

# Tempe★Union

Career & Technical Education

Pursue your interests. Get ahead. Have fun. Join a CTE Program

## Bioscience

The **Bioscience Program** focuses on biotechnology and its global impact on society. It covers applications, laboratory techniques, limitations and the international economic benefits, risks, and legal and moral issues associated with biotechnology.

We have a special focus on developing laboratory skills that prepare students with workplace skills for the modern research lab.



### Suggested Course

#### Sequence:

**Year 1:**  
**Biotechnology 1-2 or**  
**Honors Biotechnology 1-2**

**Year 2:**  
**Biotechnology 3-4 or**  
**Honors Biotechnology 3-4**

#### CTSO:

**HOSA**

#### Industry Certification:

**Biotechnician Assistant**  
**Credential (BASE) and**  
**(OSHA) – Healthcare**

#### Year one

Biotechnology 1-2 students will examine the information, the application, and the ethics of a number of technologies. These may include cellular (cloning, stem cells, antibodies), genetic (gene splicing, genomics, electrophoresis), environmental (remote sensing, biohazard, remediation), and agricultural topics. Students should also be prepared for pursuit of lab technician training or higher educational opportunities in this field.

**[www.TempeUnion.org/Bioscience](http://www.TempeUnion.org/Bioscience)**

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As students progress into the second year with Biotechnology 3-4, they will apply concepts of molecular and cellular biology (of bacteria, animals, and plants) to real-world problems and build upon Biotechnology 1-2 concepts. Students will also learn methods of culturing microorganisms, recombinant DNA technology, and genetic analysis. Students will use basic equipment found in a typical molecular biology laboratory.

Honors 1-2 and 3-4 students will additionally conduct independent lab work and research.

## Related Careers

Laboratory Technician, Research and Development Scientist, Research Associate, Process Development Scientist, Research Professor, Environmental Scientist, Forensic Scientist, Healthcare Executive, Nursing (Professional, Management, Administration, and Support), Therapy and Rehabilitation, Radiology Technician, Bioinformaticians, Chemist, Microbiologist, Biochemist, Natural Science Manager, Behavioral and Social Work, Healthcare Case Manager

## Higher Education Options

Internships, Community College, Colleges, and Universities

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