



Science,
Technology,
Engineering &
Mathematics

2021-2022

STEM: Biomedical Engineering
Public Service Endorsement
Program of Study: Biomedical Science
Grand Prairie Collegiate Institute

Grade	ELA	Math	Science	Social Studies	Required CTE Courses	Potential Certification Opportunities
9th	English 1	Algebra I	Biology	World Geography or AP Human Geography	Principles of Biomedical Sciences (Project Lead the Way) (1 Credit)	8 th Grade • OSHA General
					Human Body Systems (Project Lead the Way) (1 Credit)	9 th 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	Medical Interventions (Project Lead the Way) (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	Biomedical Innovation (Project Lead the Way) (1 Credit)	<ul style="list-style-type: none"> Pharmacy Tech Trainee/ Phlebotomy Technician WFR-Engineering Technology Advanced CPR with AED/BLS HIPAA OSHA Healthcare/Bloodborne Pathogens
					Principles of Engineering (Project Lead the Way) (1 Credit)	
12th	Business English, or Approved CTE 4 th year English	Financial Mathematics, or Approved CTE 4 th year Math	Principles of Technology, or Approved CTE 4 th year Science	Government <hr/> Economics	Practicum in STEM Biomedical Innovation (Project Lead the Way) (2 Credits) EDD Capstone	<ul style="list-style-type: none"> Pharmacy Tech Trainee/ Phlebotomy Technician WFR-Engineering Technology Advanced CPR with AED/BLS HIPAA OSHA Healthcare/Bloodborne Pathogens

Student Organizations	Additional Required Electives
SkillsUSA	Fine Arts Health Foreign Language Physical Education

Dual Credit Offerings	Additional Recommended Electives
Selected Core courses and electives will be Pre-AP, AP, or Dual Credit when applicable	Psychology (.5 Credit) Medical Microbiology (1 Credit) Introduction to Aircraft Technology (1 Credit) Sociology (.5 Credit) Pathophysiology (1 Credit) Welding I (2 Credits)

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 Engineering 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	