Pathways are a sequence of training and education programs designed to develop a person's academic and technical skills. By obtaining stackable credentials and developing new skills a worker can advance over time to successively higher levels of education and employment in a given industry or occupational sector.

## Why Have a Career in Biosciences?

Developments in biotechnology rapidly change the way we live, work and learn. Missouri has a strong presence in Plant and Agricultural Technology, Biomedicine, and Companion and Feed Animal Sciences. Bioscience represents 2.4 percent of total private sector employment, employing over 56,000 workers in 4,898 businesses in 2017. Employment has been growing at an average of 1.6 percent per year from 2012–2017. With a location quotient of 1.68, Missouri has high employment concentrations in Bioscience, particularly in Animal Food Manufacturing, Hog and Pig Farming, and Agricultural Chemical Manufacturing. Bioscience industry wages averaged \$59,400 in 2017, higher than the state average of \$47,810 for all industries.

From research to production, there are a variety of innovative and rewarding careers in the Bioscience fields of **Production**, **Research and Development**, and **Animal Sciences**.



**Production**



**Research & Development**



**Animal Sciences**

## Who's Hiring?

**Monsanto**

**MilliporeSigma**

**Pfizer**

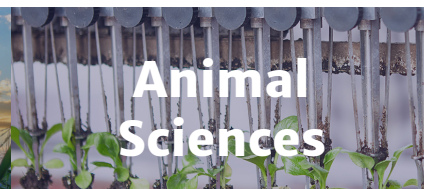
**Quest Diagnostics Inc.**

**Merck & Company**

## Know the Basics

Bioscience deals with how living things work and interact with each other, and teaches how to ask questions, make observations, and solve problems. Soft skills, such as interpersonal skills, professionalism, and dependability, are important in all industries and occupations, including Biosciences. Bioscience deals heavily with research and production so knowledge of mathematic and scientific principles is a must. Safety and quality control are also a critical part of this industry so attention to detail and continuous learning are necessary.

In addition, Bioscience has a set of industry-wide technical competencies that represent the knowledge and skills necessary to be successful in this industry. Research and Development, Manufacturing Process Design and Development, Knowledge of Medical Devices, Drugs and Pharmaceuticals, as well as Agricultural Feedstock and Chemicals are some of the skills that may be needed for success.



<i>Later</i>			
<b>Bachelor's Degree or Advanced Degree</b>	<b>Industrial Production Managers</b> Entry: \$71,430 Avg.: \$101,000	<b>Chemists</b> Entry: \$51,110 Avg.: \$72,080 <b>Chemical Engineers</b> Entry: \$76,670 Avg.: \$104,960 <b>Medical Scientists</b> Entry: \$45,270 Avg.: \$63,800	<b>Veterinarians</b> Entry: \$69,360 Avg.: \$96,250 <b>Farmers, Ranchers, Other Agricultural Managers</b> Entry: \$39,680 Avg.: \$59,740
	<b>Degrees:</b> Engineering, Business Administration & Management	<b>Degrees:</b> Chemistry, Clinical Laboratory Science/Technologist, Chemical Engineering	<b>Degrees:</b> Animal Sciences, Horticultural Operations, Veterinary Medicine
<i>Next</i>			
<b>Long Term On-the-Job Training, Certificate, Associate's Degree</b>	<b>Chemical Plant &amp; System Operators</b> Entry: \$57,280 Avg.: \$68,280 <b>First-Line Supv. of Production Workers</b> Entry: \$41,920 Avg.: \$57,630 <b>Industrial Machinery Mechanics</b> Entry: \$40,560 Avg.: \$54,310 <b>Chemical Equipment Operators &amp; Tenders</b> Entry: \$29,350 Avg.: 40,680	<b>Chemical Technicians</b> Entry: \$36,970 Avg.: \$51,360 <b>Agricultural &amp; Food Science Technicians</b> Entry: \$29,380 Avg.: \$43,330 <b>Inspectors, Testers, Sorters, Samplers, &amp; Weighers</b> Entry: \$29,430 Avg.: \$40,330	<b>Veterinary Technologists &amp; Technicians</b> Entry: \$27,560 Avg.: \$34,840 <b>Veterinary Assistants &amp; Laboratory Animal Caretakers</b> Entry: \$27,560 Avg.: \$34,840
	<b>Degrees:</b> Industrial Mechanics and Maintenance <b>Certificates:</b> Commercial Driver's License, Chemical Operator	<b>Degrees:</b> Chemistry Certificates: American Society for Quality (ASQ), Certified Quality Auditor	<b>Certificates:</b> Veterinary Technician/Technologist, Laboratory Animal Technician
<i>Now</i>			
<b>Short Term On-the-Job Training</b>	<b>Helpers-Production Workers</b> Entry: \$22,280 Avg: \$29,080	<b>Weighers, Measurers, Checkers, and Samplers, Recordkeeping</b> Entry: \$22,190 Avg.: \$30,660	<b>Nonfarm Animal Caretakers</b> Entry: \$19,770 Avg.: \$24,680 <b>Farmworkers, Farm, Ranch, &amp; Aquacultural Animals</b> Entry: \$20,980 Avg.: \$25,970
	<b>Certificates:</b> Forklift Operator	<b>Degrees:</b> Chemistry Certificates: American Society for Quality (ASQ), Certified Quality Auditor	<b>Certificates:</b> Certified Manager of Animal Resources

Sources:  
 Burning Glass Technologies Labor/Insight™ tool  
 Employment and Training Administration, Competency Model Clearinghouse  
 2017 Occupational Employment Survey Wage data, Bureau of Labor Statistics.  
 Quarterly Census of Employment and Wages, U.S. Bureau of Labor Statistics



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