



Jones County College and Career Academy

CAREER PATHWAYS 2020-2021

WHY TAKE CTAE COURSES?

CTAE courses will get you on the fast track to your future. Whatever your plans may be after high school, CTAE courses and career pathways will give you a head start in a vast variety of careers. Our goal is for you to be successful, whether you choose to go into the workforce, enlist in the military, go to a technical college, or enter a college or university. Within each Career Cluster listed below, you will find career pathways for you to choose, as well as several dual enrollment opportunities in occupational areas. Each career pathway has three classes you must take to complete the requirements for your pathway. At the end of your respective pathway(s), you will have the opportunity to earn an industry credential by passing your End of Pathway Assessment (EOPA).



Agriculture, Food and Natural Resources Career Cluster

FORESTRY AND ANIMAL SYSTEMS PATHWAY

02.47100 *Basic Agricultural Science*

Prerequisite: NONE

This course is designed as the foundational course for all Agriculture, Food & Natural Resources Pathways. The course introduces the major areas of scientific agricultural production and research; presents problem solving lessons and introductory skills and knowledge in agricultural science and agri-related technologies. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

03.45100 *Forest Science*

Prerequisite: Basic Agricultural Science

This course provides entry-level skills for employment in the forest industry and for further study. The course covers establishing forests by natural and artificial means, maintaining and surveying forests, identifying and protecting trees, practicing silviculture, measuring trees and land, mapping, preparing for timber sales and harvest, employing multiple-use resource management, keeping records, and figuring taxes. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

02.42100 *Animal Science and Biotechnology*

Prerequisite: Basic Agricultural Science

This course is designed to introduce students to the scientific principles that underlie the breeding and husbandry of agricultural animals, and the production, processing, and distribution of agricultural animal products. This course introduces scientific principles applied to the animal industry; covers reproduction, production technology, processing, and distribution of agricultural animal products. Classroom and laboratory activities are supplemented through supervised agricultural experience and leadership programs and activities.

FORESTRY/WILDLIFE SYSTEMS PATHWAY

02.47100 *Basic Agricultural Science*

Prerequisite: NONE

This course is designed as the foundational course for all Agriculture, Food & Natural Resources Pathways. The course introduces the major areas of scientific agricultural production and research; presents problem solving lessons and introductory skills and knowledge in agricultural science and agri-related technologies. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

03.45100 *Forest Science*

Prerequisite: Basic Agricultural Science

This course provides entry-level skills for employment in the forest industry and for further study. The course covers establishing forests by natural and artificial means, maintaining and surveying forests, identifying and protecting trees, practicing silviculture, measuring trees and land, mapping, preparing for timber sales and harvest, employing multiple-use resource management, keeping records, and figuring taxes. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

03.45300 *Wildlife Management*

Prerequisite: Basic Agricultural Science

This course introduces students to the principles of wildlife management and conservation and to opportunities for further education and careers in the field of wildlife biology. The course includes instruction in the history of wildlife management, ecological concepts, habitat assessment, habitat management techniques for wildlife, population dynamics, predator-prey relationships, wildlife species biology and identification, human-wildlife conflict resolution, the role of hunting in conservation, game and fish laws and regulations, hunters' safety, and the application of scientific principles to managing wildlife habitat and

populations. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

HORTICULTURE AND ANIMAL SYSTEMS PATHWAY

02.47100 *Basic Agricultural Science*

Prerequisite: NONE

This course is designed as the foundational course for all Agriculture, Food & Natural Resources Pathways. The course introduces the major areas of scientific agricultural production and research; presents problem solving lessons and introductory skills and knowledge in agricultural science and agri-related technologies. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

01.46100 *General Horticulture and Plant Science*

Prerequisite: Basic Agricultural Science

This course is designed as an introduction for the Horticulture-Plant Science Pathway Program of Study. The course introduces the major concepts of plant and horticulture science. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

02.42100 *Animal Science and Biotechnology*

Prerequisite: Basic Agricultural Science

This course is designed to introduce students to the scientific principles that underlie the breeding and husbandry of agricultural animals, and the production, processing, and distribution of agricultural animal products. This course introduces scientific principles applied to the animal industry; covers reproduction, production technology, processing, and distribution of agricultural animal products. Classroom and laboratory activities are supplemented through supervised agricultural experience and leadership programs and activities.

HORTICULTURE AND FOREST SCIENCE PATHWAY

02.47100 *Basic Agricultural Science*

Prerequisite: NONE

This course is designed as the foundational course for all Agriculture, Food & Natural Resources Pathways. The course introduces the major areas of scientific agricultural production and research; presents problem solving lessons and introductory skills and knowledge in agricultural science and agri-related technologies. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

03.45100 *Forest Science*

Prerequisite: Basic Agricultural Science

This course provides entry-level skills for employment in the forest industry and for further study. The course covers establishing forests by natural and artificial means, maintaining and surveying forests, identifying and protecting trees, practicing silviculture, measuring trees and land, mapping, preparing for timber sales and harvest, employing multiple-use resource management, keeping records, and figuring taxes. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

01.46100 *General Horticulture and Plant Science*

Prerequisite: Basic Agricultural Science

This course is designed as an introduction for the Horticulture-Plant Science Pathway Program of Study. The course introduces the major concepts of plant and horticulture science. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

PLANT AND FLORAL DESIGN SYSTEMS PATHWAY

02.47100 *Basic Agricultural Science*

Prerequisite: NONE

This course is designed as the foundational course for all Agriculture, Food & Natural Resources Pathways. The course introduces the major areas of scientific agricultural production and research; presents problem solving lessons and introductory skills and knowledge in agricultural science and agri-related technologies. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

01.46100 *General Horticulture and Plant Science*

Prerequisite: Basic Agricultural Science

This course is designed as an introduction for the Horticulture-Plant Science Pathway Program of Study. The course introduces the major concepts of plant and horticulture science. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

01.46600 *Floral Design & Management*

Prerequisite: Basic Agricultural Science

This laboratory course is designed to prepare students to apply systematic business procedures and design principles in the operation of a retail or wholesale floral business. Students will learn about the cut flower industry, the history of floral design, identification of flowers and foliage, design shapes, mechanics of design, everlasting flowers, and use knowledge and skills to create custom design work for special occasions.

PLANT AND LANDSCAPE SYSTEMS PATHWAY

02.47100 *Basic Agricultural Science*

Prerequisite: NONE

This course is designed as the foundational course for all Agriculture, Food & Natural Resources Pathways. The course introduces the major areas of scientific agricultural production and research; presents problem solving lessons and introductory skills and knowledge in agricultural science and agri-related technologies. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

01.46100 **General Horticulture and Plant Science** **Prerequisite:** Basic Agricultural Science
This course is designed as an introduction for the Horticulture-Plant Science Pathway Program of Study. The course introduces the major concepts of plant and horticulture science. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

01.47000 **Nursery and Landscape** **Prerequisite:** Basic Agricultural Science
This course is designed to provide students with the basic skills and knowledge utilized by the green industry in nursery production and management and landscape design and management. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

VETERINARY SCIENCE PATHWAY

02.47100 **Basic Agricultural Science** **Prerequisite:** NONE
This course is designed as the foundational course for all Agriculture, Food & Natural Resources Pathways. The course introduces the major areas of scientific agricultural production and research; presents problem solving lessons and introductory skills and knowledge in agricultural science and agri-related technologies. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

02.42100 **Animal Science and Biotechnology** **Prerequisite:** Basic Agricultural Science
This course is designed to introduce students to the scientific principles that underlie the breeding and husbandry of agricultural animals, and the production, processing, and distribution of agricultural animal products. This course introduces scientific principles applied to the animal industry; covers reproduction, production technology, processing, and distribution of agricultural animal products. Classroom and laboratory activities are supplemented through supervised agricultural experience and leadership programs and activities.

02.42400 **Veterinary Science (Coming 2019-2020 School Year)** **Prerequisite:** *Animal Science and Biotechnology*
This course in veterinary science covers the basics of animal care. Topics covered include disease, parasites, feeding, shelter, grooming, and general animal care. The target population is career preparatory students desiring to continue education after high school or to enter the workforce after graduation from high school. College preparatory students benefit from the course as an elective if they plan to enter college and pursue a degree to enter the veterinary profession. This course allows students entering the workforce after graduation from high school to develop entry-level skills to become employed and to continue education on the job.



Architecture and Construction Career Cluster

CARPENTRY (DUAL ENROLLMENT OPPORTUNITY)

46.54500 **Industry Fundamentals and Occupational Safety** **Prerequisite:** NONE
This course is designed as the foundational course in the Carpentry pathway to prepare students for pursuit of any career in construction. The course prepares the trainee for the basic knowledge to function safely on or around a construction site and in the industry in general and will provide the trainee with the option for an Industry Certification in the Construction Core.

46.54600 **Introduction to Construction** **Prerequisite:** Industry Fundamentals and Occupational Safety
This course is preceded by the Occupational Safety and Fundamentals course. This course offers an opportunity for students to build on their knowledge and skills developed in Industry Fundamentals and Occupational Safety. It introduces them to four construction craft areas and is also the second step towards gaining a Level One Industry Certification in one of the craft areas. The goal of this course is to introduce students to the history and traditions of the carpentry, masonry, plumbing and electrical craft trades. Students will explore how the various crafts have influenced and been influenced by history. The student will also learn and apply knowledge of the care and safe use of hand and power tools as related to each trade. In addition, students will be introduced to and develop skills to differentiate between blueprints related to each individual craft area.

46.55000 **Carpentry I** **Prerequisite:** Introduction to Construction
This course is preceded by Introduction to Construction and is the third of three courses that provides the student a solid foundation in carpentry skills and knowledge. As the third step in gaining a Level One Industry Certification in Carpentry, the course provides an overview of the building materials used in the carpentry craft, as well as teaching techniques for reading and using blueprints and specifications related to the carpentry craft. The course provides specific knowledge and skills in site layout and floor and wall framing systems, and includes basic industry terminology for a carpentry craftsman.

CARPENTRY DUAL ENROLLMENT OPTION

Third-year Carpentry students can take Carpentry I as a Dual Enrollment course and earn a TCC in Certified Construction Worker (CCW1)

Courses Include: COFC 1030, COFC 1050, COFC 1080

CABINETMAKING ASSEMBLY TECHNICIAN DUAL ENROLLMENT OPTION

Students can take Cabinetmaking as a Dual Enrollment course and earn a TCC as a Cabinetmaking Assembly Technician.

Courses Include: CABT 1080, CABT 1110, and CABT 1114

Architecture and Construction Career Cluster

WELDING PATHWAY YEAR 1 (DUAL ENROLLMENT ONLY)

Basic Shielded Metal Arc Welder TCC (FS31), Gas Metal Arc Welder (GM31)

Courses Include: WELD 1000, WELD 1010, WELD 1040, WELD 1090

WELDING PATHWAY YEAR 2 (DUAL ENROLLMENT ONLY)

Advanced Shielded Metal Arc Welder (OSM1) Vertical Shielded Metal Arc Welding Fabricator (VSM1)

Courses Include: WELD 1050, WELD 1060, WELD 1070, *Occupationally-Related Elective*

WELDING PATHWAY YEAR 3 (DUAL ENROLLMENT ONLY)

Gas Tungsten Arc Welder (GTA1), Flux Cored Arc Welder (FC61)

Courses Include: WELD 1000, WELD 1010, WELD 1110, WELD 1153, 2 *Occupationally-Related Electives*

Arts, AV/Technology, and Communications Career Cluster

AUDIO-VIDEO, TECHNOLOGY AND FILM I PATHWAY

10.51810 **Audio and Video Technology and Film I** **Prerequisite:** NONE

This course will serve as the foundational course in the Audio & Video Technology & Film pathway. The course prepares students for employment or entry into a postsecondary education program in the audio and video technology career field. Topics covered may include, but are not limited to: terminology, safety, basic equipment, script writing, production teams, production and programming, lighting, recording and editing, studio production, and professional ethics. Skills USA and Technology Student Association (TSA) are examples of, but not limited to, appropriate organizations for providing leadership training and/or for reinforcing specific career and technical skills and may be considered an integral part of the instructional program. All material covered in Audio & Video Technology & Film I will be utilized in subsequent courses. The pre-requisite for this course is advisor approval.

10.51910 **Audio and Video Technology and Film II** **Prerequisite:** Audio and Video Technology and Film I

This one credit course is the second in a series of three that prepares students for a career in Audio Video Technology and Film production and/or to transfer to a postsecondary program for further study. Topics include Planning, Writing, Directing and Editing a Production; Field Equipment Functions; Operational Set-Up and Maintenance; Advanced Editing Operations; Studio Productions; Performance; Audio/Video Control Systems; Production Graphics; Career Opportunities; and Professional Ethics. Skills USA and Technology Student Association (TSA) are examples of, but not limited to, appropriate organizations for providing leadership training and/or for reinforcing specific career and technical skills and may be considered an integral part of the instructional program.

10.52010 **Audio and Video Technology and Film III** **Prerequisite:** Audio and Video Technology and Film II

This one-credit transition course is designed to facilitate student-led projects under the guidance of the instructor. Students work cooperatively and independently in all phases of production. Skills USA and Technology Student Association (TSA) are examples of, but not limited to, appropriate organizations for providing leadership training and/or for reinforcing specific career and technical skills and may be considered an integral part of the instructional program.

GRAPHICS COMMUNICATIONS PATHWAY

48.56100 **Introduction to Graphics and Design** **Prerequisite:** NONE

This course is designed as the foundational course for both the Graphics Production and Graphics Design pathways. The Graphics and Design course provides students with the processes involved in the technologies of printing, publishing, packaging, electronic imaging, and their allied industries. In addition, the Graphics and Design course offers a range of cognitive skills, aesthetics, and crafts that includes typography, visual arts, and page layout.

48.56200 **Graphic Design and Production** **Prerequisite:** Introduction to Graphics and Design

As the second course in the Graphics Communication and Graphics Design Pathways, this course builds on knowledge and skills learned in the Introduction to Graphics and Design course and focuses on procedures commonly used in the graphic communication and design industries. Students will gain more experience in creative problem solving and the practical implementation of those solutions across multiple areas of graphic design and graphic communications.

10.52010 **Advanced Graphic Output Processes** **Prerequisite:** Graphic Design and Production

As the third course in the Graphics Communication Pathway, students will gain more advanced levels of experience to complete the output processes of various projects in an increasingly independent manner. Students also learn to manage the output and completion process as a whole including customer relations management, printing, finishing, and binding. Students will continue to accumulate work samples that will constitute their personal portfolio. Upon successful completion of the course, students are prepared to move into employment or a post-secondary educational environment where self-motivation and a high level of skill are expected. This is the final course in the Graphic Communication Pathway.



Business, Management and Administration Career Cluster

ENTREPRENEURSHIP PATHWAY

07.44130 Introduction to Business and Technology Prerequisite: NONE

IBT is the foundational course for Business and Technology, Entrepreneurship and Human Resources Management pathways. The course is designed for high school students as a gateway to the career pathways above, and provides an overview of business and technology skills required for today's business environment. Knowledge of business principles, the impact of financial decisions, and technology proficiencies demanded by business combine to establish the elements of this course. The intention of this course is to prepare students to be successful both personally and professionally in an information-based society. Employability skills are integrated into activities, tasks and projects throughout the course standards to demonstrate the skills required by business and industry. Competencies in the co-curricular student organization, Future Business Leaders of America (FBLA), are integral components of both the employability skills standard and content standards for this course.

06.41500 Legal Environment of Business Prerequisite: Introduction to Business and Technology

This course addresses statutes and regulations affecting businesses, families and individuals. All students will benefit with the knowledge of business law as they will eventually assume roles as citizens, workers, and consumers in their communities and in society at large. Students will get an overview of business law while concentrating on the legal aspects of business ownership and management. Legal issues addressed include court procedures, contracts, torts, consumer law, employment law, environmental law, international law, ethics, and the role of the government in business.

06.41610 Entrepreneurship Prerequisite: Legal Environment of Business

Students will experience how to turn ideas into businesses. Entrepreneurship focuses on recognizing a business opportunity, starting a business, and operating and maintaining a business. Students will be exposed to the development of critical thinking, problem solving and innovation in this course as they will either be the business owner or individuals working in a competitive job market in the future. Integration of accounting, finance, marketing, business management, legal and economic environments will be developed throughout projects in this course. Working to develop a business plan that includes structuring the organization, financing the organization, and managing information, operations, marketing and human resources will be a focus in the course. Engaging students in the creation and management of a business and the challenges of being a small business owner will be fulfilled in this course.



Education and Training Career Cluster

EXAMINING THE TEACHING PROFESSION PATHWAY

13.01100 Examining the Teaching Profession Prerequisite: NONE

The Examining the Teaching Profession is the foundational course under the Teaching as a Profession Pathway and prepares students for future positions in the field of education. Teaching as a Profession students study, apply, and practice the use of current technologies, effective teaching and learning strategies, the creation of an effective learning environment, the creation of instructional opportunities for diverse learners and students with special needs, and plan instruction based on knowledge of subject matter, students, community, and curriculum performance standards.

13.01200 Contemporary Issues in Education Prerequisite: Examining the Teaching Profession

This course engages the candidate in observations, interactions, and analyses of critical and contemporary educational issues. The candidate will investigate issues influencing the social and political contexts of educational settings in Georgia and the United States and actively examines the teaching profession from multiple vantage points both within and outside of the school. Against this backdrop, the candidate will reflect on and interpret the meaning of education and democracy. (Mastery of standards through project based learning, technical skills practice, and leadership development activities of the career and technical student organization Future Educations of America (FEA) will provide students with a competitive edge for either entry into the education global marketplace and/or the post-secondary institutions of their choice to continue their education and training).

13.01300 Teaching as a Profession Practicum Prerequisite: Contemporary Issues in Education

The practicum offers a candidate in the Teaching as a Profession Career Pathway a field experience under the direct supervision of a certified teacher (mentor teacher). The practicum stresses observing, analyzing, and classifying activities of the mentor teacher and comparing personal traits with those of successful teachers. The candidate intern will develop a portfolio of their skills, plan and teach a lesson or lessons, understand and practice confidentiality as it pertains to the teaching profession, meet the needs of students with special needs, maintain the safety of the students, practice professionalism, and demonstrate ethical behavior. (Mastery of standards through project based learning, technical skills practice, and leadership development activities of the career and technical student organization Future Educations of America (FEA) will provide students with a competitive edge for either entry into the education global marketplace and/or the post-secondary institutions of their choice to continue their education and training).

Government and Public Administration Career Cluster

ARMY JUNIOR RESERVE OFFICERS TRAINING CORP (JROTC) PATHWAY

28.03100 *Army Leadership Education I*

Prerequisite: NONE

JROTC is a leadership education program. This program will help students build a strong knowledge base of self-discovery and leadership skills applicable to many leadership and managerial situations. Mastery of these standards through project-based learning, service learning and leadership development activities will prepare students for 21st Century leadership responsibilities. This laboratory course is designed to introduce students to the history, customs, traditions and purpose of the Army JROTC program. It teaches students strategies to maximize their potential for success through learning and self-management. Basic leadership skills to include leadership principles, values, and attributes and communications skills are integrated throughout the course. High School students develop an understanding of learning style preferences, multiple intelligences, emotional intelligence, and study skills. These self-assessments will enable students to be self-directed learners. The JROTC curriculum is enhanced through physical fitness activities, extracurricular and co-curricular activities that support the core employability skills standards and McRel academic standards.

28.03200 *Army Leadership Education II*

Prerequisite: Army Leadership Education I

This laboratory course is designed to build on the self-discovery skill sets taught in JROTC 1. As self-directed learners, students study the fundamental citizenship skills, the foundation of the American political system and our Constitution. Personal responsibility and wellness is reinforced by diet, nutrition and physical fitness activities. Drug and alcohol awareness and prevention are reinforced. Students are placed in leadership roles that enable them to demonstrate an understanding of basic leadership principles, values, and attributes. The JROTC curriculum is enhanced through physical fitness activities extracurricular and co-curricular activities that support the core employability skills standards and McRel academic standards.

28.03300 *Army Leadership Education III*

Prerequisite: Army Leadership Education II

This laboratory course is designed to build on the leadership experiences developed during JROTC Army 1 and 2. Basic command and staff principles are introduced and include an overview of organizational roles and responsibilities. Leadership strategies, managing conflict, leading others, planning and communications skills are evaluated to improve organizational effectiveness. Career planning is investigated. The JROTC curriculum is enhanced through physical fitness activities, extracurricular and co-curricular activities that support the core employability skills standards and McRel academic standards.

28.03400 *Army Leadership Education IV*

Prerequisite: Army Leadership Education III

JROTC is a leadership education program. This program will help students build a strong knowledge base of self-discovery and leadership skills applicable to many leadership and managerial situations. Mastery of these standards through project-based learning, service learning and leadership development activities will prepare students for 21st century leadership responsibilities. This laboratory course is designed build on the leadership skills developed in JROTC 3. Students develop an in-depth understanding of the branches of military service. Intermediate leadership skills to include leadership principles, values and attributes and communications skills are integrated throughout the course. Financial planning skills are studied through the National Endowment for Financial Education. Fundamental teaching skills are introduced. The JROTC curriculum is enhanced through physical fitness activities, extracurricular and co-curricular activities that support the core employability skills standards and McRel academic standards.



Health Science Career Cluster

THERAPEUTIC SERVICES/EMERGENCY MEDICAL RESPONDER PATHWAY (DUAL ENROLLMENT ONLY)

Emergency Medical Responder TCC (EB71)

Courses Include: ALHS 1011(Telepresence), ALHS 1090, EMSP 1010

25.52100 *Introduction to Healthcare Science*

Prerequisite: NONE

This is the foundational course for all Health Science pathways and is a prerequisite for all other Healthcare Science pathway courses. This course will enable students to receive initial exposure to the many Healthcare Science careers as well as employability, communication, and technology skills necessary in the healthcare industry. The concepts of human growth and development, interaction with patients and family members, health, wellness, and preventative care area evaluated, as well as the legal, ethical responsibilities of today's healthcare provider. Fundamental healthcare skills development is initiated including microbiology, basic life support and first aid. This course will provide students with a competitive edge to be the better candidate for either entry into the healthcare global marketplace and/or the post-secondary institution of their choice to continue their education and training.

25.44000 *Essentials of Healthcare*

Prerequisite: Introduction to Healthcare Science

Anatomy and Physiology is a vital part of most healthcare post-secondary education programs. The Essentials of Healthcare course is a medical-focused anatomy course addressing the physiology of each body system, along with the investigation of common diseases, disorders and emerging diseases. The prevention of disease and the diagnosis and treatment that might utilized are addressed, along with medical terminology related to each system. This course provides an opportunity to demonstrate technical skills that enforce the goal of helping students make connections between medical procedures and the pathophysiology of diseases and disorders.

25.45000 *Emergency Medical Responder (Dual Enrollment Year)* **Prerequisite:** Essentials of Healthcare

The Emergency Medical Responder (EMR) course prepared the student to provide initial stabilizing care to the sick or injured prior to the arrival of Emergency Medical Services Professionals (EMS), and to assist EMS personnel in transporting patients for definitive care at an appropriate hospital/facility. Major areas of instruction include Introductory Medical Terminology and Anatomy and Physiology; Responder Safety; Incident

Command; Blood-borne Pathogen Training; Basic Physical Assessment; and Treatment of Trauma and Medical Emergencies; Cardiopulmonary Resuscitation and the use of Automatic External Defibrillators (AEDs). The course is a blend of lecture, hands on lab/learning, and practical scenario-based learning/testing. The course will include Healthcare Provider CPR/AED Certification from a Nationally-Recognized Body (American Heart Association or Red Cross, etc.). If this course is also approved by the Georgia State Office of Emergency Medical Services and Trauma (SOEMST), successful completion will allow the student to be eligible to take the National Registry of Emergency Medical Technicians (NREMT) Emergency Medical Responder (EMR) certification. Topics include; Preparatory; Anatomy and Physiology; Medical Terminology; Pathophysiology; Life Span Development; Public Health; Pharmacology; Airway; Management; Respiration and Artificial Ventilation; Assessment; Medicine; Shock and Resuscitation; Trauma; Special Patient Populations; EMS Operations; and Integration of Patient Assessment and Management.

THERAPEUTIC SERVICES/PATIENT CARE PATHWAY (DUAL ENROLLMENT ONLY)

Certified Nurse Aide TCC (CN21) and GC51

Courses Include: ALHS 1040, ALHS 1060, ALHS 1090, GERT 1000, GERT 1020, GERT 1030, and NAST 1100

25.52100 **Introduction to Healthcare Science**

Prerequisite: NONE

This is the foundational course for all Health Science pathways and is a prerequisite for all other Healthcare Science pathway courses. This course will enable students to receive initial exposure to the many Healthcare Science careers as well as employability, communication, and technology skills necessary in the healthcare industry. The concepts of human growth and development, interaction with patients and family members, health, wellness, and preventative care area evaluated, as well as the legal, ethical responsibilities of today's healthcare provider. Fundamental healthcare skills development is initiated including microbiology, basic life support and first aid. This course will provide students with a competitive edge to be the better candidate for either entry into the healthcare global marketplace and/or the post-secondary institution of their choice to continue their education and training.

25.44000 **Essentials of Healthcare**

Prerequisite: Introduction to Healthcare Science

Anatomy and Physiology is a vital part of most healthcare post-secondary education programs. The Essentials of Healthcare course is a medical-focused anatomy course addressing the physiology of each body system, along with the investigation of common diseases, disorders and emerging diseases. The prevention of disease and the diagnosis and treatment that might utilized are addressed, along with medical terminology related to each system. This course provides an opportunity to demonstrate technical skills that enforce the goal of helping students make connections between medical procedures and the pathophysiology of diseases and disorders.

25.43600 **Patient Care Fundamentals (Dual Enrollment Course)** **Prerequisite:** Essentials of Healthcare

This course is designed to provide students interested in the careers that involve patient care with entry level skills most commonly associated with the career Nursing Assistant. The students are required to meet both national and intrastate professional guidelines as designated by applicable regulatory agencies such as the Occupational Health and Safety Administration (OSHA), Center for Disease Control (CDC), and the Department of Health and Human Services (HHS) with a specific focus on the Omnibus Budget Reconciliation Act of 1987 (OBRA) and the Health Insurance Portability and Accountability Act of 1996 (HIPAA). Upon completion of this course and its prerequisites, this course meets the Certified Nurse Assistant curriculum content as specified by the Georgia Medical Care Foundation. Students meeting all academic, attendance, and age requirements may sit for the Georgia Registry's Examination. Successful completion of the Georgia Registry Examination allows students to seek employment in the state of Georgia as a Certified Nurse Assistant (programs and instructors must affiliate with and be approved by the GA Medical Care Foundation www.gmcf.org in order for students to be able to sit for the GA Registry Examination. Requirements for equipment, clinical hours, etc. can be found through the GA Medical Care Foundation). Any healthcare science course that includes a clinical component (excluding a shadowing experience field trip) must adhere to identified guidelines under (WBL) work-based learning (available at ctae.gadoe.org under WBL manual).

THERAPEUTIC SERVICES/PHARMACY PATHWAY

25.52100 **Introduction to Healthcare Science**

Prerequisite: NONE

This is the foundational course for all Health Science pathways and is a prerequisite for all other Healthcare Science pathway courses. This course will enable students to receive initial exposure to the many Healthcare Science careers as well as employability, communication, and technology skills necessary in the healthcare industry. The concepts of human growth and development, interaction with patients and family members, health, wellness, and preventative care area evaluated, as well as the legal, ethical responsibilities of today's healthcare provider. Fundamental healthcare skills development is initiated including microbiology, basic life support and first aid. This course will provide students with a competitive edge to be the better candidate for either entry into the healthcare global marketplace and/or the post-secondary institution of their choice to continue their education and training.

25.44000 **Essentials of Healthcare**

Prerequisite: Introduction to Healthcare Science

Anatomy and Physiology is a vital part of most healthcare post-secondary education programs. The Essentials of Healthcare course is a medical-focused anatomy course addressing the physiology of each body system, along with the investigation of common diseases, disorders and emerging diseases. The prevention of disease and the diagnosis and treatment that might utilized are addressed, along with medical terminology related to each system. This course provides an opportunity to demonstrate technical skills that enforce the goal of helping students make connections between medical procedures and the pathophysiology of diseases and disorders.

25.45300 **Pharmacy Operations**

Prerequisite: Essentials of Healthcare

This course is an introduction to pharmacy technology professions, employment opportunities and basic pre-pharmacy technician skills which may be utilized in either clinical or community settings such as retail, home health care, and ambulatory care pharmacies. Intensive pharmacy specific safety and security training are provided including potential drug addiction and abuse issues relative to pharmaceutical care such as robberies and identification of forgeries. Students are required to adhere to Federal Regulatory Agencies and Acts guidelines including Food, Drug, and Cosmetic Act, Controlled Substances Act (CSA), Joint Commission on Accreditation of Healthcare Organizations (JCAHO), Drug Enforcement Administration

(DEA) in addition to the pharmacy regulatory agencies within the state of Georgia. This course is recommended for students planning on pursuing careers in the healthcare industry, which may require basic pharmaceutical knowledge, common healthcare mathematical applications, and/or technical proficiency in the administration of medications. An overview of prescription and nonprescription medications, classifications, actions, and interactions is provided while critical thinking skills are developed throughout the course from initial calculations/conversions of drug and administration of medications are practiced in simulated clinical labs. Students must demonstrate the utilization of all professional and safety guidelines as designated by applicable Federal and State regulatory agencies and acts such as the Drug Enforcement Administration (DEA) and the Controlled Substance Act while performing simulations. The impact of pharmaceuticals on the provision of healthcare and the importance of client education are integrated throughout the course. Clinical experience is recommended to help prepare a student to potentially take the pharmacy Technician exam when they are eligible. An internship course under the supervision of a Registered Pharmacist may also be utilized for this experience. After the completion of this course, student may be eligible to take the Pharmacy Technician Certification Exam (PTCE) through the Pharmacy Technician Certification Board (PTCB).

Therapeutic Services/Sports Medicine Pathway

25.52100 *Introduction to Healthcare Science*

Prerequisite: NONE

This is the foundational course for all Health Science pathways and is a prerequisite for all other Healthcare Science pathway courses. This course will enable students to receive initial exposure to the many Healthcare Science careers as well as employability, communication, and technology skills necessary in the healthcare industry. The concepts of human growth and development, interaction with patients and family members, health, wellness, and preventative care area evaluated, as well as the legal, ethical responsibilities of today's healthcare provider. Fundamental healthcare skills development is initiated including microbiology, basic life support and first aid. This course will provide students with a competitive edge to be the better candidate for either entry into the healthcare global marketplace and/or the post-secondary institution of their choice to continue their education and training.

25.44000 *Essentials of Healthcare*

Prerequisite: Introduction to Healthcare Science

Anatomy and Physiology is a vital part of most healthcare post-secondary education programs. The Essentials of Healthcare course is a medical-focused anatomy course addressing the physiology of each body system, along with the investigation of common diseases, disorders and emerging diseases. The prevention of disease and the diagnosis and treatment that might utilized are addressed, along with medical terminology related to each system. This course provides an opportunity to demonstrate technical skills that enforce the goal of helping students make connections between medical procedures and the pathophysiology of diseases and disorders.

25.44600 *Sports Medicine*

Prerequisite: Essentials of Healthcare

Sports Medicine is the third course in the Therapeutic Services/Sports Medicine Career Pathway. The course is appropriate for students who wish to pursue a career in healthcare with a focus on the musculoskeletal system, injury assessment, injury prevention, or rehabilitation including careers in Sports Medicine and Rehabilitative Services. This course will enable students to receive initial exposure to therapeutic services skills and attitudes applicable to the healthcare industry. The concepts of anatomy and physiology, assessment, preventative and rehabilitative care are introduced. Fundamental healthcare skills development is initiated, including medical terminology, kinesiology, patient assessment, record keeping, and basic life support. The prerequisites for this course are Introduction to Healthcare and Essentials of Healthcare. Mastery of these standards through project-based learning, technical-skills practice, and leadership-development activities of the career and technical student organization, HOSA (Health Occupations Students of America), will provide students with a competitive edge for entry into either the healthcare global marketplace or a post-secondary institution to pursue further education and training.



Human Services- Family and Consumer Sciences

Nutrition and Food Science Pathway

20.41610 *Food, Nutrition and Wellness*

Prerequisite: NONE

Food, Nutrition and Wellness is the foundational course in the nutrition and food science pathway. The focus of the course is centered on healthy food and lifestyle choices. Students will investigate the interrelationship of food, nutrition and wellness to promote good health. Mastery of standards through project-based learning, technical skills practice, and leadership development activities of Family, Career and Community leaders of America (FCCLA) will provide students with a competitive edge for either entry into the education global marketplace and/or the post-secondary institution of their choice to continue their education and training.

20.41400 *Food for Life*

Prerequisite: Food, Nutrition and Wellness

Food for Life is an advanced course in food and nutrition that addresses the variation in nutritional needs at specific stages of the human life cycle: lactation, infancy, childhood, adolescence, and adulthood including elderly. The most common nutritional concerns, their relationship to food choice and health status and strategies to enhance well-being at each stage of the lifecycle are emphasized. This course provides knowledge for real life and offers students a pathway into dietetics, consumer foods, and nutrition science careers with additional education at the post-secondary level.

20.41810 *Food Science*

Prerequisite: Food for Life

Food science integrates many branches of science and relies on the application of the rapid advances in technology to expand and improve the food supply. Students will evaluate the effects of processing, preparation, and storage on the quality, safety, wholesomeness, and nutritive value of foods. Building on information learned in Nutrition and Wellness and Chemistry, this course illustrates scientific principles in an applied context, exposing students to the wonders of the scientific world. Related careers will be explored.



Information Technology Career Cluster

PROGRAMMING PATHWAY

11.41500 *Introduction to Digital Technology* **Prerequisite:** NONE

IDT is the foundational course for Web & Digital Communications. This course is designed for high school students to understand, communicate and adapt to a digital world as it impacts their personal life, society and the business world. Exposure to foundational knowledge in hardware, software, programming, web design, IT support and networks are all taught in a computer lab with hands-on activities and project-focused tasks. Students will not only understand the concepts, but apply their knowledge in this course. Employability skills are integrated into activities, tasks and projects throughout the course standards to demonstrate the skills required by business and industry. Competencies in the co-curricular student organization, Future Business Leaders of America (FBLA), are integral components of both the employability skills standards and the content standards for this course.

11.47100 *Computer Science Principles* **Prerequisite:** Introduction to Digital Technology

Computer Science (CS) Principles is an intellectually rich and engaging course that is focused on building a solid understanding and foundation in computer science. This course emphasizes the content, practices, thinking and skills central to the discipline of computer science. Through both its content and pedagogy, this course aims to appeal to a broad audience. The focus of this course will fall into these computational thinking practices: connecting computing, developing computational artifacts, abstracting, analyzing problems and artifacts, communicating, and collaborating. Various forms of technologies will be used to expose students to resources and application of computer science. Professional communication skills and practices, problem-solving, ethical and legal issues, and the impact of effective presentation skills are enhanced in this course to prepare students to be college and career ready. Employability skills are integrated into activities, tasks, and projects throughout the course standards to demonstrate the skills required by business and industry.

11.47200 *Programming, Games, Apps and Society* **Prerequisite:** Computer Science Principles

This course is designed for high school students to strategize, design, and develop games and mobile and desktop applications that can be produced in the real world. Students will learn about life-cycles of project development and use models to develop applications. Attention will be placed on how user interfaces affect the usability and effectiveness of a game or an application. Programming constructs will be employed which will allow students' applications to interact with "real world," stimuli. The course exposes students to privacy, legality, and security considerations with regards to the software industry. Various forms of technologies will be used to expose students to resources, software, and applications of programming. Professional communication skills and practices, problem-solving, ethical and legal issues, and the impact of effective presentation skills are enhanced in this course to prepare students to be college and career ready. Employability skills are integrated into activities, tasks, and projects throughout the course standards to demonstrate the skills required by business and industry. Competencies in the co-curricular student organization, Future Business Leaders of America (FBLA), are integral components of the employability skills standard for this course.



Marketing Career Cluster

MARKETING COMMUNICATIONS AND PROMOTIONS PATHWAY

08.47400 *Marketing Principles* **Prerequisite:** NONE

This is the foundational course for all marketing pathways. It addresses all the ways in which marketing satisfies consumer and business needs and wants for products and services. Students develop a basic understanding of Employability, Foundational and Business Administration skills, Economics, Entrepreneurship, Financial Analysis, Human Resources Management, Information Management, Marketing, Operations, Professional Development, Strategic Management, and Global Marketing strategies. Instructional projects with real business, work-based learning activities including school-based Enterprises, and DECA application experiences should be incorporated in this course.

08.45100 *Promotion and Professional Sales* **Prerequisite:** Marketing Principles

Promotion and Professional Sales is the second course in the Marketing Communications and Promotions pathway. This course focuses on the performance of key responsibilities required in a retail environment. Students develop skills in pricing, visual merchandising, advertising, special promotions, professional sales, and customer service. In order to increase the number of application experiences, students should participate in (1) Work-Based Learning (WBL) activities in the classroom and perhaps in a formal WBL Program; (2) DECA Career and Technical Student Organization competitive events that are directly aligned with course standards and (3) a School-Based Enterprise.

08.45200 **Marketing Communication Essentials**

Prerequisite: Promotion and Professional Sales

Marketing Communications Essentials is the third course in the Marketing Communications and Promotion Career Pathway. This course focuses on the communication aspects of the business in relation to customer/consumer relationships. Students develop knowledge and skills in advertising, direct marketing, public relations, sales promotions, and digital marketing communications. Students learn how communications affects budget considerations, marketing information decision-making and all future business opportunities. In order to increase the number of application experiences, students should participate in (1) Work-Based Learning (WBL) activities in the classroom and perhaps in a formal WBL Program; (2) DECA competitive events that are directly aligned with course standards and (3) a School-Based Enterprise. The prerequisite for this course is Promotion and Professional Sales.



Science, Technology, Engineering, and Mathematics Career Cluster

ENGINEERING AND TECHNOLOGY PATHWAY

21.42500 **Foundations of Engineering and Technology**

Prerequisite: NONE

The Foundations of Engineering and Technology is the introductory course for the Engineering and Technology Education pathways. This STEM driven course provides the students with an overview of engineering and technology including the different methods used in the engineering design process developing fundamental technology and engineering literacy. Students will demonstrate the skills and knowledge they have learned through various project based activities while using an engineering design process to successfully master the "E" in STEM.

21.47100 **Engineering Concepts**

Prerequisite: Foundations of Engineering and Technology

Engineering Concepts is the second course in the Engineering and Technology Pathway. Students will learn to design technical solutions to engineering problems using a whole systems approach to engineering design. Students will demonstrate the application of mathematical tools, teamwork, and communications skills in solving various design challenges, while maintaining a safe work environment.

21.47200 **Engineering Applications**

Prerequisite: Engineering Concepts

Engineering Applications is the third course in the Engineering and Technology Pathway. Students will apply their knowledge of Science, Technology, Engineering, and Math (STEM) to develop solutions to technological problems. Solutions will be developed using a combination of engineering software and prototype production processes. Students will use market research, cost benefit analysis, and an understanding of the design cycle to create and present design, marketing, and business plans for their solutions. A capstone project will allow students to demonstrate their depth of knowledge of the engineering design process and prepare them for future opportunities in the field of engineering.

ENGINEERING DUAL ENROLLMENT OPTION

Third-year Engineering students can take Engineering Applications as a Dual Enrollment course and earn a TCC in Engineering Technology Essentials (ETE1).

Courses Include: *ENGT 1000, ENGT 2500, and either AUMF 1150, CIST 1305, DFTG 1101, DFTG 2010, or MATH 1113*

CAREER AND TECHNICAL EDUCATION ELECTIVES

- **Work-Based Learning** – grades 11 and 12 – see **Work-Based Learning Coordinator to apply.**

Work based learning students have the opportunity to see how skills they are learning in their selected pathway are applied by professionals working in their field of interest and develop their own career-related skills as they become active participants in a business or industry setting. Work-based learning activities are designed for enrichment and application of in-school student learning and are, therefore, not included in the career pathway course sequence.

- **Youth Apprenticeship Program** (*Electrician, Aircraft Structural, etc.*) – grades 11 and 12 – see **Work-Based Learning Coordinator to apply.**

Youth Apprenticeship offers juniors and seniors school-based and work-based learning opportunities that are related to the students' career interest area. Students earn while they learn by working in their career interest area with a mentor during their fourth block class period.