

Sheldon High School

Telephone Number: (916) 681-7500

<http://www.shs-egusd-ca.schoolloop.com/>

Academies and Pathways

Students may choose to enroll in one of the three Sheldon High School Pathway programs or the Biotechnology Academy. Students must complete 70 credits within one of the pathways or academy to earn the academy/pathway designation on their high school diploma and the Block S. Students who complete 70 credits within their academy/pathway may be qualified to wear a cord at graduation.

Students who do not choose an academy/pathway must choose a major by the end of their tenth grade year. A major is 30-50 units of focused study in one of the six following areas:

- 1) Human Services
- 2) Communications
- 3) Arts
- 4) Science
- 5) Technology
- 6) Kinesiology

ARTSwork Visual and Performing Arts Pathway

The mission of the ARTSwork Pathway is to empower students to meet the standards of excellence which foster creative exploration of the visual and performing arts within school and community. In addition, this pathway prepares students to be creative, critical thinking, productive citizens who articulate ideas in various forms of communication and to cultivate BGen appreciation of the role that arts play in culturally diverse society.

ARTSwork students shall have the maximum opportunity to accelerate academically and artistically, while exploring career and curriculum options, including a community service component. The ARTSwork Pathway is designed for students who want the opportunity to explore, in depth, their interest in visual arts, dance, music, Theatre, or an integration of the visual and performing arts. The ARTS work Guest Lecture Series will expose students to professionals in the field of the arts by bringing artists, performers, and other members of the art community into the classroom. Additional opportunities to experience professional performances and exhibitions throughout the region and network with the arts community is enhanced by "Arts in the Real World." Ultimately, the arts will be infused into the total academic curricular experience.

SHELDON HIGH SCHOOL
Building Trades and Engineering Pathway

This pathway responds to students interested in exploring the skilled trades associated with the building industry as well as engineering disciplines. Steadily growing industrial and high-tech manufacturing segments of the local economy combine with an exceptionally strong construction industry to provide context for this pathway. Students begin exploration through general introductory courses. Here they survey career opportunities, engineering fundamentals, basic construction tool use and material handling, as well as technical communication skills. Higher level courses allow students to explore more specific areas of building construction and engineering. Typical topic areas include:

Building Trades:

- Fine Finish Work
- Residential and Commercial Construction

Engineering:

- Civil, Structural, Architecture, Surveying
- Mechanical, Robotics
- Electrical/Electronics, Computer, Software

This pathway has developed numerous sustained partnerships with local businesses, trades unions and colleges to ensure coursework relevance, articulation and professional mentoring.

Equitas Pathway

Equitas is a pathway built upon the foundations of political science and public policy. It includes advanced learning in the social sciences and career exploration in fields of public service. The pathway is designed to cultivate in students an understanding of democratic civil values, an appreciation for our constitutional heritage, the role of government in society, and an inspired sense of social participation in the democratic process. Equitas classes are divided into four strands of political science:

- Law and Legal Studies
- Citizenship and Civic Ethics
- Government Structure and Public policy
- Global Issues and International Relationships

In addition to basic skills such as critical thinking and comprehension, an emphasis is placed on a diverse range of opportunities such as job shadowing, speakers from the community at the mandatory monthly meetings, service learning, fieldtrips to State agencies, and internships to assist students in identifying areas of personal interest and developing their educational goals.

SHELDON HIGH SCHOOL
Biotechnology Academy (BTA)

The Biotechnology Academy (BTA) is a learning community in which small groups of students with common teachers participate in integrated academic and career/technical courses with a Biotechnology focus. Via partnerships with industry and post-secondary institutions, students build knowledge, skills, attitudes, and experiences needed to enter and succeed in higher education and the work force.

The BTA prepares students for both post-secondary education and employment in the current and emerging high-growth science career labor market. The Biotechnology Academy meets the needs of all students by combining ongoing and direct contact with local and regional industries and post-secondary institutions with rigorous, integrated academic instruction and meaningful, on-the-job experiences.

Students enrolled in this academy must complete a sequence of Career Technical Education courses noted below as well as their core academic courses (e.g., English, mathematics, science, social science, etc.) as one cohort.

Biotechnology Academy Programs of Study

Industry Sector: Health Science and Medical Technology
Pathway: Biotechnology

Grade	Academic 1	Academic 2	Academic 3	CTE
9	English 9	Geography/Health	General Science	Biotech I
10	English 10	World History	Biology	Biotech II
11	English 11	US History	Chemistry	Microbiology
12	English 12			Molecular Biotechnology

The CTE courses required for this academy are described below.

Course	Class Restrictions	Credits	Description
BTA Biotech I Course #16221	Freshman	10	The course focuses on the fundamental skills and information needed to ensure success at Sheldon High School, proficiency in the laboratory, and basic understanding of biotech concepts and principles. Biotech I is an 18 week course required for first year Biotech Academy students. This is a base-level course designed to introduce students to the history of Biotech, laboratory skills and current biotech applications. The biotech focus of this course will be on basic cell biology. <i>Prerequisite(s): Admission and enrollment in the Biotech Academy.</i> Adopted curricular materials: No textbook assigned.

SHELDON HIGH SCHOOL
Biotechnology Academy (BTA) (continued)

Course	Class Restrictions	Credits	Description
BTA Biotech II <p style="text-align: right;">Course #16222</p>	Sophomore	10	<p>This course emphasizes the historical, legal and ethical concepts in Biotech. Biotech II is an 18-week course required for second-year Biotech Academy students. Emphasis will be placed on current biotechnological techniques, impacts and advancements. Students will work on scientific research, reports and problem-solving skills, small group activities and presentations. Basic biological concepts will be examined more extensively in this class in order for students to understand the science behind Biotech. Biotech II will explore the numerous opportunities available in the field of Biotech. The course will focus on workplace knowledge, skills and etiquette necessary in the Biotech field. Emphasis will be placed on identification of personal and professional goals, educational and career opportunities, portfolio compilation and communication skills. Instruction will include technical writing, group discussion, cooperative learning and student projects/presentations. Field trips and guest speakers from local businesses and post-secondary institutions will be incorporated into class sessions.</p> <p><i>Prerequisite(s): Admission and enrollment in the Biotech Academy.</i></p> <p>Adopted curricular materials: No textbook assigned.</p>
BTA Microbiology “a-g”/“d” or “g” approved <p style="text-align: right;">Course #4674</p>	Junior	10	<p>This course provides structure and function of pathogenic and non-pathogenic microorganisms studied in theory and in practice with an emphasis upon techniques and rationale used in modern laboratories. The interactive television network and visits with cooperating hospitals and local labs will connect students with the community. This course is oriented toward students with an interest in a medical or dental career, with a solid exposure to standard basic practices.</p> <p><i>Prerequisite(s): Biology and completion or concurrent enrollment in Chemistry with a C or better.</i></p> <p>Adopted curricular materials: <i>Foundations in Microbiology</i>, McGraw-Hill</p>
BTA Molecular Biotechnology “a-g”/“d” or “g” approved NCAA approved <p style="text-align: right;">Course #4670</p>	Senior	10	<p>This course emphasizes beginning recombinant DNA technology. The laboratory-based molecular biology sequence will begin with an overview of DNA and protein structure and function. It will progress to DNA manipulation including DNA restriction analysis using gel electrophoresis and PCR. Restriction enzymes will be used to digest bacterial DNA yielding fragments of different sizes for gel and other types of analysis. Specific lab techniques will be emphasized for students entering the medical, agricultural and scientific professional.</p> <p><i>Prerequisite(s): Biology, Chemistry, and Microbiology with a C or better.</i></p> <p>Adopted curricular materials: <i>Recombinant DNA</i>, American Society</p>

Related electives that a student in the Biotechnology Academy might take include:

- AP Chemistry
- Physics or AP Physics
- Criminology
- Lab Tech
- Ecology
- Service Learning
- Physiology
- Animal Physiology
- Work Experience

For a description of academy core academic courses and the electives identified above, see the course descriptions at the front of this catalog.

***For a description of academic courses and the electives identified above, see Section 1.
Please contact the school should you need further information.***