Microbiology, Cell & Molecular Biology majors develop the following skills:

- Problem Solving
- Analytical skills
- Quantitative orientation
- Oral and written communication
- Independent work habits
- Self-motivated work ethic
- Operate scientific equipment
- Biology theory and practical knowledge
- Statistical application
- Precision
- Spirit of Scientific inquiry
- Critical thinking
- Technical Skills
- Science Communication

American Society for Microbiology
Microbiology Club
Microbiology and Molecular Genetic Graduate Student Association

Get Involved

A complete list of student clubs and organizations can be found online at: https://campuslink.okstate.edu

College of Arts & Sciences Career Services
213 Life Science East
Tel: 405 744 5658

For appointments and resources: http://cascareers.okstate.edu

Job and Internship Websites

- American Society of Microbiology http://www.asm.org
- American Society for Clinical Laboratories http://www.as.cls.org
- Anheuser-Busch http://www.buschjobs.com/careers
- Bio Careers http://www.biocareers.com
- Careers in Biotech http://accesssexcellence.org/RC/CC
- Cell & Molecular Biology Online http://www.cellbio.com/joblists.html
- International Society for Microbial Ecology http://www.isme-microbes.org
- Microbiology Careers http://www.microbiologycareers.org/
- National Institute of Environmental Health Sciences http://www.niehs.nih.gov/summers
- National Institutes for Health Clinical Center http://clinicalcenter.nih.gov/
- Oklahoma State Bureau of Investigation http://www.ok.gov/osbi/Employment/
- Personal Care Products Council http://jobs.personalcarecouncil.org/home/
- Science Careers http://www.sciencecareers.org
- Stevenson Cancer Center (OU Medicine) http://www.oumedicine.com/mi/ok-inbre/summer-undergraduate-research-program
- US Dept. of Health and Human Services http://hhs.gov
- US Food and Drug Administration http://www.fda.gov/scienceresearch/default.htm
- USA Jobs http://www.usajobs.gov
**Medicine and Health:** Diseases are prevented by vaccines developed and produced by microbiologists. Many techniques for detecting diseases have been developed as Microbiologists and biochemists continue to develop new diagnostic tools to improve existing systems.

**Drug Manufacture and Design:** This is one of the largest industries employing Microbiology majors. Doctors prescribe them, pharmacists dispense them, but chemists, biochemists and microbiologists discover them. In order to discover and develop a new drug, a thorough understanding of the interactions between biological macromolecules and small molecules is needed. Microbiologists are also involved in their production and quality assurance.

**Biotechnology and Related Industries:** Microbiologists use new enzymes to help the diverse metabolic activities of microorganisms to discover with biotechnology problems This contributes to a range of activities from cleaning up the environment (bioremediation) to the development of biofuels. Microbiologists are also involved in food production, processing and safety.

**Forensic Science: (Crime Lab Science)** Not only are molecular geneticists and their expertise used in DNA fingerprinting, which has become so prominent in criminal investigation, but the examination of other biological samples (blood, saliva, semen, and flesh) are essential in many criminal investigations. This is a field of growth as science becomes a critical part of crime scene investigation.

**Professional School:** A Microbiology degree is a great preparation for medical school, dental school, veterinary school and law school. It is also very common for a Masters or Ph.D to be required for work in this field. Undergraduate research in this area of study is also very helpful for professional school applications.

**Research:** Most microbiology graduates tend to work in a traditional laboratory and research environment and some may choose to work with a scientific company or research facility.

**Food Science:** The study and use of microbes in the production of cheese, wine and beer may also lend itself to provide work for microbiologists. Professionals are also involved in positions related to food safety through inspection, evaluation and implementing sanitary procedures.

**Genetic Counseling:** Students in our program receive a strong background in genetics. This provides an excellent basis that can be adapted into future careers in this marketable field. Genetic counselors incorporate the latest in genetic sciences into their practice in the care for patients at risk of inheritable disorders.

**Medical Laboratory Science:** Microbiology is a very important aspect in diagnosing infections and future treatments. Medical Laboratory Scientist are healthcare professionals that perform diagnostic science involving simple to complex testing procedures in a clinical laboratory. This field links technology and information to healthcare and medicine.

### Types of Employers

- Biotechnology Firms
- Health Maintenance
- Hospitals
- Computer Firms
- Chemical Manufactures
- Energy Firms
- Colleges/Universities
- Research Institutes
- Manufacturing Firms
- Crime and Forensic Labs
- Disease Diagnostic Labs
- Pharmaceutical Companies
- Research & Development Labs
- Medical Instrument Companies
- Centers for Disease Control
- Dept. of Agriculture
- US Military
- National Cancer Institute
- Drug Enforcement Agency
- National Institutes of Health
- Public Health Service
- Health and Human Services
- Research Laboratories
- Educational Institutions
- Food & Drug Administration
- Environmental Protection Agency

### Job Titles

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<th>Bacteriologist</th>
<th>Biomedical Lab Manager</th>
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<tr>
<td>Clinical Med Tech</td>
<td>Chemistry Lab Tech</td>
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<tr>
<td>Technical Sales</td>
<td>Quality Assurance Tech</td>
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<tr>
<td>Geneticist</td>
<td>Educator/Professor</td>
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<td>Dairy Technologist</td>
<td>Bomb Technician</td>
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<td>Mycologist</td>
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<td>Virologist</td>
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<td>Analysts</td>
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<td>Consultant</td>
<td>Veterinary Microbiologist</td>
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<td>Food Technologist</td>
<td>Academic Science Admin</td>
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<td>Parasitologist</td>
<td>Medical Technologist</td>
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<tr>
<td>Biochemist</td>
<td>Clinical Microbiologist</td>
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<tr>
<td>Biotechnologist</td>
<td>Science Writer</td>
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<tr>
<td>Cell Biologist</td>
<td>Research Assistant</td>
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<tr>
<td>Immunologist</td>
<td>Medical Technologist</td>
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