



Science,
Technology,
Engineering &
Mathematics

2021-2022
Biotechnology
Public Service Endorsement
Program of Study: Biomedical Science
Young Women's Leadership Academy at Arnold

Grade	ELA	Math	Science	Social Studies	Required CTE Courses	Potential Certification Opportunities
9th	English 1	Algebra 1	Biology	World Geography or AP Human Geography	Principles of Biosciences (1 Credit)	8th Grade • OSHA General 9th Grade • Cyber Safety • Career Essentials: Customer Service • Career Safe: Employability
10th	English 2	Geometry	Chemistry or OnRamps Chemistry	World History, AP World History, or Political Science	Biotechnology I (1 Credit)	• CPR
11th	English 3	Algebra II	Physics, AP Physics, AP Chemistry, or OnRamps Physics	U.S. History, AP US History, or OnRamps US History	Biotechnology II (1 Credit)	
12th	Business English, or Approved CTE 4th year English	Financial Mathematics, or Approved CTE 4th year Math	Principles of Technology, or Approved CTE 4th year Science	Government _____ Economics	Practicum in STEM Biotechnology (2 Credits)	• Lab Technician • Advanced CPR with AED/BLS • HIPAA • OSHA Healthcare/Bloodborne Pathogens

Student Organizations	Additional Required Electives
SkillsUSA NTHS	Fine Arts Health Personal Financial Literacy (.5 credits) Foreign Language Physical Education

Dual Credit Offerings	Additional Recommended Electives
Government Biology Calculus Spanish Literature Spanish Language Economics Physics Computer Science English Literature English Language	Journalism (1 Credit) Forensic Science (1 Credit) Computer Science On-Ramps (1 Credit) Political Science (1 Credit) Robotics (1 Credit) Principles of Arts, A/V Technology & Communications (1 Credit)

Sample Career Opportunities	High School	On the Job Training	Certificate	Associates Degree	Bachelor's Degree	Advanced College Degree	Average Annual Salary	Possible Majors for this Pathway
Biomedical Engineer				X	X	X	\$91,410—\$148,210	<ul style="list-style-type: none"> • Biomedical Engineering • Biomechanical Engineering • Biomedical Technology • Biochemistry • Biophysics • Chemistry • Chemical Engineering • Pharmacy Technology • Phlebotomy • Nursing • Forensic Science Technology
Biomechanical Engineer				X	X	X	\$88,430—\$138,020	
Biochemists and Biophysicists				X	X	X	\$94,490—\$182,870	
Biological Technicians		X	X	X	X		\$45,860—\$73,350	
Clinical Laboratory Technologists and Technicians		X	X	X	X		\$53,120—\$81,530	
Chemists and Materials Scientists				X	X	X	\$77,630—\$133,690	
Chemical Technicians		X	X	X	X		\$49,260—\$80,350	
Chemical Engineer					X	X	\$108,770—\$176,090	
Forensic Science Technicians		X	X	X	X		\$59,150—\$97,350	
Pharmacy Technician	X	X	X	X			\$33,950—\$49,130	
Pharmacist						X	\$128,090—\$162,900	