



Biotechnology Academy

Career-Technical Education Program News from the Six District Educational Compact

College Credit Plus Opportunities

Biotechnology Academy students can be dual-enrolled for college credit with Stark State College (SSC) starting their first year in the program. In the fall semester, students can be enrolled in the SSC course BIO 101 Intro to Anatomy and Physiology in addition to the high school Human Anatomy and Physiology course. In the spring, students can enroll in the SSC course CHM 123 General, Organic, and Biochemistry in addition to the high school Biochemistry of Health course.

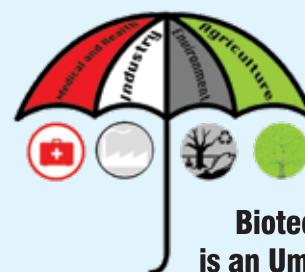


Capstone Projects

For Level II students, the spring semester includes an opportunity to complete a culminating capstone project. Students choose a topic to research or an experimental project and complete a paper about their work. Additionally, they prepare a presentation outlining their research paper and present to their families, friends, and school staff. Research paper topics from recent years include CRISPR-Cas9, prions, Alzheimer's disease, and bone marrow.

DNA Day

Since DNA is the favorite biological molecule of all Biotechnology students, the program created an engaging DNA Day celebration for Woodridge middle and high school students. DNA Day is celebrated on April 25th every year, as this was the day in 1953 that James Watson, Francis Crick, and Maurice Wilkins published their paper on the three-dimensional structure of DNA. Program students created a genome walk around the Woodridge campus where participants walked the length of each chromosome (relative to its size in the genome) and completed a scavenger hunt to learn about genes found in each chromosome.



**Biotechnology
is an Umbrella Term**

What is Biotechnology?

Biotechnology is the use of biological organisms or their components to solve a problem or create a product. Some products of biotechnology include:

- Biologics and other personalized medicines
- Using oil-eating microbes to clean up oil spills
- Increasing crop pest resistance and yield
- Use of special enzymes that wash clothes in cold water
- Recombinant DNA that produces human medicine in bacteria and yeast
- mRNA vaccines and CRISPR gene editing

The goal of the Biotechnology Academy is to expose students to various areas and careers within bioscience, including medicine, agriculture, and industry.



Six District Educational Compact

Cuyahoga Falls • Hudson • Kent • Stow-Munroe Falls • Tallmadge • Woodridge

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Field Trips

Students in the Biotechnology Academy visit various college campuses, labs, and facilities for in-depth career exploration and to show students the opportunities that are available to them! Some examples include:



1

**The Ohio State University
ATI Wooster:** Students toured
the Ohio Agricultural Research and
Development Center



2

**Cuyahoga Community College
(Tri-C):** Students toured the Allied
Health programs



3

Stark State College:
Students toured the cadaver lab



4

**The Akron Water
Reclamation Plant**



5

**“Biotech
Olympics”:**
Students
competed with
other high
school Biotech
programs in
Northeast Ohio