

THE ACADEMY OF LIFE SCIENCE

WEST SENECA CENTRAL SCHOOLS SCIENCE DEPARTMENTS

ACADEMY OF LIFE SCIENCE (AOLS)

The Academy of Life Science prepares students to enter college or employment in the exciting field of life science. Life Science is a global and locally expanding career field which integrates science and technology to produce products and services that improve health and well-being. Students will focus their high school career through the lens of laboratory science and business related to the life science industry.

Participants will have the opportunity to take advantage of the Academy Business Partners representing various health industry leaders. Academy members will participate in an array of industry sponsored activities including field trips, shadow days, classroom speakers, internships, and college credit bearing courses. The transferable skills and experiences acquired during this program will be an asset in any career path pursued.

Academy of Life Science Three Year Program

GRADE 10

Medical Terminology *1 Unit*
Science Course *1 Unit*

GRADE 11

Medical Ethics *½ Unit*
Microsoft Word & Excel *½ Unit*
College and Career Portfolio *½ Unit*
Science Course *1 Unit*

GRADE 12

Complete Remaining Science *1-2 Units*
Course Requirements

***NYS Board of Regents requires 3 units of science for graduation. Life Science students must take 2 additional science courses.**

Students must take a minimum of 5 credits of Science from the following course list:

Choose 3 of the following courses

- Physical Setting/Earth Science with Lab
- Physical Setting/Earth Science with Lab Enriched
- Living Environment/Biology with lab
- Living Environment/Biology with Lab Enriched
- AP Biology
- Physical Setting/Chemistry with Lab
- Advanced Forensics (SUPA)
- Hilbert College Forensics
- AP Chemistry

Choose 2 of the following courses

- Physical Setting/Physics with Lab
- Biotechnology
- Anatomy and Physiology

Internship – Completed during Junior and/or Senior year (*½ Unit*)

College Course – Completed during Junior and/or Senior year or passing AP Science exam

Graduation – Certificate of Life Science Studies awarded in addition to Regents Diploma or Regents Diploma with an Advanced Designation.

**Life Science Academy Graduates can earn college credits with our college partners:
Bryant & Stratton, SUNY Erie, Hilbert, Medaille, D'Youville and Trocaire.**

****SUNY Erie Advanced Studies College Credit**



Admissions to this school-within-a-school program is competitive. Students supplement their Regents program with a combination of Science courses and biotechnology. This path requires extra science coursework beyond Regents requirements. A college course is required along with an internship in a field related to career interests.

Biotech Engineering

Credit: 1 Unit Length: 40 Weeks

Biotech Engineering is an advanced Life Science course designed primarily for students in the Life Science Academy. Biotech Engineering is a capstone course which will apply concepts taught through biology, chemistry, and physics to medicine, agriculture, information technology, and industry. This course is strongly recommended for Life Science Academy students in the Laboratory Science strand. Regents Biology, Regents Chemistry and a teacher recommendation are prerequisites.

Anatomy and Physiology

Credit: 1 Unit Length: 40 Weeks

Anatomy and Physiology is an advanced Life Science course designed primarily for students in the Life Science Academy. Anatomy and Physiology is a well-established component of a comprehensive life science program and, as such, will focus on the structure and function of cells, tissues, organs and organisms. Students will be required to identify anatomical structures and demonstrate an understanding of their functions. This course is required for Life Science Academy students in the Laboratory Science strand and Regents Biology and Regents Chemistry are prerequisites.

College and Career Portfolio

Credit: 1/2 Unit Length: 20 Weeks

This hands-on course will introduce students to the application of multimedia technology in the workplace. The course will explore evolving technologies including electronic presentations, Internet exploration, and desktop publishing while highlighting the interpersonal skills vital to a successful career. The Career and College Portfolio, an electronic portfolio, will be compiled highlighting the student's exemplary work and extracurricular activities during high school. The student's career exploration, personal profile and academic records will also be included in the portfolio. This portfolio can be used for college applications and interviews, for scholarship applications and for workforce interviews. Students will also be assigned a free web site location until graduation enabling the electronic transfer and viewing of their portfolio. This portfolio is essential for all students. Qualifying students will receive an employability certificate from the Niagara Frontier Industry Education Counsel. Advanced studies course through SUNY Erie: 3 college credits (GS111 College Success Skills).

Medical Law and Ethics

Credit: 1/2 Unit Length: 20 Weeks

Medical Law and Ethics provides an overview of the laws and ethics a student should know to help them provide competent, compassionate care to patients and complete life science related research within acceptable legal and ethical boundaries. The course will provide guidance to help resolve the many legal and ethical questions a student may reasonably expect to encounter. This is a required course for students in the Life Science Academy and recommended for any student planning to pursue a career in Life or Health Sciences.

Medical Terminology

Credit: 1 Unit Length: 40 Weeks

A course for students interested in health sciences professions designed to provide skill in understanding and using medical terms. This course introduces fundamentals of word analysis, orientation to the body as a whole and common prefixes and suffixes. Anatomic and physiologic terminology, pathological terminology, clinical procedures, laboratory tests, abbreviations and correct spelling and pronunciation of medical terms relating to the body systems are stressed. Many body systems are included, such as digestive, urinary, male and female reproductive, nervous and cardiovascular systems.

Microsoft Word and Excel

Credit: 1/2 Unit Length: 20 Weeks

Recommended: Computer Skills 4Life

Students enrolled in this course will receive the necessary skills to gain knowledge and understanding in using a word processor and a spreadsheet program. Microsoft Office 2016 will be explored. Students will learn how to enhance the visual display and clarity of their documents. The skills learned in this course will assist students throughout high school, college, and beyond. Students can earn a Microsoft Office certification in Word and Excel. These certificates and testing can occur during class.

Internship

Credit: 1/2 to 1 unit Length: Varies

Prerequisite: Acceptance into the Life Science Academy

Students will be placed in internship situations with members of our Academy Advisory Board. Students will gain on-the-job experience while at the same time exploring career opportunities.

College Course

Credit: 3 college credits Length: 16 weeks.

Prerequisite: Acceptance into the Life Science Academy

All Academy students MUST take and successfully pass a college course. College courses are offered every semester including summer to fit a student's schedule. Courses can be taken on-site at a West Seneca High School or off-site at the campus location. Courses usually are offered one day per week after school, evenings or Saturdays. Most courses are tuition free requiring only a textbook expense.

Currently courses are offered through the following college partners: Bryant & Stratton, SUNY Erie, Medaille, Hilbert, and Trocaire. Students may elect to take more than one college course.

***Students must meet minimum grade requirement of an 85 in Freshmen Science class (Biology) to be accepted into the Life Science Program.**