

Biological Technicians

SOC: 19-4021 • Career Profile Report

■ Key Facts

\$52,000

Median Salary

82,700

Employment

+3.0%

Growth Rate

■ Requirements & Salary Range

Education: Bachelor's degree

■ Automation Risk Assessment

Low Risk - 8.0% probability of being automated in the next 10-20 years.

This job is relatively safe from automation due to its creative, social, or complex problem-solving requirements.

■■ Work-Life Balance

7.5/10 - Good work-life balance

■ Personality Fit (RIASEC)

Higher scores indicate better personality fit for this career type.

Realistic	6.2/10	Investigative	9.4/10
Artistic	5.6/10	Social	6.4/10
Enterprising	4.8/10	Conventional	6.4/10

■ Top Skills Required

Analytical skills, Communication skills, Detail oriented, Observational skills, Technical skills

✓ Strengths

- High Demand
- Flexible Work
- Continuous Learning

■ Challenges

- Burnout Risk
- Rapid Technological Change

■ What They Do

Biological Technicians are laboratory and field science professionals who assist in **conducting experiments, collecting biological data, and supporting scientific research**. They work under the supervision of biologists, medical scientists, or environmental researchers to help study living organisms, biological processes, and ecosystems. Their work is essential to research accuracy, data reliability, and scientific discovery.

This career is well suited for individuals who enjoy hands-on laboratory work, following scientific protocols, and supporting research that advances medicine, agriculture, and environmental science.

What Do Biological Technicians Do?

Biological technicians support scientific studies by performing technical and procedural tasks.

Common responsibilities include:

- Setting up, maintaining, and cleaning laboratory equipment
- Conducting experiments according to established protocols
- Collecting biological samples such as blood, tissue, plants, or microorganisms
- Observing and recording experimental data accurately
- Preparing specimens, slides, and cultures for analysis
- Assisting scientists with fieldwork and sample collection
- Maintaining detailed lab notes and databases

Areas of Work and Specialization

Biological technicians may work in different scientific settings:

- Medical and Clinical Research: Supporting studies related to human health and disease.
- Environmental and Ecological Research: Collecting data on plants, animals, or ecosystems.
- Biotechnology and Pharmaceutical Labs: Assisting with product development and testing.
- Agricultural and Food Research: Studying crops, soil, pests, or livestock health.
- Quality Control Laboratories: Testing biological products for safety and consistency.

Skills and Abilities Needed

Biological technicians combine technical precision with scientific understanding.

Core Professional Skills

Personal Qualities That Matter

Education and Training Pathway

Biological technicians typically require postsecondary science education:

- Associate or Bachelor's Degree (common): Biology, life sciences, biotechnology, or related fields
- Laboratory Coursework: Hands-on lab experience during education
- On-the-Job Training: Learning lab-specific protocols and equipment
- Safety and Compliance Training: Required for laboratory environments
- Continued Skill Development: Learning new techniques or technologies

Where Do Biological Technicians Work?

Biological technicians work in research, testing, and applied science environments:

- Research Laboratories and Institutes
- Pharmaceutical and Biotechnology Companies
- Hospitals and Medical Research Centers

- Government Agencies
- Universities and Colleges
- Environmental and Agricultural Organizations

Work may take place in laboratories, greenhouses, or outdoor field settings.

How Much Do Biological Technicians Earn?

Earnings vary by education level, industry, and experience:

- Entry-Level Technicians: Typically earn competitive science-support wages
- Experienced Technicians: Often earn higher pay with specialized skills
- Technicians in Biotechnology or Pharma: May earn more due to industry demand

Compensation often includes benefits and opportunities for advancement.

Is This Career Difficult?

The work is technically demanding and requires strict attention to detail. Biological technicians must follow precise procedures, maintain sterile conditions, and ensure data accuracy. The challenge lies in consistency, documentation, and adapting to complex or evolving research protocols.

Who Should Consider Becoming a Biological Technician?

This career may be a strong fit if you:

- Enjoy biology and laboratory work
- Prefer hands-on, structured tasks
- Are detail-oriented and methodical
- Want to support scientific discovery without leading research
- Are interested in healthcare, biotech, or environmental science

How to Prepare Early

- Take biology, chemistry, and lab-based science courses
- Practice careful data recording and observation
- Gain experience through internships or lab assistant roles
- Learn laboratory safety and sterile techniques
- Explore biotechnology or life science degree programs

Biological technicians turn scientific ideas into measurable results—supporting discovery and innovation by ensuring experiments are executed accurately, safely, and reliably across laboratories and research environments.