

Galveston ISD



Career & Technical Education

Handbook

Ball High School

2019-2020



Texas CTE is an education initiative designed to prepare students for a lifetime of success. It allows students to achieve excellence by preparing them for secondary and postsecondary opportunities, career preparation and advancement, meaningful work, and active citizenship.

Texas CTE is designed to help students (and their parents) make wise education choices. It is based on the belief that the curricula of the 21st century should combine rigorous academics with relevant career education. When schools integrate academic and technical education, students can see the “usefulness” of what they are learning. The system also facilitates a seamless transition from secondary to postsecondary opportunities by serving as a foundation for restructuring how schools arrange their instructional programs. A Career Cluster is a grouping of occupations and broad industries based on commonalities. The sixteen Career Clusters provide an organizing tool for schools. Career programs of study (POS) have been developed for each of the Career Clusters. The POS represent a recommended sequence of coursework based on a student’s interest or career goal.

Ball High School has incorporated the Career Clusters into the Career and Technical Education department course structure and uses 14 of the clusters offering a wide range of career exploration and some of the sequences of courses lead toward the opportunity for a professional certification.

It is the policy of G.I.S.D. not to discriminate on the basis of race, color, national origin, sex, or disability in its vocational programs, services, or activities, as required by Title VI of the Civil Rights Act of 1964, as amended; Title IX of the Education Amendments of 1972; and Section 504 of the Rehabilitation Act of 1973, as amended.

Es la política de G.I.S.D. a no discriminar en base de la raza, del color, del origen nacional, del sexo, o de la inhabilidad en sus programas servicios, o actividades vocacionales segun lod requisitos del titulo VI del acto de las derechas civiles de 1964, segun la enmienda prevista; Titulo IX de las emiendas de la educacion, de 1972; y seccion 504 del acto de la rehabilitacion de 1973, segun la enmienda prevista.

Galveston Independent School District Division of Career and
Technology Education 2014-2015

1. The Galveston Independent School District offers Career and Technology Education programs in Automotive Technology, Business, Marketing, Health Science, Technology Education, Hospitality, Family and Consumer Sciences, Construction Technology, as well as career preparation cooperative education courses in Business, Marketing, Family & Consumer Sciences, and Industrial. Admission to these programs is based on the interest of the student, and the age of the student in cooperative education programs.
2. It is the policy of the GISD not to discriminate on the basis of race, color, national origin, sex, or handicap in its Career and Technology programs, services, or activities as required by Title VI of the Civil Rights Act of 1964, as amended; Title IX of the Education Amendments of 1972; and Section 504 of the Rehabilitation Act of 1973, as amended.
3. It is the policy of GISD not to discriminate on the basis of race, color, national origin, sex, handicap, or age in its employment practices as required by Title VI of the Civil Rights Act of 1964, as amended; Title IX of the Education Amendments of 1972; the Age Discrimination Act of 1975, as amended; and Section 504 of the Rehabilitation Act of 1973, as amended.
4. GISD will take steps to ensure that lack of English language skills will not be a barrier to admission and participation in all educational and vocational programs. For information about your rights or grievance procedures, contact the Title IX Coordinator, Dyann Polzin, Executive Director of Human Resources and Student Services Assessment, at (409)766-5155; and/or the 504 Coordinator, Mary Patrick, Director for Special Services at (409) 766-5172.

División independiente del distrito de la escuela de Galveston
de la educación 2008-2009 de la carrera y de la tecnología.

1. El distrito independiente de la escuela de Galveston ofrece programas de la educación de la carrera y de la tecnología en las ciencias de la

tecnología automotora, del negocio, de la comercialización, de la ciencia de la salud, de la educación de la tecnología, de la hospitalidad, de la familia y del consumidor, tecnología de la construcción, así como cursos cooperativos de la educación de la preparación de la carrera en negocio, la comercialización, ciencias de la familia y del consumidor, e industrial. La admisión a estos programas se basa en el interés del estudiante, y la edad del estudiante en programas cooperativos de la educación.

2. Es la política del GISD a no discriminar en base de la raza, color, origen nacional, sexo, o desventaja en sus programas de la carrera y de la tecnología, los servicios, o las actividades según los requisitos del título VI del acto de las derechas civiles de 1964, según la enmienda prevista; Título IX de las enmiendas de la educación de 1972; y sección 504 del acto de la rehabilitación de 1973, según la enmienda prevista.
3. Es la política de GISD a no discriminar en base de la raza, del color, del origen nacional, del sexo, de la desventaja, o de la edad en sus prácticas del empleo según los requisitos del título VI del acto de las derechas civiles de 1964, según la enmienda prevista; Título IX de las enmiendas de la educación de 1972; el acto de la discriminación de edad de 1975, según la enmienda prevista; y sección 504 del acto de la rehabilitación de 1973, según la enmienda prevista.
4. GISD tomará medidas para asegurarse de que la carencia de las habilidades de lengua inglesa no será una barrera a la admisión y participación en todos los programas educativos y vocacionales. Para la información sobre las sus derechas o procedimientos del agravio, entre en contacto con a coordinador del título IX, Dyann Polzin, director ejecutivo de recursos humanos y del gravamen de los servicios del estudiante, en (409) 766-5155; y/o 504 coordinador, Maria Patrick, director para los servicios especiales en (los 409) 766-5172.

Certifications, Articulated College Credit and Dual Credit in the CTE Department

Certifications—many certificates are offered to students in CTE classes. All students enrolled in shop classes must pass safety courses before being allowed to work in a lab. Certificates are awarded to students who pass these courses. Students in most classes earn certificates that can be presented when applying for jobs. Teachers discuss the various certificate options during the orientation for each class where these are offered.

Articulated College Credit—the CTE Department has Articulation Agreements with various junior colleges in this area. Articulated College Credit is college hours awarded to students who successfully meet the criteria required in the Articulation Agreement. Presently CTE has agreements with Galveston College, College of the Mainland and Alvin Community Junior College. Representatives from each institution visit CTE classes to explain the process of earning and claiming the Credit.

Dual College Credit (DC)—these college hours can be earned in some CTE classes where students are enrolled both in high school and in college simultaneously. This tuition, building fees and supply costs that can be paid by the student or in some cases, by the CTE Department. Teachers, who offer this type of class, give the details and handle the arrangements required by the college.

Continuing Education Credit (CE)-these college hours can be earned through enrollment in college classes that lead to industry certification. Generally, these classes are only offered at the college, with the exception of Diesel Mechanics 1 and 2.

Project Lead the Way (PLTW)-this program is the foundation curriculum for all Engineering and Biomedical Science classes at Ball High. Students will have the opportunity to sit for end of course exams and earn articulated credit in engineering or biomedical sciences to certain college programs around the country. Please visit www.pltw.org

State Endorsements- STEM, Public Service, and Business & Industry Endorsements are those found within CTE and refer to the new state graduation pathways. A student may earn one or more of these endorsements by completing the new Foundation High School Plan and those curriculum requirements of the corresponding endorsement. Please see your counselor for more details.

CTE Pathway and Course Guide Table of Contents

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Career Clusters at Ball High School

All Ball High School Students will take Professional Communications

Professional Communications

Prerequisite: None

Grade 10-12

½ Credit

Professional Communications blends written, oral, and graphic communications in a career and college-based environment. Careers in the global economy require individuals to be creative and have a strong background in computer and technology applications, a strong and solid academic foundation, and a proficiency in professional oral and written communications. Within this context, students will be expected to develop and expand the ability to write, read, edit, speak, listen, apply software applications, manipulate computer graphics, and conduct Internet research. The student applies English language arts in professional communications projects.



Public Service and STEM: Biomedical & Allied Health

<p>Grades 9- 10</p> <p>Principles of Biomedical Sciences (PLTW-PBS)</p> <p>(1 Credit)</p>	<p>Grade 10</p> <p>Human Body Systems (PLTW-HBS)</p> <p>(1 credit)</p>	<p>Grade 10-11</p> <p>Anatomy & Physiology</p> <p>(1 credit)</p> <p>Grade 11-12</p> <p>Microbiology</p> <p>(1 credit)</p>	<p>Grade 11-12</p> <p>Medical Terminology-Dual Credit</p> <p>1 credit</p> <p>(Students will earn from GC 3 hours in Medical Terminology and 3 hours in Healthcare Communications)</p> <p>OR...</p> <p>Grade 11</p> <p>Biomedical Innovation (PLTW-BI)</p> <p>(1 Credit)</p> <p>Grade 11-12</p>	<p>Grade 12</p> <p>Practicum in Health Science from the following:</p> <p>Scientific Research & Design at UTMB, Clinical Rotations, CNA/Phlebotomy-CE, EMT-DC, Allied Health Careers-DC</p> <p>2 credits</p>
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Principles of Biomedical Sciences (PLTW-PBS)

Prerequisite: Preferred Pre-AP Math & Science Grades 9-10 1 Credit

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

Human Body Systems (PLTW-HBS)

Prerequisites: PBS Grades 10-11 1 Credit

Students examine the interactions of body systems as they explore identity, communication, power, movement, protection and homeostasis. Students design experiments, investigate the structures and functions of the human body, and use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration. Students build organs and tissues on a skeletal manikin, work through interesting real-world cases and often play the role of biomedical professionals to solve medical mysteries

Anatomy & Physiology

Prerequisite: Biology and Chemistry or IPC

Grades 10 -11

1 Credit

Students 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 study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis. (To receive credit in science, students must meet the 40% laboratory and fieldwork requirement identified in §74.3(b)(2)(C) of this title (relating to Description of a Required Secondary Curriculum).

Medical Terminology-Dual Credit

Prerequisites: HBS and/or concurrently enrolled in Anatomy & Physiology

Grades 11

1 Credit

This course is designed to develop a working knowledge of the language of medicine. Students acquire word-building skills by learning prefixes, suffixes, roots and abbreviations. By relating terms to body systems, students identify proper use of words in a medical environment. Knowledge of medical terminology enhances the student's ability to successfully secure employment or pursue advanced education in health care; 1st semester in Medical Terminology, 2nd semester is Healthcare Professions.

Students must earn a 75 or higher to go to the second semester.

Biomedical Innovation (PLTW-BI)

Prerequisites: **PBS and HBS**

Grades 12

1 Credit

Students design innovative solutions for the health challenges of the 21st century. They work through progressively challenging open-ended problems, addressing topics such as clinical medicine, physiology, biomedical engineering, and public health. They have the opportunity to work on an independent project with a mentor or advisor from a university, hospital, research institution, or the biomedical industry. Throughout the course, students are expected to present their work to an audience of STEM professionals.

Microbiology

Prerequisites: Biology and Chemistry

Grades 11-12

1 Credit

This course covers principles of microbiology and the impact these organisms have on man and the environment. Topics include the various groups of microorganisms, their structure, physiology, genetics, microbial pathogenicity, infectious diseases, immunology, and selected practical applications.

Practicum in Health Science: CNA/Phlebotomy, EMT, Clinical Rotations, or Allied Health DC at GC

Prerequisites: Health Science or PLTW-HBS and Medical Terminology

Grades 11-12

2 Credits

The Practicum 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. It will help student to pursue a career in the health science industry, students should learn to reason, think critically, make decisions, solve problems, and communicate effectively. Students should recognize that quality health care depends on the ability to work well with others.

applications to prepare and present course assignments. ***Students will have the opportunity to sit for the Autodesk Inventor Certification.***

Robotics I-IV

Prerequisite: Passed 8th grade STAAR Math for Robotics 1; passed Algebra 1 STAAR and Robot C certification for Robotics II; must be willing to compete in competitions for Robotics III/IV Grades 10-12 1-2 Credits

Students enrolled in this course will demonstrate knowledge and skills necessary for the robotic and automation industry. Through implementation of the design process, students will transfer advanced academic skills to component designs in a project-based environment. Students will build prototypes or use simulation software to test their designs. Additionally, students explore career opportunities, employer expectations, and educational needs in the robotic and automation industry. Students will compete in competitions and earn Robot C certification.

Civil Engineering & Architecture (CEA)

Prerequisites: IED and POE; preferred to have completed Algebra 2 or a higher Grades 11-12 1 Credit

Students learn important aspects of building and site design and development. They apply math, science, and standard engineering practices to design both residential and commercial projects and document their work using 3D architecture design software.

Digital Electronics (PLTW-DE)

Prerequisites: IED and POE; preferred to have completed Algebra 2 or a higher Grades 11-12 1 Credit

Students enrolled in this course will demonstrate knowledge and applications of circuits, electronic measurement, and electronic implementation. Through use of the design process, students will transfer academic skills to component designs in a project-based environment. Students will use a variety of computer hardware and software applications to complete assignments and projects. Additionally, students explore career opportunities, employer expectations, and educational needs in the electronics industry.

Aerospace Engineering (PLTW-AE)

Prerequisites: IED and POE; preferred to have completed Algebra 2 or a higher Grades 11-12 1 Credit

The major focus of this course is to expose students to the world of aeronautics, flight and engineering through the fields of aeronautics, aerospace engineering and related areas of study. Lessons engage students in engineering design problems related to aerospace information systems, astronautics, rocketry, propulsion, the physics of space science, space life sciences, the biology of space science, principles of aeronautics, and systems engineering.

Engineering Design & Development

Prerequisite: IED, POE, DE Grades 12 12 Credits

Engineer Your World is an innovative, student-centered curriculum that engages learners in authentic engineering experiences and inspires them to embrace an engineer's habits of mind. Collaborative, student-directed projects build resilient problem-solving skills and empower students to think like engineers, to adopt engineering processes, and to pursue engineering disciplines for the betterment of our world.



Business & Industry: Construction

Grade 9-10 Principles of Architecture & Construction 1 credit	Grade 10-11 Constructions Technology 1 1 credit <i>NCCR Core Certification</i> <i>Carpentry 1 Certification</i>	Grade 11-12 Construction Technology 2 2 Credits <i>Carpentry 2 Certification</i> (SEE PAGE 8 FOR HVAC/R & ELECTRICAL/INSTRUMENTATION)	Grade 12 Practicum in Construction Technology 2 credit
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Principles of Architecture & Construction

Prerequisite: none

Grades 9-10

1 Credit

This course provides an overview to the various fields of architecture, interior design, construction science, and construction technology. **(The student must have a grade of 75 to advance to Construction Technology.)**

Constructions Technology 1

Prerequisite: Principles of Architecture & Construction

Grades 10-11

1 Credit

This course is an exploratory which addresses the utilization of construction for residential and civil structures. Students study and use common construction tools, machines, materials and processes. The course provides experiences in planning and controlling construction systems and projects to explore the organizational structures and management strategies in construction. Students earn NCCR Safety Core Curriculum and Carpentry 1 Certifications. **(The student must have a grade of 75 to advance to Advanced Construction Technology.)**

Construction Technology 2

Prerequisite: Constructions Technology 1

Grades 11-12

2 Credits

First year instruction is designed to provide job-specific training for entry-level employment in construction-related careers: carpenter, bricklayer/stone mason, electrician, plumber, painter, and decorator. Second year instruction is designed to enhance entry-level training and employment in one of the five construction related areas. Safety in the school shop or at the work-site is emphasized. Students earn Carpentry 2 Certification. **(The student must have a grade of 75 to advance to Mill and Cabinet Making.)**

Practicum in Construction Technology

Prerequisite: Advanced Constructions Technology and Mill, Tile, & Cabinet Making

Grades 12

2 Credits

This course is an occupationally specific course designed to provide classroom technical instruction or on-the job training experiences. Safety and career opportunities are included in addition to work ethics and job-related study in the classroom.



Business & Industry: Electrical-Instrumentation and HVAC/Refrigeration

THIS PATHWAY IS OPENED TO ALL CONSTRUCTION OR PLTW STUDENTS WHO HAVE COMPLETED 2 YEARS OF THEIR RESPECTIVE PATHWAY.

<p>Grade 11-12</p> <p>Electrical Technology-Dual Credit</p> <p>2 credit</p>	<p>Grade 11-12</p> <p>Advanced Electrical Technology-Dual Credit</p> <p>2 credit</p>
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Electrical Technology 1 and Electrical Technology 2:

These programs are dual credit only and are offered at Galveston College Applied Technical Center. Students enrolled in this program are working towards electrical and instrumentation certification with Galveston College's Electrical & Instrumentation Applied Science Associate's Degree. Students gain advanced knowledge and skills specific to those needed to enter the work force as an electrician or building maintenance technician or supervisor or prepare for a postsecondary degree in construction. Students acquire knowledge and skills in safety, electrical theory, tools, codes, installation of electrical equipment, alternating current and direct current motors, conductor installation, installation of electrical services, and electric lighting installation.

<p>Grade 11-12</p> <p>HVAC & Refrigeration Technology-Dual Credit</p> <p>2 credit</p>	<p>Grade 11-12</p> <p>Advanced HVAC & Refrigeration Technology-Dual Credit</p> <p>2 credit</p>
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HVAC & Refrigeration Technology 1 and HVAC & Refrigeration Technology 2:

These programs are dual credit only and are offered at Galveston College Applied Technical Center. Students enrolled in this program are working towards electrical and instrumentation certification with Galveston College's HVAC/R Applied Science Associate's Degree. Students gain advanced knowledge and skills specific to those needed to enter the industry as HVAC and refrigeration technicians or building maintenance technicians or supervisors or prepare for a postsecondary degree. Students acquire knowledge and skills in safety, electrical theory, tools, codes, installation of commercial HVAC equipment, heat pumps, trouble-shooting techniques, various duct systems, and maintenance practices.



Business & Industry: Welding

Grade 9-10 Introduction to Welding (articulated credit for GC) 1 Credit	Grade 10-11 Welding 1 –Dual Credit 2 Credits (<i>multiple certifications awarded upon successful completion</i>)	Grade 11-12 Welding 2-Dual Credit 2 Credits (<i>multiple certifications awarded upon successful completion, including Forklift</i>)	Grade 12 Practicum in Welding (Manufacturing)- Dual Credit 2 credits
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Introduction to Welding

Prerequisites: none

Grades 9-10

1 Credit

Students gain knowledge and skills in the application, design, production, and assessment of products, services, and systems and how those knowledge and skills are applied to manufacturing. Knowledge and skills in the proper application of principles of manufacturing, the design of technology, the efficient production of technology, and the assessment of the effects of manufacturing production technology prepare students for success in the modern world. The study of manufacturing technology allows students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings in a manufacturing setting. In addition to general academic and technical knowledge and skills, students gain an understanding of career opportunities available in manufacturing and what employers require to gain and maintain employment in these careers. **(The student must have a grade of 80 to advance to Welding.)**

Welding 1-DC

Prerequisite: Principles of Manufacturing

Grades 10-11

2 Credits

Rapid advances in technology have created new career opportunities and demands in many industries. Welding provides the knowledge, skills, and technologies required for employment in metal technology systems. Students develop knowledge and skills related to this system and apply them to personal career development. This course supports integration of academic and technical knowledge and skills. Students will reinforce, apply, and transfer knowledge and skills to a variety of settings and problems. Knowledge about career opportunities, requirements, and expectations and the development of workplace skills prepare students for future success. **(The student must have a grade of 75 to advance to Advanced Welding.)**

Welding 1-DC

Prerequisites: Welding

Grades 11-12

2 Credits

Advanced Welding builds on knowledge and skills developed in Welding. Students will develop advanced welding concepts and skills as they relate to personal and career development. This course integrates academic and technical knowledge and skills. Students will have opportunities to reinforce, apply, and transfer knowledge and skills to a variety of settings and problems. **(The student must have a grade of 75 to advance to Practicum in Welding.)**

Practicum in Welding (Manufacturing)-DC

Prerequisites: Advanced Welding

Grades 12

2 Credits

Practicum in Welding is designed to give students supervised practical application and/or paid internships based on previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience. Students will also be enrolled in the pipefitting program at GC



Business & Industry: Automotive

Grade 9-10 Automotive Basics (1 Credit)	Grade 10-11 Automotive Technology 1 (2 Credits)	Grade 11-12 Automotive Technology 2 2 Credits	Grade 12 Diesel Mechanics 1 & 2-CE Automotive AC-CE
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Automotive Basics

Prerequisite: None

Grades 9-10

1 Credit

Students gain knowledge and skills in the safe application, design, production, and assessment of products, services, and systems. This knowledge includes the history, laws and regulations, and common practices used in the logistics of warehousing and transportation systems. Students should apply knowledge and skills in the application, design, and production of technology as it relates to the transportation, distribution, and logistics industries. This course allows students to reinforce, apply, and transfer their academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings

Automotive Technology 1

Prerequisite: Principles of Transportation, Distribution & Logistics

Grades 10-11

2 Credits

Automotive services include knowledge of the function of the major automotive systems and the principles of diagnosing and servicing these systems. In Automotive Technology, students gain knowledge and skills in the repair, maintenance, and diagnosis of vehicle systems. This study allows students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings. The focus of this course is to teach the theory of operation of automotive vehicle systems and associated repair practices. **(Students must earn a 75 or higher to go to advanced automotive technology.)**

Automotive Technology 2

Prerequisite: Automotive Technology

Grades 11-12

2 Credits

Services include advanced knowledge of the function of the major automotive systems and the principles of diagnosing and servicing these systems. Students gain knowledge and skills in the repair, maintenance, and

diagnosis of vehicle systems. This study allows students to reinforce, apply, and transfer academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings. The focus of this course is to teach the theory of operation of automotive vehicle systems and associated repair practices. Students who excel in this course will have the opportunity to earn multiple automotive certifications, and will also have the opportunity to AYES placement at a General Motors dealership auto shop or employment at a Galveston based O’Reilley’s.

Diesel Mechanics 1 & 2-CE

Prerequisite: Advanced Automotive Technology

Grades 11-12

This class mixes classroom instruction with hands-on training, including the basics of diesel technology, repair techniques and equipment, and practical exercises. Students also learn how to interpret technical manuals and electronic diagnostic reports. This class is offered at Ball High School, but it is after-school only.

Automotive AC-CE

Prerequisite: Diesel 1

Grades 11-12

Learning experiences for students in the Automotive Technology program and related certificates are provided in the classrooms and automotive bays. Students develop skills within the Automotive HVAC Essentials Certificate Program. The program can help you prepare for industry certification and enhance your skills for employment in a garage, dealership, auto supply store, or public transportation.



Business & Industry: Global Logistics and Supply Chain Distribution

Grade 9 Business Information Management 1 Credit	Grade 10 Marketing & Social Media 1 credit	Grade 11 Distribution & Logistics-CE/DC with Certificate 2 credits (up to 10 college hours)	Grade 12 Practicum Distribution & Logistics -CE/DC with Certificate 2-3 credits (11 college hours)
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(THESE HOURS ARE TRANSFERABLE TO THE MARITIME ASSOCIATES DEGREE PROGRAM AT HOUSTON COMMUNITY COLLEGE WHO HAS AN ARTICULATION AGREEMENT WITH TAMUG.)

BIM

Prerequisite: For Students in Grade 9-10

Grades 9

1 Credit

Students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and make a successful transition to the workforce and postsecondary education. Students apply technical skills to address business applications of Microsoft Office, emerging technologies, create word-processing

documents, develop a spreadsheet, formulate a database, and make an electronic presentation using appropriate software. **All students will have the opportunity to earn the Microsoft Office Certification.**

Marketing & Social Media

Prerequisite: BIM

Grade 10

1 credit

This course is designed to build students' social media marketing skills by utilizing projects that give students hands on experience implementing social media marketing strategies. Topics include integrating different social media technologies into a marketing plan, creating social media marketing campaigns, and applying appropriate social media tools.

Distribution & Logistics -CE/DC with Certificate

Grade 11

2-3 credits (10 college hours)

This transferrable credit-based certificate is a sequence of courses that the college will offer as a program in Ball High School and on the main campus. This course satisfies the requirements for a student to take the national Manufacturing Skill Standards Council (MSSC) test for certification as a Certified Logistics Associate. Major topics include understanding the life cycle of global chain logistics, the logistics environment and familiarization with different material handling equipment, introduction to safety principles and safe equipment handling, quality control principles, workplace communications, teamwork and problem solving. Total Program hours: 592 contact hours.

Practicum Distribution & Logistics -CE/DC with Certificate

Grade 12

2-3 credits (11 college hours)

Students who have successfully completed the first level logistics associate course are prepared for the second level certification as a Certified Logistics Technician Certification. The focus of the course is on product receiving, storage order processing, packaging and shipment, inventory control, evaluation of transportation modes and dispatch and tracking. This second course is a second level certification from the Manufacturing Skills Standards Council, (MSSC). These are industry led nationally validated skills standards. The assessment for certification will be at the conclusion of the course.



Business & Industry: Entrepreneurship and Business



Grade 9 Business Information Management 1 Credit	Grade 10 Marketing & Social Media 1 Credit	Grade 11-12 INCUBATOR-Entrepreneurship 1 Credit	Grade 12 INCUBATOR 2-Practicum in Business Management 2 Credits
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BIM

Prerequisite: For Students in Grade 9-10 Grades 9 1 Credit

Students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and make a successful transition to the workforce and postsecondary education. Students apply technical skills to address business applications of Microsoft Office, emerging technologies, create word-processing documents, develop a spreadsheet, formulate a database, and make an electronic presentation using appropriate software. **All students will have the opportunity to earn the Microsoft Office Certification.**

Marketing & Social Media

Prerequisite: BIM Grade 10 1 credit

This course is designed to build students’ social media marketing skills by utilizing projects that give students hands on experience implementing social media marketing strategies. Topics include integrating different social media technologies into a marketing plan, creating social media marketing campaigns, and applying appropriate social media tools.

INCUBATOR-Entrepreneurship

Prerequisite: IED, Art I, Business Law, BIM, any trades level 1 course Grade 11 1 Credits

Students acquire foundational business concepts, and then apply those concepts to a team business idea. Principles from the LEAN startup movement help students test their thinking. From concept to Minimum Viable Product to Pitch, students are hypothesizing, testing, adapting and learning. Importantly, they work and learn in teams. In addition to team collaboration, students are paired with business professional mentors and learn content specific information from community coaches. Mentors are volunteer guides, who advise student teams as they develop their business concepts. Coaches are volunteer subject matter experts, who share best thinking/practices in the classroom.

INCUBATOR Year 2-Practicum in Business Management

Prerequisites: INCUBATOR Grade 12 1-2 Credits

The Practicum, second year INCUBATOR course is designed to give students supervised practical application of previously studied knowledge and skills and to see their vested idea or start up through! Practicum experiences occur in a paid or unpaid arrangement and a variety of locations appropriate to the nature and level of experience. Students implement personal and

interpersonal skills to strengthen individual performance in the workplace and in society and to make a successful transition to the workforce or postsecondary education. Students apply technical skills to address business applications of emerging technologies. Students develop a foundation in the economic, financial, technological, international, social, and ethical aspects of business to become competent consumers, employees, and entrepreneurs. Students enhance reading, writing, computing, communication, and reasoning skills and apply them to the business environment. Students incorporate a broad base of knowledge that includes the legal, managerial, marketing, financial, ethical, and international dimensions of business to make appropriate business decisions.



Business & Industry: IT

Grade 9-10	Grade 10-11	Grade 11-12	Grade 11-12	Grade 12
Principles of Information Technology	Computer Maintenance (A+/CompTia certification)	AP Computer Science Principles & Software Engineering (PLTW-CSE) (elective)	Microsoft Office Desktop Support-CE	Practicum in IT/CISCO 1& 2-CE/DC with GC
1 credit	1 credit	1 credit	2 Credits	2 credits

Principles of Information Technology

Prerequisite: none Grade 9-10 1 credit

Students develop computer literacy skills to adapt to emerging technologies used in the global marketplace. Students implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. Students enhance reading, writing, computing, communication, and reasoning skills and apply them to the information technology environment. ***Students will have the opportunity to become certified in IC3.***

Computer Maintenance

Prerequisite: Principles of Information Technology Grade 10-11 1 credit

Students acquire principles of computer maintenance, including electrical and electronic theory, computer hardware principles, and broad level components related to the installation, diagnosis, service, and repair of computer systems. To prepare for success, students must have opportunities to reinforce, apply, and transfer knowledge and skills to a variety of settings and problems. ***Students will have the opportunity to earn A+ certification through 2 exams that cover the skills of the fundamentals of computer technology, installation and configuration of PCs, laptops and related hardware, and basic networking; and those required to install and configure PC operating systems, as well as configuring common features for mobile operating systems Android and Apple iOS.***

AP Computer Science Principles & Software Engineering (PLTW-CSE) (elective)

Prerequisites: currently enrolled or completed Algebra 2 Grades 11-12 1 Credit

Using Python® as a primary tool and incorporating multiple platforms and languages for computation, this course aims to develop computational thinking, generate excitement about career paths that utilize computing, and introduce professional tools that foster creativity and collaboration. This course can be a student's first course in computer science, although we encourage students without prior computing experience to start with Introduction to Computer Science. CSE helps students develop programming expertise and explore the workings of the Internet. Projects and problems include app development, visualization of data, cybersecurity, and simulation. This course aligns with the AP Computer Science Principles course.

Microsoft Office Desktop Support-CE Grade: 11-12 2 credits

Help desk technicians are vital to the IT workforce, as they keep the technologies that organizations rely on to do business up-to-date and running smoothly. IT help desk technicians provide technical support and troubleshooting services to end-users who need assistance with their computer hardware or software.

Practicum in IT/CISCO 1& 2- CE/DC with GC

Prerequisite: Computer Maintenance and A+ Certification Grade: 11-12 2 credits

This course is designed to implement the skills to diagnose, restore, repair, and replace critical Cisco networking and system devices at customer sites; introduce students to CISCO routing and switching and how to successfully install, operate, and troubleshoot a small to medium-size enterprise branch network. ***Students will have the opportunity to earn CISCO certification through ICDN1 and ICND2: CCNA Routing and Switching.***



Business & Industry: Audio & Video

<p>Grade 9-10</p> <p>Animation</p> <p>1 credit</p>	<p>Grade 9-11</p> <p>Audio/Video Production 1</p> <p>1 credit</p>	<p>Grade 10-12</p> <p>Audio/Video Production 2 with Lab</p> <p>2 Credits</p>	<p>Grade 11-12</p> <p>Practicum and Extended Practicum in Audio/Video Production</p> <p>2-3 Credits</p>
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Animation

Prerequisite: none Grades 9-10 1 Credit

Careers in animation span all aspects of motion graphics. Within this context, in addition to developing technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications career cluster, students will be expected to develop an understanding of the history and techniques of the animation industry.



Business & Industry: Animation & Gaming



Grade 9-10 Animation 1 credit	Grades 10-11 Graphic Design & Illustration 1 Credit	Grades 10-12 AP Computer Science Principles & Software Engineering (PLTW-CSE) 1 credit	Grade 11-12 Graphic Design & Illustration 2 1 Credit	Grades 11-12 Video Game and Mobile Application Design 1 credit
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Animation

Prerequisite: none Grades 9-10 1 Credit

Careers in animation span all aspects of motion graphics. Within this context, in addition to developing technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications career cluster, students will be expected to develop an understanding of the history and techniques of the animation industry.

Graphic Design & Illustration

Prerequisite: Animation Grades 10-11 1 Credit

Students will be expected to develop an understanding of the industry with a focus on fundamental elements and principles of visual art and design. Students will use personal information management, email, internet, writing and publishing, presentation, and spreadsheet or database applications for art and design projects.

AP Computer Science Principles & Software Engineering (PLTW-CSE)

Prerequisites: currently enrolled or completed Algebra 2 Grades 11-12 1 Credit

Using Python® as a primary tool and incorporating multiple platforms and languages for computation, this course aims to develop computational thinking, generate excitement about career paths that utilize computing, and introduce professional tools that foster creativity and collaboration. This course can be a student's first course in computer science, although we encourage students without prior computing experience to start with Introduction to Computer Science. CSE helps students develop programming expertise and explore the workings of the Internet. Projects and problems include app development, visualization of data, cybersecurity, and simulation. This course aligns with the AP Computer Science Principles course.

Graphic Design 2

Grades 11-12 1 Credit

Students will use the enhancement of the Adobe Creative Suite software, which includes Photoshop, InDesign and Illustrator to create advanced graphic documents. Advanced style and techniques will be used throughout the layout and design process. The design process will be explored further, and students will be given more challenging graphic tasks and assignments which will include logo design. Activities call for students to apply problem solving methodology to analyze and formulate real world solutions. Career options will be explored in the fields of Marketing, Advertising, and Graphic Design.

Video Game Design

Prerequisite: Principles of Arts, Audio/Video Technology & Communications and Animation

Grades 12

1 Credit

Students will learn game analysis, game design, creation of characters and their environments, low-polygon modeling, and file limitations. A wide range of skills will be developed in the class including, storyboarding, sketching, rendering, animation, and program debugging. By using software design knowledge and skills that support the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. Students will learn digital citizenship by researching current laws and regulations and by practicing integrity and respect. Students will gain an understanding of the principles of mobile application development through the study of development platforms, programming languages, and software design standards.



Business & Industry Endorsement: Hospitality & Culinary

Grades 9-10 Principles of Hospitality & Tourism 1 Credit	Grades 10-11 Hotel Management 1 Credit Grades 10-11 <i>Students earn State of Texas Food Handler & Servsafe Certificates</i>	Grades 11-12 Hospitality Services 2 credits (<i>intern at San Luis Resort</i>)	Grade 12 Practicum in Hospitality Services 2 Credits (<i>intern at San Luis Resort</i>)Grades 12
	Grades 11-12 Food Science 1 Credit (may count as 1 of the 4 sciences required for graduation)		Grade 12 Culinary Arts-DC 2 Credits-Dual Credit Course: up to 8hours

Principles of Hospitality & Tourism

Prerequisites: None

Grades 9-10

1 Credit

The hospitality and tourism industry encompasses lodging; travel and tourism; recreation, amusements, attractions, and resorts; and restaurants and food beverage service. The hospitality and tourism industry maintains the largest national employment base in the private sector. Students use knowledge and skills that meet industry standards to function effectively in various positions within this multifaceted industry. Students are encouraged to

Culinary Arts-Dual Credit (up to 8 college hours)

Prerequisites: Prerequisites: Principles of Hospitality & Tourism, Hotel Management, Food Science Grades 12
2 Credits

This course is a unique practicum that provides occupationally specific opportunities for students to participate in a learning experience that combines classroom instruction with actual business and industry career experiences. Practicum in Culinary Arts integrates academic and career and technical education; provides more interdisciplinary instruction; and supports strong partnerships among schools, businesses, and community institutions with the goal of preparing students with a variety of skills in a fast-changing workplace. This course sequencing is offered as a laboratory-based at Galveston College where students take Saucier, Nutrition, International Cuisine, and Restaurant Spanish (total of 12 hours)



Public Service Endorsement: Childcare and Education



<p>Grades 10 - 11</p> <p>Lifetime Nutrition & Wellness</p> <p>1 Credit</p>	<p>Grades 10-11</p> <p>Child Guidance</p> <p>1 Credit</p>	<p>Grades 12</p> <p>Practicum in Education & Training (BESTT)</p> <p>2 Credits</p>
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Lifetime Nutrition and Wellness

Prerequisite: None Grades 10 - 11 1 Credit

This laboratory course allows students to use principles of lifetime wellness and nutrition to help them make informed choices that promote wellness as well as pursue careers related to hospitality and tourism, education and training, human services, and health sciences. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations. Students will have an opportunity to earn their Food Handler Certification. ***Students may take this course for a full year or 1 semester.***

Child Guidance

Prerequisite: none or Lifetime Nutrition and Wellness Grades 10-11 1 Credit

This technical laboratory course addresses the knowledge and skills related to child growth and guidance equipping students to develop positive relationships with children and effective caregiver skills. Students use these skills to promote the well-being and healthy development of children, strengthen a culturally diverse society, and pursue careers related to the care, guidance, and education of children, including those with special needs. Students will have the opportunity to earn their Child Care Worker Certification.

Practicum in Education and Training (BESTT)

Prerequisites: Principles of Education and Training, Human Growth and Development, and Instructional Practices in Education and Training
 Grades 12
 2 Credits

Practicum in Education and Training is a field-based internship that provides students background knowledge of child and adolescent development principles as well as principles of effective teaching and training practices. Students in the course work under the joint direction and supervision of both a teacher with knowledge of early childhood education and exemplary educators in direct instructional roles with elementary-, middle school-, and high school-aged students. Students learn to plan and direct individualized instruction and group activities, prepare instructional materials, assist with record keeping, make physical arrangements, and complete other responsibilities of classroom teachers, trainers, paraprofessionals, or other educational personnel.



Public Service Endorsement: Cosmetology

Grade 10-11 Anatomy & Physiology (will count as 1 of the student's 4 sciences) 1 credit	Grade 11 Introduction to Cosmetology and Cosmetology 1 TAUGHT AT GALVESTON COLLEGE ATC 4 credits	Grade 12 Cosmetology 2 and Cosmetology Specialist TAUGHT AT GALVESTON COLLEGE ATC 4 credits
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Anatomy & Physiology

Prerequisite: Biology and IPC/Chemistry
 Grades 10 -11
 1 Credit

Students 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 study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis. (To receive credit in science, students must meet the 40% laboratory and fieldwork requirement identified in §74.3(b)(2)(C) of this title (relating to Description of a Required Secondary Curriculum).

Introduction to Cosmetology /Cosmetology 1 and Cosmetology 2 and Cosmetology Specialist

(TAUGHT AT GALVESTON COLLEGE ATC)

This high school program is dual credit only and is offered at Galveston College Applied Technical Center. Students enrolled in this program are working towards the state of Texas certification in cosmetology and an Applied Science Associate's Degree. Students gain advanced knowledge and skills specific to those needed to enter the

