

Principles of the Biomedical Sciences

(PTLW)

8379 36 weeks

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Course Description

Suggested Grade Level: 9 or 10 or 11 or 12

In this specialization course for Project Lead the Way (PLTW), students are taught concepts of forensic inquiry, DNA and inheritance, and the function of human body systems, exploring the body through diseases, such as those leading to diabetes and heart, sickle cell, and infectious diseases. Students also explore medical interventions, postmortem examination, bioprocessing, bioinformatics, and concepts of microbiology and genetic engineering.

Project Lead The Way (PLTW) curriculum guides and course competencies are only available to PLTW affiliated schools through agreement with PLTW. To obtain additional information contact: Project Lead The Way 3939 Priority Way South Drive, Suite 400 Indianapolis, IN 46240 Toll Free: 877.335.PLTW (7589) Local: 317.669.0200 <https://www.pltw.org>

Appendix: Credentials, Course Sequences, and Career Cluster Information

Industry Credentials: Only apply to 36-week courses

- College and Work Readiness Assessment (CWRA+)
- National Career Readiness Certificate Assessment
- Project Lead the Way End-of-Course Assessments
- Workplace Readiness Skills for the Commonwealth Examination

Concentration sequences: *A combination of this course and those below, equivalent to two 36-week courses, is a concentration sequence. Students wishing to complete a specialization may take additional courses based on their career pathways. A program completer is a student who has met the requirements for a CTE concentration sequence and all other requirements for high school graduation or an approved alternative education program.*

- Biomedical Innovation (PLTW) (8382/36 weeks)
- Human Body Systems (PLTW) (8380/36 weeks)
- Medical Interventions (PLTW) (8381/36 weeks)

Career Cluster: Health Science	
Pathway	Occupations
Biotechnology Research and Development	Biochemist Cell Biologist Medical, Clinical Laboratory Technician Research Assistant
Diagnostics Services	Cardiovascular Technologist Computer Tomography (CT) Technologist Medical, Clinical Laboratory Technician Medical, Clinical Laboratory Technologist Nuclear Medicine Technologist Phlebotomist Radiologic Technologist, Radiographer Radiologist
Support Services	Administrative Assistant Communications Equipment Operator Data Entry Specialist Environmental Sampling and Analysis Technician

Career Cluster: Health Science	
Pathway	Occupations
	Food Service Worker Front Office Assistant Materials Manager Medical Transcriptionist Medical, Clinical Laboratory Technologist Records Processing Assistant
Therapeutic Services	Athletic Trainer Audiologist Certified Nurse Aide Dental Assistant Emergency Medical Technician, Paramedic Exercise Physiologist Home Health Aide Licensed Practical Nurse Massage Therapist Medical Assistant Occupational Therapist Occupational Therapist Aide Optician Pharmacy Technician Physical Therapist Physical Therapist Assistant Recreation Therapist Registered Nurse Surgeon Surgical Technologist Veterinary Assistant Veterinary Technologist

Career Cluster: Law, Public Safety, Corrections and Security	
Pathway	Occupations
Emergency and Fire Management Services	Emergency Medical Technician, Paramedic

Career Cluster: Science, Technology, Engineering and Mathematics	
Pathway	Occupations
Engineering and Technology	Biomedical Engineer Human Factors Engineer Materials Engineer
Science and Mathematics	Biologist Materials Scientist Microbiologists Research Chemist