GALVESTON INDEPENDENT SCHOOL DISTRICT

BALL HIGH SCHOOL

CTE COURSE SELECTION GUIDE 2025-2026

CAREER AND TECHNICAL EDUCATION

What Are Career Pathways/Programs Of Study?

Career pathways/program of study are broad clusters of occupations, which are grouped together because many of the people in them share similar interests and strengths. The pathways/program of study are flexible, overlapping in nature, which allows students to change as new knowledge and experiences are acquired. They help provide a focus and guideline for future planning at the high school level and beyond. Use the pathways/program of study to explore career options and design your own individual career pathway/program of study education plan.

This section of the course guide is designed to help students select career pathway/program of study plans and courses that are appropriate to their needs and career interests. The Career and Technical Education program includes courses that provide a solid background for advanced college training in various fields, on-the job training and marketable skills upon graduation from high school. Offering course sequences within career clusters may help students make better career choices and motivate students to reach higher academic achievement. Career Clusters represent a national and state effort (AchieveTexas.org) to help schools ensure that learners get the knowledge and skills they need for multiple career choices by matching what is taught in the classroom to business and industry expectations.

Students should review each career cluster described and the courses and their descriptions before making or revising their four-year plan. The career pathway/program of study for some subject areas may vary somewhat to the plans set forth in this section due to individual student interest, course offerings, and changes in state and local requirements. Students should discuss their individual plan with parents, school counselors, and teachers in their chosen field.

What is a Coherent Sequence?

A coherent sequence includes three (3) or more courses for four (4) or more credits in a Career and Technical Education Program of Study with the last course being an advanced CTE course. The Programs of Study are available through the 14 Texas Career Clusters, which include:

Agricultural, Food & Natural Resources	Health Science
Architecture & Construction	Hospitality & Tourism
Arts, A/V Technology & Communications	Human Services
Business, Marketing & Finance	Information Technology
Education & Training	Law and Public Safety
Energy	Manufacturing
Engineering	Transportation, Distribution & Logistics

Suggested sequences are provided in this guide as examples within various pathways to create a four year plan unique to the student.

Please visit the following sites for additional information on Career Clusters, Program of Study's and Career Information.

Texas Education Agency	www.tea.state.tx.us
States' Career Cluster Initiative	www.careerclusters.org
O*Net – My Next Move	www.mynextmove.org/
Texas Workforce Commission	www.twc.state.tx.us
Occupational Outlook Handbook	www.bls.gov/oco
Texas-Career Alternative Evaluation System	www.texascaresonline.com

Health Science Career Cluster

The Health Science career cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. This career cluster includes occupations ranging from medical assistant, registered nurse, and physical therapist to forensic science technician and athletic trainer.

Statewide Program of Study:

Diagnostic and Therapeutic Services – CNA/Phlebotomy/PCT

The Diagnostic and Therapeutic Services program of study focuses on occupational and educational opportunities associated with diagnosing and treating acute, episodic, or chronic illness independently or as part of a healthcare team. This program of study includes exploration of patient treatment and rehabilitative programs that help build or restore daily living skills to persons with disabilities or developmental delays.

Secondary Courses for High School Credit

Level 1	• Principles of Health Science – AC – 1 Credit
Level 2	• Medical Terminology – DC – 1 Credit
Level 3	• Health Science Clinical – CE – 2 Credit
Level 4	• Practicum in Health Science - PCT - CE - 2 Credits
Additional Courses	• Anatomy and Physiology - Reg/DC – 1 Credit • Medical Microbiology - 1 Credit • Pathophysiology – 1 Credit

*Articulated Credit (AC) / Continuing Education (CE) / Dual Credit (DC)
Certification offerings can vary from year to year

Aligned Advanced Academic Courses

AP or IB	AP Biology IB Biology SL IB Biology HL	AP Chemistry IB Chemistry SL IB Chemistry HL
Dual Credit	Dual credit offerings will vary by local education agency.	

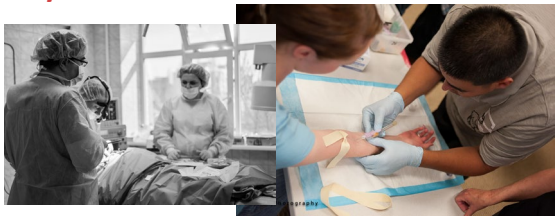
Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	• Intern with a medical assistant at a community clinic, hospital, assisted living, or long-term care facility • Participate in job shadowing experiences such as Emergency Medical Services (EMS) ride along or hospital/clinical job
Expanded Learning Opportunities	• Participate in Health Occupation Students of America (HOSA) or SkillsUSA • Participate in Advanced Medical Ambulance Bus (AMBUS) event or Community Emergency Response Team (CERT) event

Aligned Industry-Based Certifications

- Certified Nurse Aide (CNA)
- Patient Care Technician
- Phlebotomy Technician



Example Postsecondary Opportunities

Apprenticeships
- Medical Assistant

Associate Degrees
- Emergency Medical Technology
- Radiologic Technology/Science

Bachelor's Degrees
- Emergency Medical Technology
- Medical Insurance Coding

Master's, Doctoral, and Professional Degrees
- Medicine
- Occupational Therapy

Additional Stackable IBCs/License
- Registered Diagnostic Medical Sonographer

Example Aligned Occupations

Medical Assistants
Median Wage: $36,834
Annual Openings: 11,638
10-Year Growth: 29%

Dental Hygienists
Median Wage: $79,663
Annual Openings: 1,352
10-Year Growth: 32%

Physician Assistants
Median Wage: $127,332
Annual Openings: 974
10-Year Growth: 41%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/8/2024.

For more information visit: https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources

HEALTH SCIENCE – CERTIFIED NURSE AIDE/PHLEBOTOMY/PATIENT CARE TECHNICIAN:

PRINCIPLES OF HEALTH SCIENCE - AC Credit: 1
(HPRS 1201)
Grades: 9
Prerequisite: None

The Principles of Health Science course is designed to provide an overview of the therapeutic, diagnostic, health informatics, support services, and biotechnology research and development systems of the health care industry.

HPRS 1201 – An overview of the roles of various members of the healthcare system, educational requirements, and issues affecting the delivery of health care.

MEDICAL TERMINOLOGY - DC Credit: 1
(HITT 1305 & HITT 1353)
Grades: 10
Prerequisite: Principles of Health Science

The Medical Terminology course is designed to introduce students to the structure of medical terms, including prefixes, suffixes, word roots, singular and plural forms, and medical abbreviations. The course allows students to achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology.

HITT 1305 – Study of word origin and structure through the introduction of prefixes, suffixes, root words, plurals, abbreviations and symbols, surgical procedures, medical specialties, and diagnostic procedures.

HITT 1353 – Concepts of privacy, security, confidentiality, ethics, healthcare legislation, and regulations relating to the maintenance and use of health information.

HEALTH SCIENCE CLINICAL - CE Credits: 2
(NURA 1001 + NURA 2005)
Grade Placement: 11-12
Prerequisites: Medical Terminology – DC + Complete Galveston College Health Requirements/Background Check
Corequisite: Health Science Theory. This course must be taken concurrently with Health Science Theory and may not be taken as a stand-alone course.

The Health Science Clinical course is designed to provide for the development of advanced knowledge and skills related to a wide variety of health careers. Students will employ hands-on experiences for continued knowledge and skill development.

NURA 1001 – Train to become a Certified Nurse Aid (CNA) in a long-term care facility. Course topics include residents' rights, communication, safety observation, reporting and basic comfort and care. Clinical hours are scheduled at various times by the instructor.

NURA 2005 – Clinical Lab for NURA 1001

PRACTICUM IN HEALTH SCIENCE – PCT - CE Credits: 2
(PLAB 1023 + PLAB 1060 & NUPC 1020)
Grades: 12
Prerequisites: Health Science Clinical – CE + Complete Galveston College Health Requirements/Background Check

The Practicum in Health Science course is designed to give students practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience.

PLAB 1023 – Get started as an entry-level phlebotomist and prepare for your certification exam with the National Healthcare Association (NHA). Study the skills used in the performance of a variety of blood collection methods. Clinical hours are scheduled at various times by the instructor and may need to be simulated due to COVID-19 restrictions.

PLAB 1060 – Clinical Lab for PLAB 1023

NUPC 1020 – This course is a capstone course that encompasses and reviews the skills needed for aides, EKG techs, and phlebotomists. Students will have the opportunity to earn the credentials needed to work as a Patient care Technician (PCT) in most major medical facilities.

ANATOMY AND PHYSIOLOGY Credit: 1
Grades: 11-12
Prerequisite: Biology and one credit in Chemistry, IPC or Physics

The Anatomy and Physiology course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Anatomy and Physiology will study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis. *This course satisfies a high school science graduation requirement and students shall be awarded one credit for successful completion of this course.*

ANATOMY AND PHYSIOLOGY - DC Credit: 1
(BIOL 2401 & BIOL 2402)
Grades: 11-12
Prerequisite: Biology and one credit in Chemistry, IPC or Physics + TSIA Satisfied in literacy.

The Anatomy and Physiology course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Anatomy and Physiology will study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis. *This course satisfies a high school science graduation requirement and students shall be awarded one credit for successful completion of this course.*

BIOL 2401 – Study of the structure and function of human anatomy, including the neuroendocrine, integumentary, musculoskeletal, digestive, urinary, reproductive, respiratory, and circulatory systems. Content
may be either integrated or specialized. The first of a two-semester course sequence introducing the normal structure and function of the human body, its cells, tissues, organs, and organ systems. Major body systems to be studied in this course include the integumentary, skeletal, muscular, and nervous systems. This course serves as a foundation for students of Associate Degree in Nursing, Allied Health disciplines and physical education majors.

BIOL 2402 – Study of the structure and function of human anatomy, including the neuroendocrine, integumentary, musculoskeletal, digestive, urinary, reproductive, respiratory, and circulatory systems. Content
may be either integrated or specialized. The second of a two-semester course sequence introducing the normal structure and function of the human body, its cells, tissues, organs, and organ systems. Major body systems to be studied in this course include the endocrine, circulatory, respiratory, digestive, excretory, and reproductive systems. This course serves as a foundation for students of Associate Degree in Nursing, Allied Health disciplines and physical education majors.

MEDICAL MICROBIOLOGY Credit: 1
Grade: 11-12
Prerequisite: Biology, Chemistry and at least one credit from a course in the Health Science Career Cluster

The Medical Microbiology course is designed to explore the microbial world, studying topics such as pathogenic and non-pathogenic microorganisms, laboratory procedures, identifying microorganisms, drug-resistant organisms, and emerging diseases. *This course satisfies a high school science graduation requirement and students shall be awarded one credit for successful completion of this course.*

PATHOPHYSIOLOGY Credit: 1
Grade: 12
Prerequisite: Biology, Chemistry and at least one credit from a level 2 course in the Health Science Career Cluster (preferably, Anatomy and Physiology)

The Pathophysiology course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Pathophysiology will study disease processes and how humans are affected. Emphasis is placed on prevention and treatment of disease. *This course satisfies a high school science graduation requirement and students shall be awarded one credit for successful completion of this course.*

Galveston College
CONTINUING EDUCATION
409-944-1344 | CE@GC.EDU

GALVESTON COLLEGE - CE - OPEN

STEP 1: COMPLETE BACKGROUND CHECK

Annual background checks no more than 60 days prior to class start date are required to ensure the safety of patients treated by students in the clinical education programs. The reports are typically completed within 3-5 business days; however, you must submit your order in sufficient time for the report to be reviewed by the program coordinator or associated clinical site prior to starting the rotation. The background check is conducted by PreCheck, Inc., a firm specializing in the health care industry.

All Students must have a satisfactory criminal history; this is obtained through Student Check at www.mystudentcheck.com. **The following may disqualify a student from the Continuing Education Healthcare Programs at Galveston College (GC) Programs**: felony convictions, misdemeanor convictions involving crimes against persons: felony deferred adjudications for the sale possession, distribution, or transfer of narcotics or controlled substance; and registered sex offender, etc. Students with any criminal history must complete and submit their criminal history check report to the Director of CE for additional evaluation, which is necessary to determine eligibility into the GC program and access to clinical sites. This process can take several weeks, so please do not delay. If a student is ruled ineligible for a CE program, the money spent on a criminal history check and with Student Check is non-refundable. If the student has any concerns with their criminal history, before enrolling we encourage the student to print at a minimal fee a less detailed report athttps://records.txdps.state.tx.us/DpsWebsite/CriminalHistory/

GETTING STARTED

Follow link to MyStudentCheck (https://candidate.precheck.com/StudentCheck?schoolId=15593
Cost approx. $59.00
(Applicable state sales tax will be collected based on the location of your school.)

- Confirm the school name matches: **Galveston College - CE -OPEN**
- Select your program from drop down menu, and then select background check.
- Log in with your username and password or please create a new account.
- Enter the required information, provide authorization, and continue to enter payment information.
- If you need further assistance, please contact PreCheck at StudentCheck@PreCheck.com.
- You will be provided with a receipt and confirmation page when your order is placed.

1. **What does PreCheck do with my information?**
   Your information will only be used for the services ordered. Your credit will not be investigated and your name will not be given out to any businesses.
2. **I selected the wrong school, program or incorrect information.**
   Please email StudentCheck@PreCheck.com with the details.
3. **Do I get a copy of the background report?**
   Yes, go to www.mystudentcheck.com, log in, and select Check Status.
4. **I was denied entry into a program because of information on the report, who can I contact?**
   Call PreCheck's Adverse Action hotline at 800-203-1654.

STEP 2: SUBMIT DOCUMENTS TO C.E. OFFICE!

Review and submit your health requirements: How to find your healthcare records: https://www.cdc.gov/vaccines/adults/vaccination-records.html
The following documentation is required for admission into of the Continuing Education Healthcare Programs at Galveston College. The documentation listed below must be submitted to the CE Office. The cost for creating a student check account is not included in your course tuition and varies per program. The penalty for falsifying information on this application is immediate withdrawal without a refund. Results are good for 1 year.

Required Documentation for CE HEALTHCARE Programs

Item	Nurse Aide	PHLEB.	EKG	Clinical Medical Assistant	PCT	Massage	Notes
DOCUMENTS							
RELEASE FORM:	Required	Required	Required	Required	Required	Required	
Copy of Photo ID	Required	Required	Required	Required	Required	Required	Must be a signed state ID
Copy of Social Security Card	Required	Optional	Optional	Optional	Optional	Required	May be ITIN residency card
Transcripts/GED *		Required*	Required*	Required*	Required*	Required*	* N/A for high school students
Healthcare providers CPR Card	Provided	Required	Required	Required	Required	Required	
Criminal Background Check*	Required	Required	Required	Required	Required	Required	*w/release form if HS student
HIPPA Training Modules						Required	
Employability Status Check	GC Staff						
Physical Exam Form	Required	Required	Required		Required	Required	
Drug Screening* (5 panel)		Required*		Required*	Required*		*within 30 days of class start
IMMUNIZATIONS							
TB BLOOD TEST (Interferon Gold)	Required	Required	Required	Required	Required	Required	CNA accept PPD skin test
Chest X-ray (if applicable)							
TDAP (tetanus, diphtheria, pertussis)	Required	Required	Required	Required	Required	Preferred	Within 10 years
MMR (two doses)	Required	Required	Required	Required	Required	Preferred	
Hepatitis B Series * may be 2-3	Required	Required	Required	Required	Required	Preferred	* Series
Flu (Influenza) vaccine * Current	Required	Required	Required	Required	Required	Required	* Exempt summer
Varicella or date of infection*	Required	Required	Required	Required	Required	Preferred	* Or Date/Year of Chicken pox
Meningitis *						Required	* Massage (under age 22)
Covid-19* (highly recommended)	Recommended	Recommended	Recommended	Recommended	Recommended	Recommended	*recommended

Health Science Career Cluster

The Health Science career cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. This career cluster includes occupations ranging from medical assistant, registered nurse, and physical therapist to forensic science technician and athletic trainer.

Statewide Program of Study:

Diagnostic and Therapeutic Services – Emergency Medical Technician (EMT)

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Secondary Courses for High School Credit

Level 1	• Principles of Health Science – AC – 1 Credit
Level 2	• Medical Terminology – DC – 1 Credit
Level 3	• Health Science Clinicals – CE – 2 Credits
Level 4	• Emergency Medical Technician–Basic – DC & CE – 2 Credits
Additional Courses	• Anatomy and Physiology – Reg/DC – 1 Credit • Medical Microbiology – 1 Credit • Pathophysiology – 1 Credit

*Articulated Credit (AC) / Continuing Education (CE) / Dual Credit (DC)
Certification offerings can vary from year to year

Aligned Advanced Academic Courses

AP or IB	AP Biology IB Biology SL IB Biology HL	AP Chemistry IB Chemistry SL IB Chemistry HL
Dual Credit	Dual credit offerings will vary by local education agency.	

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	• Intern with a medical assistant at a community clinic, hospital, assisted living, or long-term care facility • Participate in job shadowing experiences such as Emergency Medical Services (EMS) ride along or hospital/clinical job
Expanded Learning Opportunities	• Participate in Health Occupation Students of America (HOSA) or SkillsUSA • Participate in Advanced Medical Ambulance Bus (AMBUS) event or Community Emergency Response Team (CERT) event

Aligned Industry-Based Certifications

- Emergency Medical Technician–Basic

Example Postsecondary Opportunities

Apprenticeships
- Medical Assistant

Associate Degrees
- Emergency Medical Technology
- Radiologic Technology/Science

Bachelor's Degrees
- Emergency Medical Technology
- Medical Insurance Coding

Master's, Doctoral, and Professional Degrees
- Medicine
- Occupational Therapy

Additional Stackable IBCs/License
- Registered Diagnostic Medical Sonographer

Example Aligned Occupations

Medical Assistants
Median Wage: $36,834
Annual Openings: 11,638
10-Year Growth: 29%

Dental Hygienists
Median Wage: $79,663
Annual Openings: 1,352
10-Year Growth: 32%

Physician Assistants
Median Wage: $127,332
Annual Openings: 974
10-Year Growth: 41%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/8/2024.

For more information visit: https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources

HEALTH SCIENCE – EMERGENCY MEDICAL TECHNICIAN (EMT):

PRINCIPLES OF HEALTH SCIENCE - AC Credit: 1
(HPRS 1201)
Grades: 9
Prerequisite: None

The Principles of Health Science course is designed to provide an overview of the therapeutic, diagnostic, health informatics, support services, and biotechnology research and development systems of the health care industry.

HPRS 1201 – An overview of the roles of various members of the healthcare system, educational requirements, and issues affecting the delivery of health care.

MEDICAL TERMINOLOGY - DC Credit: 1
(HITT 1305 & HITT 1353)
Grades: 10
Prerequisite: Principles of Health Science

The Medical Terminology course is designed to introduce students to the structure of medical terms, including prefixes, suffixes, word roots, singular and plural forms, and medical abbreviations. The course allows students to achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology.

HITT 1305 – Study of word origin and structure through the introduction of prefixes, suffixes, root words, plurals, abbreviations and symbols, surgical procedures, medical specialties, and diagnostic procedures.

HITT 1353 – Concepts of privacy, security, confidentiality, ethics, healthcare legislation, and regulations relating to the maintenance and use of health information.

HEALTH SCIENCE CLINICAL - CE Credits: 2
(NURA 1001 + NURA 2005)
Grade Placement: 11-12
Prerequisites: Medical Terminology – DC + Complete Galveston College Health Requirements/Background Check
Corequisite: Health Science Theory. This course must be taken concurrently with Health Science Theory and may not be taken as a stand-alone course.

The Health Science Clinical course is designed to provide for the development of advanced knowledge and skills related to a wide variety of health careers. Students will employ hands-on experiences for continued knowledge and skill development.

NURA 1001 – Train to become a Certified Nurse Aid (CNA) in a long-term care facility. Course topics include residents' rights, communication, safety observation, reporting and basic comfort and care. Clinical hours are scheduled at various times by the instructor.

NURA 2005 – Clinical Lab for NURA 1001

EMERGENCY MEDICAL TECHNICIAN - BASIC – DC & CE Credits: 2
(EMSP 1501/EMSP 1160 + EMSP 1091)
Grades: 12
Prerequisites: Health Science Clinical – CE + Complete Galveston College Health Requirements/Background Check

Emergency Medical Technician (EMT)—Basic instructs students to meet and exceed the standard knowledge needed to be a valid Emergency Medical Technician. The curriculum includes skills necessary for a student to provide entry level emergency medical care, life support, and ambulance service. The EMT—Basic course is an introductory course to concepts, knowledge, and skills needed by EMTs in the areas of communications, transportation, and recordkeeping. Students interested in working in public safety, including fire, police, and ambulance operators will be capable of performing the job expectations of an EMT safely and effectively after the completion of this course.

EMSP 1501 – Preparation for certification as an Emergency Medical Technician (EMT). Includes all the skills necessary to provide emergency medical care at a basic life support level with an emergency service or other specialized services.

EMSP 1160 – A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts.

EMSP 1091 - Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

ANATOMY AND PHYSIOLOGY Credit: 1
Grades: 11-12
Prerequisite: Biology and one credit in Chemistry, IPC or Physics

The Anatomy and Physiology course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Anatomy and Physiology will study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis. *This course satisfies a high school science graduation requirement and students shall be awarded one credit for successful completion of this course.*

ANATOMY AND PHYSIOLOGY - DC Credit: 1
(BIOL 2401 & BIOL 2402)
Grades: 11-12
Prerequisite: Biology and one credit in Chemistry, IPC or Physics + TSIA Satisfied in literacy.

The Anatomy and Physiology course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Anatomy and Physiology will study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis. *This course satisfies a high school science graduation requirement and students shall be awarded one credit for successful completion of this course.*

BIOL 2401 – Study of the structure and function of human anatomy, including the neuroendocrine, integumentary, musculoskeletal, digestive, urinary, reproductive, respiratory, and circulatory systems. Content
may be either integrated or specialized. The first of a two-semester course sequence introducing the normal structure and function of the human body, its cells, tissues, organs, and organ systems. Major body systems to be studied in this course include the integumentary, skeletal, muscular, and nervous systems. This course serves as a foundation for students of Associate Degree in Nursing, Allied Health disciplines and physical education majors.

BIOL 2402 – Study of the structure and function of human anatomy, including the neuroendocrine, integumentary, musculoskeletal, digestive, urinary, reproductive, respiratory, and circulatory systems. Content
may be either integrated or specialized. The second of a two-semester course sequence introducing the normal structure and function of the human body, its cells, tissues, organs, and organ systems. Major body systems to be studied in this course include the endocrine, circulatory, respiratory, digestive, excretory, and reproductive systems. This course serves as a foundation for students of Associate Degree in Nursing, Allied Health disciplines and physical education majors.

MEDICAL MICROBIOLOGY Credit: 1
Grade: 11-12
Prerequisite: Biology, Chemistry and at least one credit from a course in the Health Science Career Cluster

The Medical Microbiology course is designed to explore the microbial world, studying topics such as pathogenic and non-pathogenic microorganisms, laboratory procedures, identifying microorganisms, drug-resistant organisms, and emerging diseases. *This course satisfies a high school science graduation requirement and students shall be awarded one credit for successful completion of this course.*

PATHOPHYSIOLOGY Credit: 1
Grade: 12
Prerequisite: Biology, Chemistry and at least one credit from a level 2 course in the Health Science Career Cluster (preferably, Anatomy and Physiology)

The Pathophysiology course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Pathophysiology will study disease processes and how humans are affected. Emphasis is placed on prevention and treatment of disease. *This course satisfies a high school science graduation requirement and students shall be awarded one credit for successful completion of this course.*

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GETTING STARTED

Follow link to MyStudentCheck (https://candidate.precheck.com/StudentCheck?schoolId=15593
Cost approx. $59.00
(Applicable state sales tax will be collected based on the location of your school.)

- Confirm the school name matches: **Galveston College - CE -OPEN**
- Select your program from drop down menu, and then select background check.
- Log in with your username and password or please create a new account.
- Enter the required information, provide authorization, and continue to enter payment information.
- If you need further assistance, please contact PreCheck at StudentCheck@PreCheck.com.
- You will be provided with a receipt and confirmation page when your order is placed.

1. **What does PreCheck do with my information?**
   Your information will only be used for the services ordered. Your credit will not be investigated and your name will not be given out to any businesses.
2. **I selected the wrong school, program or incorrect information.**
   Please email StudentCheck@PreCheck.com with the details.
3. **Do I get a copy of the background report?**
   Yes, go to www.mystudentcheck.com, log in, and select Check Status.
4. **I was denied entry into a program because of information on the report, who can I contact?**
   Call PreCheck's Adverse Action hotline at 800-203-1654.

STEP 2: SUBMIT DOCUMENTS TO C.E. OFFICE!

Review and submit your health requirements: How to find your healthcare records: https://www.cdc.gov/vaccines/adults/vaccination-records.html
The following documentation is required for admission into of the Continuing Education Healthcare Programs at Galveston College. The documentation listed below must be submitted to the CE Office. The cost for creating a student check account is not included in your course tuition and varies per program. The penalty for falsifying information on this application is immediate withdrawal without a refund. Results are good for 1 year.

Required Documentation for CE HEALTHCARE Programs

Item	Nurse Aide	PHLEB.	EKG	Clinical Medical Assistant	PCT	Massage	Notes
DOCUMENTS							
RELEASE FORM:	Required	Required	Required	Required	Required	Required	
Copy of Photo ID	Required	Required	Required	Required	Required	Required	Must be a signed state ID
Copy of Social Security Card	Required	Optional	Optional	Optional	Optional	Required	May be ITIN residency card
Transcripts/GED *		Required*	Required*	Required*	Required*	Required*	* N/A for high school students
Healthcare providers CPR Card	Provided	Required	Required	Required	Required	Required	
Criminal Background Check*	Required	Required	Required	Required	Required	Required	*w/release form if HS student
HIPPA Training Modules						Required	
Employability Status Check	GC Staff						
Physical Exam Form	Required	Required	Required		Required	Required	
Drug Screening* (5 panel)		Required*		Required*	Required*		*within 30 days of class start
IMMUNIZATIONS							
TB BLOOD TEST (Interferon Gold)	Required	Required	Required	Required	Required	Required	CNA accept PPD skin test
Chest X-ray (if applicable)							
TDAP (tetanus, diphtheria, pertussis)	Required	Required	Required	Required	Required	Preferred	Within 10 years
MMR (two doses)	Required	Required	Required	Required	Required	Preferred	
Hepatitis B Series * may be 2-3	Required	Required	Required	Required	Required	Preferred	* Series
Flu (Influenza) vaccine * Current	Required	Required	Required	Required	Required	Required	* Exempt summer
Varicella or date of infection*	Required	Required	Required	Required	Required	Preferred	* Or Date/Year of Chicken pox
Meningitis *						Required	* Massage (under age 22)
Covid-19* (highly recommended)	Recommended	Recommended	Recommended	Recommended	Recommended	Recommended	*recommended

NEW

Health Science Career Cluster

The Health Science career cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. This career cluster includes occupations ranging from medical assistant, registered nurse, and physical therapist to forensic science technician and athletic trainer.

Statewide Program of Study:

Diagnostic and Therapeutic Services – Imaging Technology (Radiography)

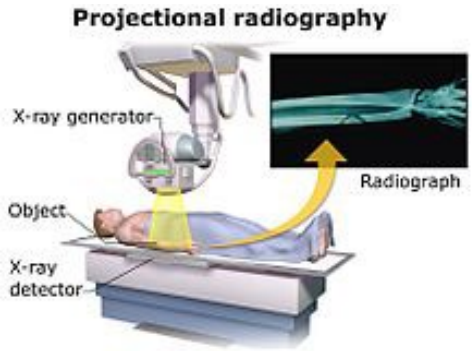
The Diagnostic and Therapeutic Services program of study focuses on occupational and educational opportunities associated with diagnosing and treating acute, episodic, or chronic illness independently or as part of a healthcare team. This program of study includes exploration of patient treatment and rehabilitative programs that help build or restore daily living skills to persons with disabilities or developmental delays.

Secondary Courses for High School Credit

Level 1	• Introduction to Imaging Technology – AC – 1 Credit
Level 2	• Imaging Technology I – DC – 1 Credit + TBD
Level 3	• Imaging Technology II – DC – 2 Credits
Level 4	• Practicum in Health Science – Imaging Technology (Radiography) – DC – 2 Credits
Additional Courses	• Medical Terminology – DC – 1 Credit • Anatomy and Physiology – Reb/DC – 1 Credit • Medical Microbiology – 1 Credit • Pathophysiology – 1 Credit

*Articulated Credit (AC) / Continuing Education (CE) / Dual Credit (DC)

Certification offerings can vary from year to year



Aligned Advanced Academic Courses

AP or IB	AP Biology IB Biology SL IB Biology HL	AP Chemistry IB Chemistry SL IB Chemistry HL
Dual Credit	Dual credit offerings will vary by local education agency.	

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	• Intern with a medical assistant at a community clinic, hospital, assisted living, or long-term care facility • Participate in job shadowing experiences such as Emergency Medical Services (EMS) ride along or hospital/clinical job
Expanded Learning Opportunities	• Participate in Health Occupation Students of America (HOSA) or SkillsUSA • Participate in Advanced Medical Ambulance Bus (AMBUS) event or Community Emergency Response Team (CERT) event

Aligned Industry-Based Certifications

- Limited Medical Radiologic Technologist

Example Postsecondary Opportunities

Apprenticeships
- Medical Assistant

Associate Degrees
- Emergency Medical Technology
- Radiologic Technology/Science

Bachelor's Degrees
- Emergency Medical Technology
- Medical Insurance Coding

Master's, Doctoral, and Professional Degrees
- Medicine
- Occupational Therapy

Additional Stackable IBCs/License
- Registered Diagnostic Medical Sonographer

Example Aligned Occupations

Medical Assistants
Median Wage: $36,834
Annual Openings: 11,638
10-Year Growth: 29%

Radiography
Median Wage: $79,741
Annual Openings: 5,374
10-Year Growth: 28%

Physician Assistants
Median Wage: $127,332
Annual Openings: 974
10-Year Growth: 41%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/8/2024.

For more information visit: https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources

HEALTH SCIENCE – IMAGING TECHNOLOGY (RADIOGRAPHY):

NEW

INTRODUCTION TO IMAGING TECHNOLOGY – AC Credit: 1
(RADR 1309 & RADR 2313)
Grades: 9
Prerequisite: None

The Introduction to Imaging Technology course provides students with an introduction to the basic principles, guidelines, and knowledge needed for members of the medical imaging field. This course will provide the student with an overview of radiography and its role within the health care system, including basic radiologic terminology, equipment, basic image production, patient positioning, and radiation safety. The student will study human anatomic structures and organs, as well as the standard positioning associated with the chest, abdomen, upper and lower extremities.

RADR 1309 – An overview of the historical development of radiography, basic radiation protection, an introduction to medical terminology, ethical and legal issues for health care professionals, and an orientation to the profession and to the health care system. Patient assessment, infection control procedures, emergency and safety procedures, communication and patient interaction skills, and basic pharmacology are also included.

RADR 2313 – Includes the effects of radiation on biological systems, genetic and subcellular interactions, and occupational exposure of radiologic personnel.

IMAGINING TECHNOLOGY I – DC Credit: 1 + TBD
(RADR 2209/BIOL 2401 + RADR 1411/MATH ELECTIVE)
Grades: 10
Prerequisite: Introduction to Imaging Technology – AC + TSIA Satisfied in BOTH Literacy and Math

The Imaging Technology I course provides students with the opportunity to learn about standard radiographic positioning and related medical terminology of the chest, abdomen, and upper and lower extremities. The course introduces students to the operation of X-ray equipment, analyzing X-rays, and maintaining diagnostic results. Imaging Technology I prepares students for college, career and military readiness by allowing the student the opportunity to obtain an industry certification, enter the workforce upon graduation from high school, or transition to a postsecondary institution with the prior knowledge to be successful in a radiology career field.

RADR 2209 – Equipment and physics of x-ray production. Includes basic x-ray circuits. Also examines the relationship of conventional and digital equipment components to the imaging process.

BIOL 2401 – Study of the structure and function of human anatomy, including the neuroendocrine, integumentary, musculoskeletal, digestive, urinary, reproductive, respiratory, and circulatory systems. Content
may be either integrated or specialized. The first of a two-semester course sequence introducing the normal structure and function of the human body, its cells, tissues, organs, and organ systems. Major body systems to be studied in this course include the integumentary, skeletal, muscular, and nervous systems. This course serves as a foundation for students of Associate Degree in Nursing, Allied Health disciplines and physical education majors.

RADR 1411 – An introduction to radiographic positioning terminology, the proper manipulation of equipment, positioning and alignment of the anatomical structure and equipment, and evaluation of images for proper demonstration of basis anatomy.

MATH ELECTIVE – Math 1314 is suggested, or you can select one courses from: MATH 1325, MATH 2312, MATH 2413, MATH 2414, MATH 2415, MATH 2318, MATH 2320, MATH 2321, or MATH 2305

IMAGINIING TECHNOLOGY II – DC Credits: 2
(RADR 2401/RADR 1313 + RADR 1166/RADR 2305)
Grades: 11
Prerequisite: Imagining Technology I – DC + TSIA Satisfied in Literacy

The Imaging Technology II Clinical course provides students with the opportunity to build upon the knowledge learned in Introduction to Imaging Technology and Imaging Technology I. The course prepares students to take the Limited Medical Radiologic Technician Licensing Exam (LMRT) by increasing their depth of knowledge in anatomy, radiology-based physics, positioning, radiation protection, radiation biology, patient care, ethics, imaging techniques, correcting imaging errors, image storage, and equipment while participating in clinical rotations. Additionally, students will identify errors within the radiographic image and describe how to correct the errors. Imaging Technology II Clinical incorporates a clinical component that allows students to gain hands-on experience.

RADR 2401 – A continuation of the study of the proper manipulation of radiographic equipment, positioning and alignment of the anatomical structure and equipment, and evaluation of images for proper demonstration of anatomy and related pathology.

RADR 1313 – Radiographic image quality and the effects of exposure variables.

RADR 1166 – Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

RADR 2305 – Radiographic imaging technique formulation. Includes equipment, quality control, imaging quality assurance, and the synthesis of all variables in image production.

PRACTICUM IN HEATLH SCIENCE – IMAGINING TECHNOLOGY (RADIOGRAPHY) - DC Credits: 2
(RADR 1267 & RADR 1367)
Grades: 12
Prerequisite: Imaging Technology II – DC + TSIA Satisfied in Literacy

The Practicum in Health Science course is designed to give students practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience.

RADR 1267 – Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

RADR 1367 - Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

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GALVESTON COLLEGE - CE - OPEN

STEP 1: COMPLETE BACKGROUND CHECK

Annual background checks no more than 60 days prior to class start date are required to ensure the safety of patients treated by students in the clinical education programs. The reports are typically completed within 3-5 business days; however, you must submit your order in sufficient time for the report to be reviewed by the program coordinator or associated clinical site prior to starting the rotation. The background check is conducted by PreCheck, Inc., a firm specializing in the health care industry.

All Students must have a satisfactory criminal history; this is obtained through Student Check at www.mystudentcheck.com. **The following may disqualify a student from the Continuing Education Healthcare Programs at Galveston College (GC) Programs**: felony convictions, misdemeanor convictions involving crimes against persons: felony deferred adjudications for the sale possession, distribution, or transfer of narcotics or controlled substance; and registered sex offender, etc. Students with any criminal history must complete and submit their criminal history check report to the Director of CE for additional evaluation, which is necessary to determine eligibility into the GC program and access to clinical sites. This process can take several weeks, so please do not delay. If a student is ruled ineligible for a CE program, the money spent on a criminal history check and with Student Check is non-refundable. If the student has any concerns with their criminal history, before enrolling we encourage the student to print at a minimal fee a less detailed report athttps://records.txdps.state.tx.us/DpsWebsite/CriminalHistory/

GETTING STARTED

Follow link to MyStudentCheck (https://candidate.precheck.com/StudentCheck?schoolId=15593
Cost approx. $59.00
(Applicable state sales tax will be collected based on the location of your school.)

- Confirm the school name matches: **Galveston College - CE -OPEN**
- Select your program from drop down menu, and then select background check.
- Log in with your username and password or please create a new account.
- Enter the required information, provide authorization, and continue to enter payment information.
- If you need further assistance, please contact PreCheck at StudentCheck@PreCheck.com.
- You will be provided with a receipt and confirmation page when your order is placed.

1. **What does PreCheck do with my information?**
   Your information will only be used for the services ordered. Your credit will not be investigated and your name will not be given out to any businesses.
2. **I selected the wrong school, program or incorrect information.**
   Please email StudentCheck@PreCheck.com with the details.
3. **Do I get a copy of the background report?**
   Yes, go to www.mystudentcheck.com, log in, and select Check Status.
4. **I was denied entry into a program because of information on the report, who can I contact?**
   Call PreCheck's Adverse Action hotline at 800-203-1654.

STEP 2: SUBMIT DOCUMENTS TO C.E. OFFICE!

Review and submit your health requirements: How to find your healthcare records: https://www.cdc.gov/vaccines/adults/vaccination-records.html
The following documentation is required for admission into of the Continuing Education Healthcare Programs at Galveston College. The documentation listed below must be submitted to the CE Office. The cost for creating a student check account is not included in your course tuition and varies per program. The penalty for falsifying information on this application is immediate withdrawal without a refund. Results are good for 1 year.

Required Documentation for CE HEALTHCARE Programs

Item	Nurse Aide	PHLEB.	EKG	Clinical Medical Assistant	PCT	Massage	Notes
DOCUMENTS							
RELEASE FORM:	Required	Required	Required	Required	Required	Required	
Copy of Photo ID	Required	Required	Required	Required	Required	Required	Must be a signed state ID
Copy of Social Security Card	Required	Optional	Optional	Optional	Optional	Required	May be ITIN residency card
Transcripts/GED *		Required*	Required*	Required*	Required*	Required*	* N/A for high school students
Healthcare providers CPR Card	Provided	Required	Required	Required	Required	Required	
Criminal Background Check*	Required	Required	Required	Required	Required	Required	*w/release form if HS student
HIPPA Training Modules						Required	
Employability Status Check	GC Staff						
Physical Exam Form	Required	Required	Required		Required	Required	
Drug Screening* (5 panel)		Required*		Required*	Required*		*within 30 days of class start
IMMUNIZATIONS							
TB BLOOD TEST (Interferon Gold)	Required	Required	Required	Required	Required	Required	CNA accept PPD skin test
Chest X-ray (if applicable)							
TDAP (tetanus, diphtheria, pertussis)	Required	Required	Required	Required	Required	Preferred	Within 10 years
MMR (two doses)	Required	Required	Required	Required	Required	Preferred	
Hepatitis B Series * may be 2-3	Required	Required	Required	Required	Required	Preferred	* Series
Flu (Influenza) vaccine * Current	Required	Required	Required	Required	Required	Required	* Exempt summer
Varicella or date of infection*	Required	Required	Required	Required	Required	Preferred	* Or Date/Year of Chicken pox
Meningitis *						Required	* Massage (under age 22)
Covid-19* (highly recommended)	Recommended	Recommended	Recommended	Recommended	Recommended	Recommended	*recommended

NEW

Health Science Career Cluster

The Health Science career cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. This career cluster includes occupations ranging from medical assistant, registered nurse, and physical therapist to forensic science technician and athletic trainer.

Statewide Program of Study:

Diagnostic and Therapeutic Services – Surgical Technician

The Diagnostic and Therapeutic Services program of study focuses on occupational and educational opportunities associated with diagnosing and treating acute, episodic, or chronic illness independently or as part of a healthcare team. This program of study includes exploration of patient treatment and rehabilitative programs that help build or restore daily living skills to persons with disabilities or developmental delays.

Secondary Courses for High School Credit

Level 1	• Principles of Health Science – AC – 1 Credit
Level 2	• Medical Terminology – DC – 1 Credit
Level 3	• Health Science Clinical – CE – 2 Credit
Level 4	• Practicum in Health Science – Surgical Tech - DC – 2 Credits
Additional Courses	• Anatomy and Physiology - Reg/DC – 1 Credit • Medical Microbiology - 1 Credit • Pathophysiology – 1 Credit

*Articulated Credit (AC) / Continuing Education (CE) / Dual Credit (DC)
Certification offerings can vary from year to year

Aligned Advanced Academic Courses

AP or IB	AP Biology IB Biology SL IB Biology HL	AP Chemistry IB Chemistry SL IB Chemistry HL
Dual Credit	Dual credit offerings will vary by local education agency.	

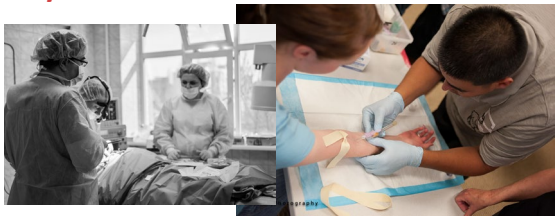
Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	• Intern with a medical assistant at a community clinic, hospital, assisted living, or long-term care facility • Participate in job shadowing experiences such as Emergency Medical Services (EMS) ride along or hospital/clinical job
Expanded Learning Opportunities	• Participate in Health Occupation Students of America (HOSA) or SkillsUSA • Participate in Advanced Medical Ambulance Bus (AMBUS) event or Community Emergency Response Team (CERT) event

Aligned Industry-Based Certifications

- Certified Nurse Aide (CNA)
- Patient Care Technician
- Phlebotomy Technician



Example Postsecondary Opportunities

Apprenticeships
- Medical Assistant

Associate Degrees
- Emergency Medical Technology
- Radiologic Technology/Science

Bachelor's Degrees
- Emergency Medical Technology
- Medical Insurance Coding

Master's, Doctoral, and Professional Degrees
- Medicine
- Occupational Therapy

Additional Stackable IBCs/License
- Registered Diagnostic Medical Sonographer

Example Aligned Occupations

Medical Assistants
Median Wage: $36,834
Annual Openings: 11,638
10-Year Growth: 29%

Dental Hygienists
Median Wage: $79,663
Annual Openings: 1,352
10-Year Growth: 32%

Physician Assistants
Median Wage: $127,332
Annual Openings: 974
10-Year Growth: 41%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/8/2024.

For more information visit: https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources

HEALTH SCIENCE – SURGICAL TECHNICIAN:

PRINCIPLES OF HEALTH SCIENCE - AC Credit: 1
(HPRS 1201)
Grades: 9
Prerequisite: None

The Principles of Health Science course is designed to provide an overview of the therapeutic, diagnostic, health informatics, support services, and biotechnology research and development systems of the health care industry.

HPRS 1201 – An overview of the roles of various members of the healthcare system, educational requirements, and issues affecting the delivery of health care.

MEDICAL TERMINOLOGY - DC Credit: 1
(HITT 1305 & HITT 1353)
Grades: 10
Prerequisite: Principles of Health Science

The Medical Terminology course is designed to introduce students to the structure of medical terms, including prefixes, suffixes, word roots, singular and plural forms, and medical abbreviations. The course allows students to achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology.

HITT 1305 – Study of word origin and structure through the introduction of prefixes, suffixes, root words, plurals, abbreviations and symbols, surgical procedures, medical specialties, and diagnostic procedures.

HITT 1353 – Concepts of privacy, security, confidentiality, ethics, healthcare legislation, and regulations relating to the maintenance and use of health information.

HEALTH SCIENCE CLINICAL - CE Credits: 2
(NURA 1001 + NURA 2005)
Grade Placement: 11-12
Prerequisites: Medical Terminology – DC + Complete Galveston College Health Requirements/Background Check
Corequisite: Health Science Theory. This course must be taken concurrently with Health Science Theory and may not be taken as a stand-alone course.

The Health Science Clinical course is designed to provide for the development of advanced knowledge and skills related to a wide variety of health careers. Students will employ hands-on experiences for continued knowledge and skill development.

NURA 1001 – Train to become a Certified Nurse Aid (CNA) in a long-term care facility. Course topics include residents' rights, communication, safety observation, reporting and basic comfort and care. Clinical hours are scheduled at various times by the instructor.

NURA 2005 – Clinical Lab for NURA 1001

PRACTICUM IN HEALTH SCIENCE – SURGICAL TECHNICIAN (NON-TSIA SATISFIED) - DC Credits: 2
(MDCA 1309 & SRGT 1505)
Grades: 12
Prerequisites: Health Science Clinical – CE + Complete Galveston College Health Requirements/Background Check

The Practicum in Health Science course is designed to give students practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience.

MDCA 1309 – Emphasis on structure and function of human cells, tissues, organs, and systems with overview of common pathophysiology.

SRGT 1505 – Orientation to surgical technology theory, surgical pharmacology and anesthesia, technological sciences, and patient care concepts.

PRACTICUM IN HEALTH SCIENCE – SURGICAL TECHNICIAN (TSIA 2 SATISFIED) - DC Credits: 2
(SCIT 1307 & SRGT 1505)
Grades: 12
Prerequisites: Health Science Clinical – CE + Complete Galveston College Health Requirements/Background Check + TSIA Satisfied in Literacy

The Practicum in Health Science course is designed to give students practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience.

SCIT 1307 – An applied systematic study of the structure and function of the human body. Includes anatomical terminology, cells, tissues, and the following systems: integumentary, skeletal, muscular, nervous, and endocrine. Emphasis on homeostasis.

SRGT 1505 – Orientation to surgical technology theory, surgical pharmacology and anesthesia, technological sciences, and patient care concepts.

ANATOMY AND PHYSIOLOGY Credit: 1
Grades: 11-12
Prerequisite: Biology and one credit in Chemistry, IPC or Physics

The Anatomy and Physiology course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Anatomy and Physiology will study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis. *This course satisfies a high school science graduation requirement and students shall be awarded one credit for successful completion of this course.*

ANATOMY AND PHYSIOLOGY - DC Credit: 1
(BIOL 2401 & BIOL 2402)
Grades: 11-12
Prerequisite: Biology and one credit in Chemistry, IPC or Physics + TSIA Satisfied in literacy.

The Anatomy and Physiology course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Anatomy and Physiology will study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis. *This course satisfies a high school science graduation requirement and students shall be awarded one credit for successful completion of this course.*

BIOL 2401 – Study of the structure and function of human anatomy, including the neuroendocrine, integumentary, musculoskeletal, digestive, urinary, reproductive, respiratory, and circulatory systems. Content
may be either integrated or specialized. The first of a two-semester course sequence introducing the normal structure and function of the human body, its cells, tissues, organs, and organ systems. Major body systems to be studied in this course include the integumentary, skeletal, muscular, and nervous systems. This course serves as a foundation for students of Associate Degree in Nursing, Allied Health disciplines and physical education majors.

BIOL 2402 – Study of the structure and function of human anatomy, including the neuroendocrine, integumentary, musculoskeletal, digestive, urinary, reproductive, respiratory, and circulatory systems. Content
may be either integrated or specialized. The second of a two-semester course sequence introducing the normal structure and function of the human body, its cells, tissues, organs, and organ systems. Major body systems to be studied in this course include the endocrine, circulatory, respiratory, digestive, excretory, and reproductive systems. This course serves as a foundation for students of Associate Degree in Nursing, Allied Health disciplines and physical education majors.

MEDICAL MICROBIOLOGY Credit: 1
Grade: 11-12
Prerequisite: Biology, Chemistry and at least one credit from a course in the Health Science Career Cluster

The Medical Microbiology course is designed to explore the microbial world, studying topics such as pathogenic and non-pathogenic microorganisms, laboratory procedures, identifying microorganisms, drug-resistant organisms, and emerging diseases. *This course satisfies a high school science graduation requirement and students shall be awarded one credit for successful completion of this course.*

PATHOPHYSIOLOGY Credit: 1
Grade: 12
Prerequisite: Biology, Chemistry and at least one credit from a level 2 course in the Health Science Career Cluster (preferably, Anatomy and Physiology)

The Pathophysiology course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Pathophysiology will study disease processes and how humans are affected. Emphasis is placed on prevention and treatment of disease. *This course satisfies a high school science graduation requirement and students shall be awarded one credit for successful completion of this course.*

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GALVESTON COLLEGE - CE - OPEN

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- If you need further assistance, please contact PreCheck at StudentCheck@PreCheck.com.
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Required Documentation for CE HEALTHCARE Programs

Item	Nurse Aide	PHLEB.	EKG	Clinical Medical Assistant	PCT	Massage	Notes
DOCUMENTS							
RELEASE FORM:	Required	Required	Required	Required	Required	Required	
Copy of Photo ID	Required	Required	Required	Required	Required	Required	Must be a signed state ID
Copy of Social Security Card	Required	Optional	Optional	Optional	Optional	Required	May be ITIN residency card
Transcripts/GED *		Required*	Required*	Required*	Required*	Required*	* N/A for high school students
Healthcare providers CPR Card	Provided	Required	Required	Required	Required	Required	
Criminal Background Check*	Required	Required	Required	Required	Required	Required	*w/release form if HS student
HIPPA Training Modules						Required	
Employability Status Check	GC Staff						
Physical Exam Form	Required	Required	Required		Required	Required	
Drug Screening* (5 panel)		Required*		Required*	Required*		*within 30 days of class start
IMMUNIZATIONS							
TB BLOOD TEST (Interferon Gold)	Required	Required	Required	Required	Required	Required	CNA accept PPD skin test
Chest X-ray (if applicable)							
TDAP (tetanus, diphtheria, pertussis)	Required	Required	Required	Required	Required	Preferred	Within 10 years
MMR (two doses)	Required	Required	Required	Required	Required	Preferred	
Hepatitis B Series * may be 2-3	Required	Required	Required	Required	Required	Preferred	* Series
Flu (Influenza) vaccine * Current	Required	Required	Required	Required	Required	Required	* Exempt summer
Varicella or date of infection*	Required	Required	Required	Required	Required	Preferred	* Or Date/Year of Chicken pox
Meningitis *						Required	* Massage (under age 22)
Covid-19* (highly recommended)	Recommended	Recommended	Recommended	Recommended	Recommended	Recommended	*recommended

Health Science Career Cluster

The Health Science career cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. This career cluster includes occupations ranging from medical assistant, registered nurse, and physical therapist to forensic science technician and athletic trainer.

Statewide Program of Study: Health Informatics

The Health Informatics program of study focuses on occupational and educational opportunities associated with the management and use of patient information in the healthcare field. This program of study includes exploration of computerized healthcare systems and the process of creating and maintaining hospital and patient records in accordance with regulatory requirements of the healthcare system. Students will also practice writing and interpreting medical reports.

Secondary Courses for High School Credit

Level 1	• Principles of Health Science – AC – 1 Credit
Level 2	• Medical Terminology – DC – 1 Credit
Level 3	• Medical Intervention Evaluation and Research – DC – 1 Credit
Level 4	• Healthcare Administration and Management – DC – 1 Credit
Additional Courses	• Anatomy and Philosophy – Reg/DC – 1 Credit • Medical Microbiology – 1 Credit • Pathophysiology – 1 Credit

*Articulated Credit (AC) / Continuing Education (CE) / Dual Credit (DC)
Certification offerings can vary from year to year

Aligned Advanced Academic Courses

AP or IB	AP Statistics
Dual Credit	Dual credit offerings will vary by local education agency.

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	• Intern with a medical records specialist or health services manager • Job shadow a medical services manager to understand how services and facilities are managed
Expanded Learning Opportunities	• Participate in HOSA, DECA, SkillsUSA, or BPA

Aligned Industry-Based Certifications

- Certified Billing and Coding Specialist (CBCS)

Example Postsecondary Opportunities

Apprenticeships
- Medical Coder

Associate Degrees
- Health Information/Medical Records Technology
- Medical Assisting

Bachelor's Degrees
- Nursing Administration
- Medical Insurance Coding

Master's, Doctoral, and Professional Degrees
- Nursing Administration
- Hospital and Health Care Facilities Administration

Additional Stackable IBCs/License
- Consumer Health Information Specialization – Level I

Example Aligned Occupations

Medical Secretaries/ Administrative Assistants
Median Wage: $36,994
Annual Openings: 10,505
10-Year Growth: 21%

Medical Records Specialists
Median Wage: $39,408
Annual Openings: 2,763
10-Year Growth: 18%

Medical and Health Services Managers
Median Wage: $102,937
Annual Openings: 4,787
10-Year Growth: 43%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/8/2024.

For more information visit: https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources

HEALTH SCIENCE – HEALTH INFORMATICS:

PRINCIPLES OF HEALTH SCIENCE - AC Credit: 1
(HPRS 1201)
Grades: 9
Prerequisite: None

The Principles of Health Science course is designed to provide an overview of the therapeutic, diagnostic, health informatics, support services, and biotechnology research and development systems of the health care industry.

HPRS 1201 – An overview of the roles of various members of the healthcare system, educational requirements, and issues affecting the delivery of health care.

MEDICAL TERMINOLOGY - DC Credit: 1
(HITT 1305 & HITT 1353)
Grades: 10
Prerequisite: Principles of Health Science

The Medical Terminology course is designed to introduce students to the structure of medical terms, including prefixes, suffixes, word roots, singular and plural forms, and medical abbreviations. The course allows students to achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology.

HITT 1305 – Study of word origin and structure through the introduction of prefixes, suffixes, root words, plurals, abbreviations and symbols, surgical procedures, medical specialties, and diagnostic procedures.

HITT 1353 – Concepts of privacy, security, confidentiality, ethics, healthcare legislation, and regulations relating to the maintenance and use of health information.

MEDICAL INTERVENTION EVALUATION AND RESEARCH - DC Credit: 1
(HITT 2330 & MDCA 1309)
Grade Placement: 11-12
Prerequisites: Medical Terminology - DC

Medical Intervention, Evaluation, and Research further develops basic knowledge of health informatics, data management, and biotechnological advances and their connections in various healthcare settings. Topics include informatics in medical intervention and evaluation, electronic patient management systems, applications in medical diagnostics, best practices in billing and coding medical diagnosis and procedures, appropriate International Classification of Diseases (ICD) 10 codes, fraud prevention, and databases culminating in an extended learning experience. The demand and growth in the field precipitates a needed integration of multiple medical technologies and their impact on healthcare delivery.

HITT 2330 – Study of the pathology and general health management of diseases and injuries across the life span. Topics include etiology, symptoms, and the physical and psychological reactions to diseases and injuries. A study of drug classifications, actions, therapeutic uses, adverse effects, routes of administration, and calculation of dosages.

MDCA 1309 – Emphasis on structure and function of human cells, tissues, organs, and systems with overview of common pathophysiology.

HEALTHCARE ADMINISTRATION AND MANAGEMENT - DC Credit: 1
(POFM 1327 & HITT 1341)
Grades: 12
Prerequisites: Medical Intervention Evaluation and Research - DC

Healthcare Administration and Management is designed to familiarize students with the concepts related to healthcare administration as well as the functions of management, including planning, organizing, staffing, leading, and controlling. Students will also demonstrate interpersonal and project-management skills.

POFM 1327 – Survey of medical insurance including the life cycle of various claim forms, terminology, litigation, patient relations, and ethical issues.

HITT 1341 – Basic coding rules, conventions, and guidelines using clinical classification systems.

ANATOMY AND PHYSIOLOGY Credit: 1
Grades: 11-12
Prerequisite: Biology and one credit in Chemistry, IPC or Physics

The Anatomy and Physiology course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Anatomy and Physiology will study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis. *This course satisfies a high school science graduation requirement and students shall be awarded one credit for successful completion of this course.*

ANATOMY AND PHYSIOLOGY - DC Credit: 1
(BIOL 2401 & BIOL 2402)
Grades: 11-12
Prerequisite: Biology and one credit in Chemistry, IPC or Physics + TSIA Satisfied in literacy.

The Anatomy and Physiology course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Anatomy and Physiology will study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis. *This course satisfies a high school science graduation requirement and students shall be awarded one credit for successful completion of this course.*

BIOL 2401 – Study of the structure and function of human anatomy, including the neuroendocrine, integumentary, musculoskeletal, digestive, urinary, reproductive, respiratory, and circulatory systems. Content
may be either integrated or specialized. The first of a two-semester course sequence introducing the normal structure and function of the human body, its cells, tissues, organs, and organ systems. Major body systems to be studied in this course include the integumentary, skeletal, muscular, and nervous systems. This course serves as a foundation for students of Associate Degree in Nursing, Allied Health disciplines and physical education majors.

BIOL 2402 – Study of the structure and function of human anatomy, including the neuroendocrine, integumentary, musculoskeletal, digestive, urinary, reproductive, respiratory, and circulatory systems. Content
may be either integrated or specialized. The second of a two-semester course sequence introducing the normal structure and function of the human body, its cells, tissues, organs, and organ systems. Major body systems to be studied in this course include the endocrine, circulatory, respiratory, digestive, excretory, and reproductive systems. This course serves as a foundation for students of Associate Degree in Nursing, Allied Health disciplines and physical education majors.

MEDICAL MICROBIOLOGY Credit: 1
Grade: 11-12
Prerequisite: Biology, Chemistry and at least one credit from a course in the Health Science Career Cluster

The Medical Microbiology course is designed to explore the microbial world, studying topics such as pathogenic and non-pathogenic microorganisms, laboratory procedures, identifying microorganisms, drug-resistant organisms, and emerging diseases. *This course satisfies a high school science graduation requirement and students shall be awarded one credit for successful completion of this course.*

PATHOPHYSIOLOGY Credit: 1
Grade: 12
Prerequisite: Biology, Chemistry and at least one credit from a level 2 course in the Health Science Career Cluster (preferably, Anatomy and Physiology)

The Pathophysiology course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Pathophysiology will study disease processes and how humans are affected. Emphasis is placed on prevention and treatment of disease. *This course satisfies a high school science graduation requirement and students shall be awarded one credit for successful completion of this course.*

What is CTE?

Career Technical Education (CTE) is an education pathway that provides students with the academic, technical, and real-world knowledge, skills and experience they need to be prepared for a variety of career options. CTE gives students training and skills in many different types of careers in high growth industries such as science and technology, healthcare, and business management. CTE programs are personalized, hands-on, and let students explore different career fields. CTE is part of the middle school and high school experience and prepares students for the full range of post-secondary opportunities, including college and careers.

What is the Purpose of CTE?

Career and Technical Education is a cornerstone of a national initiative to increase the competitiveness of the U.S. workforce in the global economy. It provides students with:

- ***core academic skills*** and how to apply them to real-world situations in the workplace or daily life,
- ***employability skills*** essential in any career,
- ***job-specific, technical skills*** related to a specific career pathway.

Career and Technical Education gives students a foundation for career success by integrating rigorous academic content with job-specific technical skills and hands-on learning. Students who complete a CTE program of study in high school will be prepared to obtain an entry-level position or pursue more advanced education and training in their chosen career field.

CTE Data Points:

- Over 75% of #CTE learners enroll in postsecondary education after high school.
- CTE learners have a 10% higher high school graduation rate than non-CTE students.
- 89% of parents think students should receive more education about career choices while in high school.
- Six of the ten hardest-to-fill positions are in technical fields or require a CTE background.
- About half of all CTE learners are enrolled in programs in leading fields such as health care, STEM, and information technology.

Health Science Career Cluster

The Health Science career cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. This career cluster includes occupations ranging from medical assistant, registered nurse, and physical therapist to forensic science technician and athletic trainer.

Statewide Program of Study: Biomedical Science

The Biomedical Science program of study focuses on occupational and educational opportunities associated with the study of biology and medicine. This program of study includes researching and diagnosing diseases, pre-existing conditions, and other determinants of health. Students will also practice patient care and communication.

Secondary Courses for High School Credit

Level 1	•	Principles of Biosciences
Level 2	•	Anatomy and Physiology/Human Body Systems (PLTW)– Reg/DC – 1 Credit
Level 3	•	Pathophysiology/Medical Interventions (PLTW) – 1 Credit
Level 4	•	Quality Assurance for Biosciences /Biomedical Innovation (PLTW)– 1 Credit UTMB Biomedical Research

*Articulated Credit (AC) / Continuing Education (CE) / Dual Credit (DC)
Certification offerings can vary from year to year

Example Postsecondary Opportunities

Apprenticeships
- Medical Laboratory Technician

Associate Degrees
- Biotechnology
- Biological Sciences

Bachelor's Degrees
- Biology
- Cellular and Molecular Biology

Master's, Doctoral, and Professional Degrees
- Forensic Science and Technology
- Biomedical Sciences

Additional Stackable IBCs/License
- Cytotechnologist

Aligned Advanced Academic Courses

AP or IB	AP Biology IB Biology SL IB Biology HL	AP Chemistry IB Chemistry SL IB Chemistry HL
Dual Credit	Dual credit offerings will vary by local education agency.	

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	• Intern with a biological or medical scientist at a healthcare organization or health research company to learn scientific testing methods • Shadow a clinical laboratory technician to observe laboratory testing processes
Expanded Learning Opportunities	• Participate in Health Occupations Students of America (HOSA)

Example Aligned Occupations

Medical Equipment Preparers
Median Wage: $38,827
Annual Openings: 519
10-Year Growth: 18%

Forensic Science Technicians
Median Wage: $56,971
Annual Openings: 249
10-Year Growth: 22%

Biological Technicians
Median Wage: $45,787
Annual Openings: 879
10-Year Growth: 14%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/8/2024.

Aligned Industry-Based Certifications

- Biotechnician Assistant Credentialing Exam (BACE)
- Medical Laboratory Assistant
- Medical Laboratory Technician

For more information visit:
https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources

HEALTH SCIENCE - BIOMEDICAL:

PRINCIPLES OF BIOSCIENCES Credit: 1
Grades: 9-12
Prerequisite: None

The course provides an introduction and serves as an overview of the biomedical sciences through exciting "hands on" projects and problems. Student work involves the study of human medicine, research processes and an introduction to bioinformatics. Students investigate the human body systems and various health conditions including heart disease, diabetes, sickle cell disease, hypercholesterolemia, and infectious diseases.

ANATOMY AND PHYSIOLOGY/HUMAN BODY SYSTEMS (PLTW) Credit: 1
Grades: 10-12
Prerequisite: Biology and one credit in Chemistry, IPC or Physics

The Anatomy and Physiology course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Anatomy and Physiology will study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis. *This course satisfies a high school science graduation requirement and students shall be awarded one credit for successful completion of this course.*

ANATOMY AND PHYSIOLOGY/HUMAN BODY SYSTEMS (PLTW) – DC Credit: 1
(BIOL 2401 & BIOL 2402)
Grades: 10-12
Prerequisite: Biology and one credit in Chemistry, IPC or Physics + TSIA Satisfied in literacy.

The Anatomy and Physiology course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Anatomy and Physiology will study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis. *This course satisfies a high school science graduation requirement and students shall be awarded one credit for successful completion of this course.*

BIOL 2401 – Study of the structure and function of human anatomy, including the neuroendocrine, integumentary, musculoskeletal, digestive, urinary, reproductive, respiratory, and circulatory systems. Content
may be either integrated or specialized. The first of a two-semester course sequence introducing the normal structure and function of the human body, its cells, tissues, organs, and organ systems. Major body systems to be studied in this course include the integumentary, skeletal, muscular, and nervous systems. This course serves as a foundation for students of Associate Degree in Nursing, Allied Health disciplines and physical education majors.

BIOL 2402 – Study of the structure and function of human anatomy, including the neuroendocrine, integumentary, musculoskeletal, digestive, urinary, reproductive, respiratory, and circulatory systems. Content
may be either integrated or specialized. The second of a two-semester course sequence introducing the normal structure and function of the human body, its cells, tissues, organs, and organ systems. Major body systems to be studied in this course include the endocrine, circulatory, respiratory, digestive, excretory, and reproductive systems. This course serves as a foundation for students of Associate Degree in Nursing, Allied Health disciplines and physical education majors.

PATHOPHYSIOLOGY/MEDICAL INTERVENTIONS (PLTW) Credit: 1
Grades: 11-12
Prerequisite: Biology, Chemistry and at least one credit from a level 2 course in the Health Science Career Cluster (preferably, Anatomy and Physiology)

The Pathophysiology course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Pathophysiology will study disease processes and how humans are affected. Emphasis is placed on prevention and treatment of disease. *This course satisfies a high school science graduation requirement and students shall be awarded one credit for successful completion of this course.*

QUALITY ASSURANCE FOR BIOSCIENCES/BIOMEDICAL INNOVATION (PLTW) Credit: 1
Grades: 12
Prerequisite: Biology, Chemistry, and completion of at least one course within the Biomedical pathway
Special Note: This is a research-based opportunity at UTMB, 4 Hours a week.

Quality Assurance for the Biosciences is designed to introduce the student to quality principles and regulatory affairs as they apply to the biotechnology, biopharmaceutical, and the biomedical device industries.

Each problem is staged as a mission – a unique set of tasks to work through to achieve their desired objective. Students are presented with a Mission File – a case brief, a list of completion tasks, links to available resources, as well as a reflection section. Working through the missions not only exposes students to current issues in biomedical science, but it also provides skills-based instruction in research and experimentation – tools students will use to design innovative solutions to real-world problems. Students will use what they learn in these missions as they develop and implement their independent project at the end of the year.

RATIONALE FOR THE DESIGN OF A SCIENCE WING

Designing a science lab that comfortably allows for the delivery of both practical and theoretical components is key. Each lab must be of adequate size plus, and flexible to allow hands on experimentation, group involvement of students, and individual desks for both lecture note taking and privacy.

–

Spaces must allow room to draw and diagram, carry out experiments, and 'force' the learning of science at a higher level. The science lab is, first and foremost, a place for experiments. Teachers must have flexibility to demonstrate to their students, and students must be able to carry out their work in comfort and safety. Pragmatically, the students must be able to immerse themselves in the possibility of a career in the future in science.

The space must also be flexible to provide opportunities for both solo practical experiments and provision for collaborative group work. Thus, the laboratory will allow practical science to take the lead in the delivery of the curriculum.

As we said before, we need separate labs for each of the sciences, all of which lead to excellence in a allied health/premed curriculum. One way of providing safety and efficiency to the system is to have a central preparation room where those things which are shared by two or more labs can be stored, cleared and organized. By freeing up space in this manner, safety ventilation and equipment can be built into a shared efficient facility and the supplies and equipment managed by fewer employees. Decluttering and increasing storage can increase the science learning space to some extent as well.

Trying to rotate teachers and subjects into single lab spaces is both counterproductive, inefficient and lacking in sense. Teachers need their own space to prepare lab work, obtain supplies and disposables along with equipment beforehand of a class session, and then time to clean up and organize everything at the end without clashing with other teachers wanting and needing to prepare their lessons.

THE ASK

Every scientific area of learning is unique. That makes each laboratory explanation specific, and equipment for each is listed and attached to this proposal. Each individual wish and request for that specific lab is included. Each type of lab has its own section in the book.

There are 17 new classroom/laboratories plus two additional reimagined ones from the current labs at BHS. Each is designed larger than the largest in the current building. The Health Sciences and Sciences Wing thus becomes both unique and advanced compared to current and usual public-school labs. Each one is to be fully outfitted with specialty furnishings, separate prep room, storage, and inter-room connections to launch the new Pathway Sciences.

THIS EFFORT IS UNPARALLELED

Lists in each section were compiled by science faculty with advice from universities and practicing professionals. In each section, specifically considered needs for advanced science education in the high school are listed along with desirable teaching aids. They are costed at 2024/2025 prices and requested for purchase as funds become available.

*Unfortunately, as we all know, costs increase over time, so it would not be unreasonable to expect costs could rise as much as 25% as funds become available for purchase.

A table listing each piece of equipment, its cost, and a short description of its usefulness in the classroom and laboratory along with an illustration of each piece is included in pages to follow this note.

CONSIDERATION OF SPONSORSHIP

Please review each lab separately and after reading the opening statement, determine which one catches your interest.

Consider whether you might choose to sponsor specific equipment or an entire classroom/laboratory in the Science wing. If choosing a classroom or laboratory, you have the privilege to name that classroom/laboratory by gifting at least $50,000 of its cost to our campaign.

**When making your gift, please consider cost increases.*

LABORATORY PARTNERSHIP OPPORTUNITIES

A wise and sage philosopher of olden days once said, and I paraphrase, "What's the big deal of investing a mere $2,000,000 on a ONE TIME BASIS to merge with the millions and trillions of dollars pledged, used and often wasted by our governments and public systems? The more our taxes are spent by those government systems who have no personal involvement in our families and community, the more is lost among trivial and even improper expenses.

HOWEVER, our students in Galveston have the unique opportunity currently, AND ONLY AT THIS TIME, to design and build an advanced science wing and teaching/learning system to lead our schools and our community in the development of higher education. We can attract educated professionals to our Island. This exciting new program will offer their children and families unusual and unique opportunities to develop and become better trained and educated than what was available to their parents and grandparents.

We can now offer pathways to certification and rigorous coursework to begin our students on the path to many Health Sciences and Science schooling and Professions. We even have a pipeline to formal Medical School education. To realize this educational goal, however, requires that we Galvestonians and Texans make it happen.

In addition to rapid enrollment in these courses, the District has recognized early growth and potential by contributing monies and support in the acquisition of a second synthetic anatomic dummy called "Earl". It teaches physiology in addition to anatomy and has the commitment of a second lab in the construction of the New Ball High. Since that building is completed, now is the only time.

THE ASK

Every scientific area of learning is unique. That makes each laboratory explanation specific, and equipment for each is listed and attached to this proposal. Each individual wish and request for that specific lab is included. Each type of lab has its own section in the book.

There are 17 new classroom/laboratories plus two additional reimagined ones from the current labs at BHS. Each is designed larger than the largest in the current building. The Health Sciences and Sciences Wing thus becomes both unique and advanced compared to current and usual public-school labs. Each one is to be fully outfitted with specialty furnishings, separate prep room, storage, and inter-room connections to launch the new Pathway Sciences.

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*Unfortunately, as we all know, costs increase over time, so it would not be unreasonable to expect costs could rise as much as 25% as funds become available for purchase.

A table listing each piece of equipment, its cost, and a short description of its usefulness in the classroom and laboratory along with an illustration of each piece is included in pages to follow this note.

CONSIDERATION OF SPONSORSHIP

Please review each lab separately and after reading the opening statement, determine which one catches your interest.

Since each lab is a separate need…
It becomes a separate ask.
Of course, you may choose to sponsor as many or as few labs as you see fit.
Every one of the nineteen labs, in combination, adds up to the Ball High School Allied Health Sciences and Science Pathways.

Consider whether you might choose to sponsor specific equipment or an entire classroom/laboratory in the Science wing. If choosing a classroom or laboratory, you have the privilege to name that classroom/laboratory by gifting at least $50,000 of its cost to our campaign.

* *When making your gift, please consider cost increases in your choice of gift.*

GALVESTON INDEPENDENT SCHOOL DISTRICT

THE NEW BALL HIGH SCHOOL

HEALTH SCIENCES AND SCIENCES PATHWAYS

PROPOSED BUDGET

TO EQUIP

17 NEW LABORATORIES AND 2 REDESIGNED LABS

SUMMARY OF NEEDS/ TOOLS/ EQUIPMENT REQUIRED

It should be noted that several costs are shared and absorbed by mutually shared classrooms and laboratories which are planned into the design of the science wing.

Written agreements now exist among The University of Texas Medical Branch, Galveston College (with a newly constructed Health Sciences building and a certified four- year school of Nursing), and the administration and faculty at GISD

BUDGET and DONATION AMOUNT REQUESTED

Our budget of nearly $2,000,000 is attached.

Included is our success to date to collect about $350,000 towards that goal.

We are requesting any possible assistance to our total projected need to complete and establish the Pathways. A gift of any size would be most appreciated and a valuable offering to the community. Of course, it will be recognized in print.

A larger gift could result in a named area of the science department, recognizing your generosity and involvement in education in Galveston Texas.

1. Equipment: We have had equipment donations in the past and we put a sticker or tag on each item to recognize the donor. We are willing to continue that practice if requested.
   Sample Donation Levels might include:
   a. $250: Dissection Kits
   b. $500: Blood typing and diagnostic kits
   c. $2000: Microscope
   d. $5000: Medical simulation equipment
   e. $25000- $50000: Naming rights to a Classroom or Special Lab.

2. Classroom: If someone wants to sponsor an individual classroom (Chemistry, Physics, Health Science, etc.) there would be a $25,000 minimum donation required.

3. Special Lab: For the Cell Culture Lab, Synthetic Cadaver Lab, or other specialized student instructional space, a $50,000 minimum donation would be expected. Naming rights would be guaranteed for at least ten years.

SUMMARY OF BHS LAB NEEDS TABLE

	A	B	C	D	E	F	G	H
1	LABORATORY	PER LAB NEEDS	20% HANDLING	TOTAL COST PER LAB	NO. OF LABS	TOTAL $$ REQUIRED	MONIES RAISED INITIALLY	CURRENT REQUEST
2								
3	PHYSICS LAB	$14,603.10	$2,920.62	$17,523.72	2	$35,047.44		**$35,047.44**
4								
5	BIOLOGY LAB	$26,355.31	$5,271.06	$31,626.37	5	$158,131.85		$158,131.85
6	MICROBIOLOGY LAB	$146,109.40	$29, 221.80	$175,331.20	1	$175,331.20		$175,331.20
7	CELL CULTURE LAB CURRENTLY IN OPERATION			$172,571.09	1	$172,571.09	($117,742.66)	$54,828.43
8								
9	CHEMISTRY LABS	$26,437.42	$5,287.48	$31,724.90	4	$126,899.60		$126,899.68
10								
11	HEALTH SCIENCE LABS	$126,037.40	$25,207.40	$151,244.80	2	$302,489.60		$302,489.60
12								
13	CURRENT SYNDAVER GROSS LAB	$387,957.00		$387,957.00	1	$387,957.00	($166,000.00)	$221,957.00
14	ANATOMY II LAB	$111,719.00	$22,343.80	$134,062.80	1	$134,062.80		$134,062.80
15								
16	FORENSIC LAB	$11,005.95	$2,201.19	$13, 707.14	1	$13,707.14		$13,707.14
17								
18	AQUATICS/ ENVIRONMENTAL LABS	$21,821.78	$4,364.36	$26,186.14	1	$26,186.14		$26,186.14
19								
20								
21	FURNITURE UNIQUE TO	$281,993.58	$56,398.72	$338,392.30		$338,392.30		$338,392.30
22	LAB TEACHING/LEARNING							
23	HEALTH LABS							
24	EMERGENCY ROOM SETUP							
25	HOSPITAL ROOM SETUP							
26	FORENSICS, ETC.							
27								
28	TO REPLACE NON-TRANSFERABLES*					$66,451.13		$66,451.13
29	TOTAL FOR 19 LABS					$1,937,227.29	($283,742.66)	$1,653,484.63
30								
31	*Money raised originally raised but not							
32	transferable from old account.							

Proposed Name for Facility

Board approval will be required for the naming or renaming of all District facilities including schools or distinct portions thereof, such as a library or auditorium.

This form will be used by person(s) proposing names for new or existing facilities or distinct portions of facilities.

Section A: Identify the facility or portion of the facility to be named.

Type of Facility to be Named:

- ❑ Elementary, Middle, or HS Campus
- ❑ Athletic Facility
- ❑ District-wide Facility
- ❑ Portion of Existing Facility

Current name of facility (if applicable):

Name for Consideration:

☐ Trustee (Name)_____, has been notified of the name change and is in consensus with thechange.

Section B: Include a statement containing the following information:

- Biographical or Historical Data,
- Nominee's significant contribution(s) or event's or geography's significance,
- Impact statement explaining why a facility, school, or portion thereof should be named accordingly.

Section C: Contact information for person/family being recommended:

PERMISSION FROM FAMILY AND/OR NOMINEE

Name

Address:

Phone #

Email address

Relationship

Please provide a photograph of nominee if available.

Section D: Contact information for person(s) making the recommendation:

Submitted by
(please print name)

Address Email

_____

Phone #

Signature Date

Forms should be submitted prior to January 1 for naming considerations going into effect the following school year (September 1). Nominations will only be accepted with completed exhibits.

Completed applications may be sent to the following address:

Support Center Galveston ISD
RE: Superintendent
3904 Ave T
Galveston, TX 77550

This exhibit was last amended on January 16, 2024.

BIOTECH CELL LAB IMPORTANCE

To quote a retired high school science teacher when she was shown plans for the Biotech Cell Lab at Ball High School: “That Ball High School students would be given the opportunity to grow and nourish their own cell lines is nothing less than astonishing. I so envy those students given this amazing opportunity." Cell growth and cell specialization are the basic building blocks of life. Nothing is more fundamental and there can be no more legitimate scientific inquiry.

Students will be given cell lines of plant cells (from, for example, a carrot, a grape, or tomato), animal cells (from, for example, a hamster, a rabbit, or mouse), harmless bacterial cells, or fungus cells, (such as yeasts) that were begun elsewhere. They will be afforded thorough training and supervision and given access to all the sophisticated equipment used in a modern scientific laboratory necessary to keep the cell line healthy and reproducing.

The focus from day one will be providing a hands-on experience for every student. The emphasis, from day one, will be individual student responsibility for his/her own cell line. Acquiring the skill set to keep a cell line alive and growing, though obviously of critical importance, is simply the first step for students. Additional challenges in a second and third step have enormous learning, as well as motivational and inspirational potential.

Step two will focus on manipulation, employing cells from the cell line as principal subjects in experiments.
Students will learn that changes in the environment, such as the reduction or total elimination of oxygen, exposure to chemical substances, such as vitamins and minerals, can be of enormous influence on cell vitality and growth.

Step three will be applying what was learned from step two to better understand human biomedical applications. By way of example, one's understanding of heart failure and what may be done from a cellular standpoint to repair damaged heart muscle, is likely to be vastly different after a student is a cell line veteran. As we have proclaimed repeatedly, learning in a real scientific laboratory is vastly different from lecture and textbook learning. You may recall from your own high school science class viewing various types of cells under a microscope. A new experience for sure, but of very limited long-term impact.

Now imagine the thrill of returning from Thanksgiving holiday break to discover that the cells you have been growing in your grape cell line have tripled in quantity while the yeast cell exposed to a simple sugar has, in contrast to the yeast cells, been exposed to a non-fermentable sugar reproduced over and over again.

Further imagine the skills you are learning in this high school laboratory will allow you to mentor in a medical college course on their campus.

These skills, taught in the biology labs, offer at least three advantages to the motivated student:

1. Plenty of career options from clinical roles, like physical therapy to administrative positions like health management.
2. Many health science careers are experiencing rapid growth due to an aging population and increased focus on wellness, leading to job stability and attractive salaries.
3. Careers in health science often require specific degrees and certification. Pathways are available for students with biology backgrounds. It allows them to enter the field at multiple levels beginning in lower-level jobs in laboratories to higher-level ones such as cell biology, these careers are evident in a very broad spectrum of professionals and integral to every aspect of community well-being, leveraging their expertise and specialties to ensure individual receive timely and optimal care. As a result, these experts to fulfilling opportunities in which all biology skills and knowledge that we're talking about lead to careers such as administrator, a public health specialist, therapists and technicians. A foot in the door, by design, leads to a strong job. The health sciences in general provide stability and versatility. It allows graduates to pursue careers in patient care, health, care, administration, medical research, and beyond whether you're looking to enter the workforce immediately or plan for a further education degree. You will be equipped with knowledge and skills to make a meaningful impact in the field.

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IMPORTANCE OF THE SYNDAVER GROSS ANATOMY LABS

In our Biomedical Sciences Community, Ball High School has opened a gross anatomy laboratory with a SynDaver Human Cadaver, featuring hands-on, real world learning activities.

This cadaver models the human body, utilizing an education-grade synthetic human cadaver complete with all bones, joints, muscles, organs, and tendons in normal human anatomy. It is made from materials that mimic the mechanical, thermal, and physiochemical properties of live tissue. It enhances the student-centered experience to both teach and motivate students in the biological sciences with a body that they would not experience through a textbook or computer. Further, it is a first in public high school education in Texas and perhaps the United States.

In addition, to the human cadaver we have now added a virtual augmented imagination/virtual reality synthetic body to teach physiology in addition to anatomy. This is always exciting to the students because it stimulates learning by creating emergency medical simulations.

The additions we are requesting upgrade the initial lab with trend-setting educational tools and equipment. Not only to be available for learning, this also offers pathways to certification and rigorous courses for those who would desire to gain higher education in the Health Sciences, including medical school. We are asking for support to upgrade the original lab and to purchase another SynDaver synthetic anatomic cadaver for the second lab to increase our capacity to teach this exciting course. Both requests are detailed in the following pages.

These lab opportunities will increase college readiness, reduce barriers to college access and align programs to regional work and career needs. Thus, they also enhance economic development in our community, which is no small achievement.

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ANATOMY LABORATORY TWO

1. Description of benefits provided.
   This project will benefit College of Health students and faculty by providing:
   - Access to technology found in flagship universities, medical schools, and research laboratories that allows evidence-based practices to be applied and defined.
   - High-impact learning experiences that translate into demonstrable clinical and research knowledge, skills, and abilities.

2. Description of how success/impact will be measured.
   - Assessment of course usage through syllabi analysis
   - Assessment of student knowledge through course assignments and examinations.
   - Implementing assessment rubrics for the application of evidence-based practices in clinical skills.
   - Tracking of UWF students accepted into Medical, Dental, Optometry, Pharmacy, and Physician Assistant programs.

3. Detailed description of resources required including hardware and software requirements and personnel costs (faculty compensation is not an allowed cost).

   A summary of the hardware expenses is provided here:

Item	Technology Fee Funds	
SynDaver Synthetic Human Anatomy Model	(x 3) @ $60,000 =	$180,000
Onsite Install and Training	(x 3) @ $ 2,500 =	$ 7,500
Shipping		$ 1,800
Project Total		$189,300

Each SynDaver Synthetic Human Anatomy Model includes a tank table and storage chemicals.

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IMPORTANCE OF THE PHYSICS LABORATORIES

Two physics labs are planned for the Science Wing at the new Ball High School. Opportunities to experience rigorous coursework at both the Honors and A/P levels will prepare them to enter college and will position them to acquire college credits through the Advanced Placement program. ANY STUDENT WHO HAS THE DESIRE TO MEET THE DEMANDS OF CHALLENGING COURSEWORK IS ELIGIBLE TO ENROLL IN THESE HONORS AND A/P COURSES.

These modern physics labs are to be equipped for hands on investigative experience in the concepts of natural, physical, and chemical phenomena. A course in Integrative Physics and Chemistry is required introduction to these labs.

The labs concentrate on the interactions between matter and energy and the organization of observed phenomena into useful and meaningful relationships. For example, equipment to supply solar, wind, and turbine energy give the students the ability to create and modify lighting, HVAC and further experimentation of their own design. The study of light, reflection, refraction and magnification will be available through a series of adjustable lenses, prisms and mirrors. A heat source will assist in the study of thermal energy, convection, radiation, conduction and the like.

The rooms are adaptable to teaching the physics of light and sound; equipment to teach energy transfer, insulation, harmonies and the like are included in this pian. Many other physical properties are taught through hands on and student involvement in design and creativity in the completion of experimentation as well. The rooms are designed with appropriate input of electricity and appropriate equipment in a high end "college" level course instruction and success.

What kind of jobs can students in physics obtain? Common job titles include Accelerator Operator, Applications Engineer, Data Analyst, Design Engineer, Physics Teacher, IT Consultant, and Lab Technician among others. . While not always necessary for entry-level positions, a bachelor's degree can be your step in the Pathway to open more advanced roles, leadership positions, or work in specialized fields like biotech technology or forensic science. Degrees alone do not get your jobs. Skills and experience get your jobs. When you have a background in physics, if you don’t plan to go graduate school, you’re going to have to advertise the skills you learned on the Pathways in high school. These can lead to many different jobs or suggested careers.

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IMPORTANCE OF THE BIOLOGY LABORATORIES

Biology is the foundation of all premedical and living science study. Our science wing has five separate laboratories to accommodate the classes and needs of our Biomedical and Technology Pathway. Such a curriculum will shine the most favorable light on Ball High and the BIOMED program. It has now been blessed and conferred association with the medical school, UTM B, in Galveston. They are a committed partner with a FORMAL agreement to work with Galveston Independent School District. Their cooperation and collaboration, along with the medical/ biology department at Galveston College, will achieve the highest quality of instructors and instruction for our required core of biology and medical science curriculum.

In a word, a Ball High graduate who earns the right to have a career in Medical Technology, Nursing, or as a Physician is every bit as important to create an environment where changing lives for the better is the primary business of the pathway at Ball.

This academically rigorous tract of learning will contribute immensely to an impression of a favorable public education in Galveston. Overall, you can agree that the study of the medical sciences is the most demanding of all studies, and we will now have the means to excel in these areas for our students. This is the unique offering at Ball High, only with your support .

To quote a retired high school science teacher when she was shown these plans for Ball High School, “That high school students could be given the opportunity to grow and nourish their own cell lines is nothing less than astonishing. I so envy those students given this amazing opportunity".

These are the building blocks of life and there can be no more fundamental nor legitimate scientific inquiry. Ball students have that opportunity now.

The focus from day #1 will be hands on experience for EVERY student. They will have their own cell lines and given access to the sophisticated equipment of an advanced (college) laboratory to keep their cell lines healthy and producing.

They will learn the manipulation and application of cell biological lines to biomedical applications. For example, damaged heart muscle requires understanding of basic muscle biology, heart failure of that muscular organ in the living body, and what may be done to heal and repair damaged heart muscle. As we must emphasize, learning in a real scientific laboratory is different and involving over learning from a textbook and lecture alone.

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IMPORTANCE OF THE MICROBIOLOGY LABORATORY

If you have a passion for scientific research and understanding, the microscopic world a degree in microbiology can open a world of exciting career opportunities. Microbiology is multidisciplinary in that it combines biology, chemistry, and medicine to study microorganisms such as bacteria, viruses, fungi, etc.

Depending on the career path that a student chooses, he may also need a diploma or degree in microbiology, chemistry, or biology to qualify for employment opportunities. With this Pathway background, he may seek improvement of his science skills. Both are available and possible, and students who gain relevant experience in this laboratory become more attractive candidates for roles in their chosen microbiology field.
If as a research laboratory technician, for example, he can become a quality control analyst or a clinical microbiologist or an immunologist in a medical school and health sciences setting. Microbiologists are needed for environmental laboratories, testing foods and dairy, the relevant DNA technology, research science, and the like. It often requires at least a bachelor's in the medical lab sciences, but it allows the foot in the door to advanced career opportunities as well.

Microbiologists typically work in laboratories, offices, and industrial or academic settings. Some travel to collect samples from the field, which may require working outdoors in a variety of settings. Other microbiologists, who work with more dangerous organisms follow safety procedures to avoid exposure. In Galveston, the National Laboratory for environmental research at UTMB is one of only two such institutes in the United States. Working in microbiology at Ball High school can lead one down the pathway to the door of the National Lab as well as other labs at UTMB. Students will be prepared by their laboratory experience in microbiology to enter training and careers only available to persons with this background.

THE ASK

For a total gift of at least $50,000, it is possible to sponsor a laboratory, and have it named after you or the person/institution of your choice.

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IMPORTANCE OF THE CHEMISTRY LABORATORIES

Four chemistry classroom/laboratories are under construction at the new Ball High School in the Science Wing. Chemistry is both basic and integrative to the study of biomedical and technical sciences, as one uses chemistry together with biology and physics to understand and recall the basis of this study. This grouping of studies is the underlying principle of "clustering" where the science programs are grouped together in our curriculum because many of the people in them share similar interests and strengths. The pathway of study is flexible, overlapping in nature, and allows students to change as new knowledge and experience is acquired. They help provide a focus and guidelines for future planning at the high school level and, most importantly, to see into the future of their career choices. That may be the single most important innovation of the new science curriculum made possible by the variety and integration of advanced scientific courses and experience.

Our chemistry labs will feature the latest and greatest teaching material to give our students an understanding of the basic makeup of scientific elements, what those elements are and can do in the real world of science. This will teach students how they can work with the elements in learning and experimenting with the combined efforts that they have available to them in the biology and physics labs.

Isolating facts, as opposed to fully integrating them into scientific understanding with the facilities of our other sciences at Ball High, create a unique and motivating environment where the student becomes at one with his environment through knowledge. The motivation is to see the future in which that student can imagine a career and, most importantly, his success!

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THE IMPORTANCE OF THE HEALTH SCIENCES

Professionals in the field of health sciences are integral to every aspect of community well-being, leveraging their expertise in numerous and varied specialties to ensure that individuals receive timely and optimal care. As a result, these experts discover. positions, research opportunities, and public health initiatives everywhere they seek them.

According to the Bureau of Labor Statistics, overall employment in the healthcare occupations is projected to grow much faster than the average for all occupations in the next decade. About 1.9 million openings are projected each year, on average, in these occupations. With such a strong job outlook , degrees in health science provide both stability and versatility to a student willing to train. It allows graduates to pursue careers in patient care, healthcare administration, medical research, and beyond.

Whether you're looking to enter the workforce immediately out of high school or planning to further your education, a health science degree equips you with the knowledge and skills to make a meaningful impact in the field. Careers in the health sciences often require specific degrees or certifications, some available with Pathways. Pathways are available for various educational backgrounds, allowing individuals to enter the field at multiple levels. While the degree from high school alone offers career opportunities, many graduates choose to further education pursuing advanced degree these include a master of healthcare administration (MHA), the Master of Science and Health Informatics, the Master of Science in Clinical Research, Master of Public Health (MPH), Master of Physical Therapy (PT) or Doctor of Physical Therapy These degrees are representative of other paths in executive leadership and management positions in healthcare.

BSHS degrees can also consider certificate programs and specialized areas such as medical coding clinic, research, coordination, healthcare management, or healthcare quality improvement. These are just some of the career paths and continuing educational opportunities that could be available to the student who chooses to learn at our health care. it is clearly a launching pad for further educational presents. Once the door is open, countless opportunities allow you to follow your passion and contribute to the health and well-being of individuals and communities.

The health sciences laboratory requires a considerable variety of equipment, especially when you consider the number of career pathways possible.

*Equipment has been carefully documented by our science faculty and, and the cost is clear from 2024/2025 catalogs. It is certainly reasonable to consider adding 25% to that number in to anticipate future arise in cost and maintenance of the laboratories.

THE ASK

We ask you to consider sponsoring one or both Health Sciences Labs and equipment as listed. With a gift of at least $100,000, sponsorship of a classroom or laboratory would allow you to name that space as you desire.

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THE IMPORTANCE OF LEARNING IN A FORENSIC SCIENCE LABORATORY

What high school student would want to work and learn in a forensic science laboratory? The short answer is everyone in high school wants to be Colombo or a CSI detective. There are almost unlimited. Pathways for a student of forensic sciences to have training and a career that is both exciting, profitable, and challenging. These are the detectives of our world, those who take subtle clues and use them to solve problems on multiple levels.

For example: by illustration, openings in forensic science technology are projected to grow 14% nationally in private investigation, and in detective work 5% nationally. In information security. Growth is estimated at an astonishing 33% nationally according to the Bureau of Labor Statistics.

Where do forensic scientists work? Depending on rank and responsibilities, they can be found working in laboratories or at a crime scene, private investigators in armored vehicles or insurance offices, and information security analysts behind screens and in boardrooms of private and public administrative offices.

They are scientists, computer And information technology specialists, nurses, artists, accountants, and many other types of professionals who use their primary areas of expertise to pursue careers in forensic science.

As an example, a forensic ballistics expert is a detective in many crimes.
He is knowledgeable about firearms and ammunition, but more importantly about evidence that can be left on a crime scene, bodies, and objects by their usage.

A forensic autopsy technician can be a partner with those who study in our high school Gross Anatomy lab. Forensic biologists examine bodily fluids, bones, hair, insects, plants, and animals; forensic chemists use scientific methods to investigate physical evidence by analyzing that which is collected from various crime scenes, even giving testimony based on laboratory test results. There are literally dozens of forensic professionals in differing areas of Technology, Biology, Microbiology, Chemistry, Engineering, Environmental, etymology, and so many more areas.

The scientific investigators are among the sexiest of scientists, and the Pathway from our forensic science laboratory into so many careers is nearly limitless.

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IMPORTANCE OF THE AQUATICS LABORATORIES
ENVIRONMENTAL SCIENCES

In our two aquatics laboratories, we conduct studies to examine the relationships between environmental factors and the structure and function of aquatic invertebrates and vertebrate communities. We work to develop strategies that minimize environmental influences of land use practices by examining the effects of anthropogenic and natural disturbances on aquatic ecosystems. We also examine biogeography, taxonomy. Students learn about the environment as well as developing social skills and relaxing activity knowledge which is bot attractive and beneficial to anyone living on the Gulf Coast. Learning with actual testing material for water content and quality fish diagnostics and parasitology and disease diagnostics is basic to these labs. and habitat preference of common and rare aquatic organisms in springs and rivers. We work closely with local, state, federal and non-profit organizations to assist them in creating management strategies for aquatic projects.

That's a lot of words to say that we are involved in understanding water chemistry to support fisheries and agriculture, water clearing treatments, parasitology and bacterial invasion and habitats in the waters surrounding our land.

Studying the planet's oceanic and freshwater environments teaches our students how to relate to water, living species in or near water or taking place in water and, by necessity, other environmental science in and around our planet.

Many scientists today consider this study to be the MOST IMPORTANT scientific inquiry of all. They overwhelmingly support the manmade problems in our environment as critical to the continuation of human life as we know it into the next millennium and beyond. This may be our most important science lab to support.

As an aside, it becomes attractive to teaching the sciences because the students also learn hands on about fish, fishing activity, and size limits for catching in season as a means to understanding and controlling our aquatic environment. In Galveston, association with the Texas A & M Sea Turtle facility is a part of the program as well.

The main campus of Texas A and M University Marine Sciences Departments are fortuitously situated on Pelican Island. This location is within the City of Galveston and, conveniently, it accrues to our benefit to cooperate and consult with the GISD Aquatics and Environmental Sciences as we expand the GISD Health Sciences and Biotechnical Pathways at Ball High School.

Ongoing discussions and agreement continue currently.

THE ASK

Every scientific area of learning is unique. That makes each laboratory explanation specific, and equipment for each is listed and attached to this proposal. Each individual wish and request for that specific lab is included. Each type of lab has its own section in the book.

There are 17 new classroom/laboratories plus two additional reimagined ones from the current labs at BHS. Each is designed larger than the largest in the current building. The Health Sciences and Sciences Wing thus becomes both unique and advanced compared to current and usual public-school labs. Each one is to be fully outfitted with specialty furnishings, separate prep room, storage, and inter-room connections to launch the new Pathway Sciences.

THIS EFFORT IS UNPARALLELED

Lists in each section were compiled by science faculty with advice from universities and practicing professionals. In each section, specifically considered needs for advanced science education in the high school are listed along with desirable teaching aids. They are costed at 2024/2025 prices and requested for purchase as funds become available.

*Unfortunately, as we all know, costs increase over time, so it would not be unreasonable to expect costs could rise as much as 25% as funds become available for purchase.

A table listing each piece of equipment, its cost, and a short description of its usefulness in the classroom and laboratory along with an illustration of each piece is included in pages to follow this note.

CONSIDERATION OF SPONSORSHIP

Please review each lab separately and after reading the opening statement, determine which one catches your interest.

Consider whether you might choose to sponsor specific equipment or an entire classroom/laboratory in the Science wing. If choosing a classroom or laboratory, you have the privilege to name that classroom/laboratory by gifting at least $50,000 of its cost to our campaign.

**When making your gift, please consider cost increases in your choice of gift*.