

PLTW – Project Lead the Way
BIOMEDICAL SCIENCES

PBS

PRINCIPLES OF BIOMEDICAL SCIENCES (PBS) (PLTW)

2 Sem. 2 Credits Grades 9

Course Code 5218M

(Weighted Class) .5 Weight

RECOMMENDED PREPARATION: Successful completion or concurrent enrollment in Biology I
COURSE DESCRIPTION: This honors-level course provides an introduction to the biomedical sciences through exciting “hands-on” projects and problems. Student work involves the study of human medicine, research processes, biomedical technology, and an introduction to a wide variety of careers. Students investigate the human body systems and various health conditions including heart disease, diabetes, sickle-cell disease, hypercholesterolemia, and infectious diseases. The course is designed to provide an overview of all the courses in the Biomedical Sciences program. Dual credit with post-secondary education is available. *This is a Core 40 science course, but it does not replace Biology 1.*

HBS

HUMAN BODY SYSTEMS (HBS) (PLTW)

2 Sem. 2 Credits. Grades 10-12

Course Code: 5216M

(Weighted Class) .5 Weight

RECOMMENDED PREPARATION: Successful completion of (PBS) Principles of Biomedical Sciences or juniors and sophomores may begin with HBS if successfully C+ or better in Biology.
COURSE DESCRIPTION: This honors-level course will engage students in the study of basic human physiology, especially in relationship to human health. Students will use a variety of electronic sensors to examine body systems (respiratory, circulatory, and nervous) at rest and under stress, and observe the interactions between the various body systems. Students will gain communication skills through modeling, writing, and presenting, and technical skills through computer software. Dual credit with post-secondary education is available. *This is a Core 40 science course, but it does not replace Biology 1.*

MI

MEDICAL INTERVENTIONS (MI) (PLTW)

2 Sem. 2 Credits Grades 11-12

Course Code: 5217M

(Weighted Class) 1.0 Weight

RECOMMENDED PREPARATION: Successful completion of (HBS) Human Body Systems and (PBS) Principles of Biomedical Sciences.

COURSE DESCRIPTION: This advanced laboratory course, focuses on complex microbiology and biotechnology lab techniques while exploring the design and development of various medical technologies. In addition, students learn about infectious disease, genetics disease, cancer and organ transplantation, and stay updated on cutting-edge developments via current scientific literature. Dual credit with post-secondary education is available. *This is a Core 40 science course.*

BI

BIOMEDICAL INNOVATIONS (BI) (PLTW)

2 Sem. 2 Credits Grade 12

Course Code: 5219M

(Weighted Class) 1.0 Weight

RECOMMENDED PREPARATION: Successful completion of (PBS) Principles of Biomedical Sciences, (HBS) Human Body Systems and (MI) Medical Interventions

COURSE DESCRIPTION: In this capstone course students will design and conduct experiments related to the diagnosis, treatment, and prevention of disease. They will apply their knowledge and skills to solve problems related to the biomedical sciences. Students will be expected to do original, independent research and present the results of their work to the community. Second semester and extended field experience allows students to engage with professionals in the biomedical field. Dual credit with post-secondary education is available.

