



Level 1 H09841 (AC) / H09842 Principles of Biomedical Science

Level 2 H09790 Human Body Systems

Level 3 H09773 (AC) / H09794 Medical Interventions

Level 4 H09796 Biomedical Innovation
AC 08833/08833/BIOL 2401 & 2402 Anatomy & Physiology

Dual Credit Science

HIGH SCHOOL/INDUSTRY CERTIFICATION	CERTIFICATE/LICENSE*	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/DOCTORAL PROFESSIONAL DEGREE
Medical Laboratory Assistant	Medical and Clinical Laboratory Technologists	Histologic Technician	Biomedical Engineers	Genetic Counseling
Medical Laboratory Technician		Clinical Laboratory Science/ Medical Technology/ Technologist	Biomedical Engineers	Medical Scientists
			Clinical Laboratory Science/ Medical Technology/ Technologist	Epidemiology

Occupations	Median Wage	Annual Openings	% Growth
Medical and Laboratory Technicians	\$37,981	1,159	28%
Biological Technicians	\$42,931	452	17%
Forensic Science Technicians	\$48,152	171	35%
Chemical Technicians	\$49,733	672	10%
Medical and Clinical Laboratory Technologists	\$58,760	1,166	25%

WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES

Exploration Activities:	Work Based Learning Activities:
Health Occupations Students of America (HOSA)	Lab internship or shadow a healthcare or medical professional

Additional industry-based certification information is available on the TEA CTE website. For more information on postsecondary options for this program of study, visit TXCTE.org.

The Biomedical Science program of study focuses on the study of biology and medicine in order to introduce CTE learners to the knowledge and skills necessary to be successful in the healthcare field, such as researching and diagnosing diseases, pre-existing conditions, or other determinants of health. Students may also practice patient care and communication.



The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing, scientific research and professional and technical services, including laboratory and testing services, and research and development services.

Successful completion of the Biomedical Science program of study will fulfill requirements of the Public Service or STEM endorsement if the math and science requirements are met.



GCCISD offers career and technical education (CTE) programs in Agriculture, Food & Natural Resources; Architecture & Construction; Arts, Audio Visual Technology & Communications; Business, Marketing & Finance; Education & Training; Energy; Health Science; Hospitality & Tourism; Human Services; Information Technology; Law & Public Service; Manufacturing; Science, Technology, Engineering & Math; and Transportation, Distribution & Logistics. Admission to these programs is based on student interest and space availability in GCCISD CTE programs. It is the policy of GCCISD CTE Programs not to discriminate on the basis of race, color, national origin, sex or handicap in its CTE programs, services or activities.

COURSE INFORMATION

H09841 (AC) H09842	PRINCIPLES OF BIOMEDICAL SCIENCE (PLTW)	GPA Level: Pre-AP GPA Level: Honors
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Grade Level: 9-12	Service ID: N13020292 (1 cr.)	Prerequisites: None
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In the introductory course of the Project Lead the Way Biomedical Science coherent sequence of courses, students explore concepts of biology and medicine to determine factors that led to the death of a fictional person. While investigating the case, students examine autopsy reports, investigate medical history, and explore medical treatments that might have prolonged the person's life. The activities and projects introduce students to human physiology, basic biology, medicine, and research processes while allowing them to design their own experiments to solve problems.

H09793 (AC) / H09790	HUMAN BODY SYSTEMS (PLTW)	GPA Level: Pre-AP GPA Level: Honors
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Grade Level: 9-12	Service ID: N1302093 (1 cr.)	Prerequisites: Principles of Biomedical Science
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Students examine the interactions of human body systems as they explore identity, power, movement, protection, and homeostasis. Exploring science in action, students build organs and tissues on a skeletal Maniken®; use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration; and take on the roles of biomedical professionals to solve real-world medical cases

H09773 (AC)/H09794	MEDICAL INTERVENTIONS (PLTW)	GPA Level: Pre-AP GPA Level: Honors
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Grade Level: 11-12	Service ID: N1302094 (1 cr.)	Prerequisites: Human Body Systems
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Students follow the life of a fictitious family as they investigate how to prevent, diagnose, and treat disease. Students explore how to detect and fight infection; screen and evaluate the code in human DNA; evaluate cancer treatment options; and prevail when the organs of the body begin to fail. Through real-world cases, students are exposed to a range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics.

H09796	BIOMEDICAL INNOVATION (PLTW)	GPA Level: Pre-AP GPA Level: Honors
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Grade Level: 12	Service ID: N1302095 (1 cr.)	Prerequisites: Medical Interventions
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In the final course of the PLTW Biomedical Science sequence, students build on the knowledge and skills gained from previous courses to design innovative solutions for the most pressing health challenges of the 21st century. Students address topics ranging from public health and biomedical engineering to clinical medicine and physiology.

08833 / AC 08833	ANATOMY & PHYSIOLOGY	GPA Level: Regular
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Grade Level: 11-12	Service ID: 13020600 (1 cr.)	Prerequisites: Biology and a Second Science Satisfies Science Credit
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Anatomy and Physiology studies the human body from two aspects. First, students will learn proper anatomical terminology and location of body parts. Second, students will study the function of each system from the cellular level through tissues and the organs involved. During this course of study, students will use microscopes, dissecting tools and basic chemistry to study the workings of the organs, tissues and cells of the human body. This course is a great college prep class for any student interested in furthering their education in the field of medicine.

COURSE INFORMATION

BIOL 2401	HUMAN ANATOMY & PHYS I (ANAT & PHYS)	GPA Level: DC
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Grade Level: 11- 12	Service ID: 13020600 (0.5 cr.)	Prerequisites: Biology and a 2nd Science; Meet Dual Credit Requirements & See Lee College's Course Catalog Satisfies Science Credit
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This course consists of the fundamentals of human anatomy and physiology with the emphasis on etiology and functions of anatomical systems. Laboratory includes dissection of a mammal, study of selected mammalian organs, histological studies, and physiological experiments.

BIOL 2402	HUMAN ANATOMY & PHYS II (ANAT & PHYS)	GPA Level: DC
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Grade Level: 11- 12	Service ID: 13020600 (0.5 cr.)	Prerequisites: BIOL and a 2nd Science; Meet Dual Credit Requirements & See Lee College's Course Catalog Satisfies Science Credit
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This course consists of the fundamentals of human anatomy and physiology with the emphasis on etiology and functions of anatomical systems. Laboratory includes dissection of a mammal, study of selected mammalian organs, histological studies, and physiological experiments.

FOR ADDITIONAL INFORMATION ON THE BIOMEDICAL SCIENCE PROGRAM, PLEASE CONTACT:

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