

# ATC COURSE DESCRIPTIONS

## The Applied Technology Center (ATC)

The Applied Technology Center offers a variety of career and technical education (CTE) high school courses, designed specifically to prepare students for success in college, technical/specialty school, or the workforce. ATC courses provide Rock Hill School District students the opportunity to use academic skills in a project-based, hands-on learning environment while utilizing work place skills.

- Students who successfully complete the required number of courses in a program may earn a Certificate of CTE Completion as a Rock Hill School District and/or SC State CTE Completer.
- Students may qualify to participate in a work-based Cooperative Learning education experience including youth apprenticeships.
- The Computer Literacy graduation requirements may be satisfied by taking designated ATC courses.
- Students may earn industry certification or licensure aligned with their related industry area.
- It is recommended that students complete entry level courses with a grade of 75 or higher in order to advance to upper level courses in that program.
- Students with excessive absences may be dropped from their CTE program of study.

**\*\*Students who need assistance with any course fees should contact a counselor or administrator.**

## HUMAN SERVICES

### Cosmetology

This two-year program includes academic instruction and classwork with exams prior to lab instruction in hair cutting, scalp care, braiding, wigs, hair removal, hair styling, chemical texture services, hair coloring, facials, facial makeup, manicures, pedicures, nail tips, gels, and acrylic nails. Students gain experience through laboratory activities, hear presentations from professionals in the Cosmetology industry, and work in a salon setting, simulating a real work place experience. As students gain experience and skills they have the opportunity to work on clients. Students need four blocks in their schedule during their junior and senior year for a total of eight.

• **Cosmetology 1 and 2 (Grade 11 only)**

615000CD, 615100CD

**PREREQUISITE: Chemistry strongly recommended.**

*This is a 2-block, year-long course.* This yearlong, double blocked course has a limited class size of 20 per SC State Board of Cosmetology. Due to limited enrollment, students may be placed on a waiting list. A valid government issued picture ID and social security card are required on enrollment form by the SC Department of Labor, Licensing, and Regulation.

• **Cosmetology 3 and 4 (Grade 1 only)**

615200CD, 615300CD

**PREREQUISITES: Cosmetology 1 and 2 with a recommended 75 or higher.**

*This is 2-block, year-long course.* The size of class is limited to 20 per SC State Board of Cosmetology. Due to limited enrollment, students may be placed on a waiting list. A valid government-issued picture ID and social security card are required on enrollment form by the SC Department of Labor, Licensing, and Regulation. Students that successfully complete the required number of hours and pass their practical and theory examinations with a passing score or of 75 or higher will be licensed by the South Carolina State Board of Cosmetology upon competition of the program.

## HOSPITALITY AND TOURISM

• **Culinary Arts Management 1 (Grades 10-11)**

572000CW

**PREQUISITE: Foods and Nutrition 1 with a recommended 75 or higher or Sports Nutrition 1 with a recommended 75 or higher is strongly recommended.**

Culinary Arts 1 is a required course for the Culinary Arts completer program. Students taking Culinary Arts 1 apply the knowledge gained from the basic foods and nutrition/sports nutrition course and advance into an in-depth study of the professional food industry. This course emphasizes skills in the following areas: cuisines, culinary basics, culinary mathematics, dining room operations, food production techniques, food service management, menus nutrition, professionalism, recipes, safety and sanitation, and sustainability. Employment opportunities and qualifications are explored as well as industry certifications. National Certification Examinations: ProStart 1 Examination and ServSafe Food Handler. *Courses included in this SC State Completer Program include: Foods and Nutrition 1 or Sports Nutrition 1 and both Culinary Arts 1 and Culinary Arts 2.*

• **Culinary Management Arts 2 (Grades 11 or 12)**

572100CD

**PREQUISITE: Culinary Arts 1 with a recommended 75 or higher and ProStart 1 Certification.**

*This is a 2-block, one-semester course. Culinary Arts 1 and 2 may not be taken in the same school year.*

Culinary Arts 2 is a required course for the Culinary Arts completer program. This course applies and expands upon the skills learned in Culinary Arts 1. Students will gain valuable experiences in the following: cuisines, culinary basics, culinary mathematics, dining room operations, food production techniques, food service management, menus, nutrition, professionalism, recipes, safety and sanitation, and sustainability. Students are strongly encouraged to achieve appropriate workplace certification. Students follow the ProStart curriculum and will take the national certification examinations as described in the description. National Certification Examinations: ProStart 2 and ServSafe Manager. Students are highly encouraged to participate in the ProStart Program to its fullest obtaining a job in the industry. Scholarships may be offered to the major culinary schools by way of studying this curriculum.

## EDUCATION AND TRAINING

### • Introduction to Teaching 1

570300CW

Introduction to Teaching 1 is designed to prepare students for careers in the education field. This course will examine careers in early childhood, elementary, secondary, and postsecondary education. Students learn the foundations of education, human growth and development, brain development, teaching strategies, classroom management, and instructional planning and assessment. Technology, professionalism, and academic skills are integrated throughout the course work. There is also an extended learning experience where the student will go into schools and work with a mentor teacher. Professional dress attire is required. Students must earn a 75 or higher in this course as a prerequisite for higher level courses.

### • Introduction to Teaching 2

570400CW

**PREREQUISITE: Introduction to Teaching 1 with a recommended 75 or higher.**

Introduction to Teaching 2 is an advanced level course that builds on skills developed in Introduction to Teaching Level 1. Students develop a higher level of proficiency through authentic learning experiences. Students plan engaging lessons, enhance communication and presentation skills, explore school-societal relationships, and exhibit professionalism. Technology is integrated throughout the course work. Participation in student organizations (EdRising) Educators Rising and (FCCLA) Family, Careers, Community, Leaders of America greatly enhance the learning experience.

### • Introduction to Teaching 3

570401CW

**PREREQUISITE: Introduction to Teaching 2 with a recommended 75 or higher.**

In Introduction to Teaching 3, students will engage in extended learning opportunities for professional experiences in education. Students will demonstrate integration of curriculum and instruction to meet children's developmental needs and interests in an internship at a local Rock Hill school under the supervision of the ATC teacher and a mentor teacher. The student will be responsible for their own transportation and professional attire. Students will complete portfolios as an assessment of their experiences.

## HEALTH SCIENCE

### • Health Science 1

555000CW

**PREREQUISITE: English 1 and Algebra 1 with Biology 1 as a pre- or co-requisite.**

*Health Science 1 and 2 plus one additional select course are required for students to be a CATE completer.*

Health Science 1 is the first of four courses offered to students interested in pursuing a career in the healthcare field. During this course students are introduced to healthcare history, careers, law and ethics, cultural diversity, health care language and math, infection control, professionalism, communication, basics of the organization of healthcare facilities, and types of healthcare insurance. Students will learn first-aid procedures and learn fire safety. The skills and knowledge that students learn in Health Science 1 serve to prepare them for future clinical experiences such as job shadowing or internships as they advance in the Health Science courses. **A pre-requisite grade of 75 or above is required in Health Science 1 in order to enroll in Health Science 2 per SC state requirement. This course is also available at SC Virtual School for students with scheduling conflicts.**

### • Health Science 2

555101CW

**PREREQUISITE: Health Science 1 with a recommended 75 or higher.**

*Health Science 1 and 2 plus one additional select course are required for students to be a CATE completer.*

Health Science 2 applies the knowledge and skills that were learned in Health Science 1 while further challenging the students to learn more about the healthcare field. This course will introduce students to basic patient care skills. Medical terminology, medical math and pharmacology are incorporated throughout the lessons being taught. Students may earn certifications in First Aid and CPR in this course. Job shadowing opportunities may be available in this course.

• **Health Science 3 - Human Structure and Function**

**555201HW**

**PREREQUISITE:** Health Science 1 with a recommended 75 or higher.

Health Science 3 acquaints students with basic anatomy and physiology of the body. Students learn how the human body is structured and the function of 12 body systems. Students will study the relationship that body systems have with disease from the healthcare point of view. This class is recommended for juniors or seniors. *This course is also available at SC Virtual School for students with scheduling conflicts.*

• **Health Science Clinical Study (Grade 12 only)**

**854000EW, 854100EH**

**PREREQUISITES:** Health Science 2 with an 80 or higher and at least one of the following courses: Health Science 3 with an 80 or higher or Medical Terminology with an 80 or higher. Students must meet York Technical College admission requirements.

*This is a 2-block, one semester course, 1.5 high school credits and 6 hours of dual credit through York Technical College including AHS 117 (4 credit hours) and AHS 120 (2 credit hours). Fees may be associated with this course for uniforms, tuberculin skin tests, and SLED report. Students must also furnish their own transportation to and from the clinical and internship sites.*

This course develops students' technical skills to provide health care in a variety of settings. Student may earn Feeding Assistant Certification and prepare to take the South Carolina Nurse Aide certification exam. Skills include vital signs, activities of daily living, transfers, personal hygiene, nutrition, and safety. Infection Control and HIPAA principles will also be an integral part of the course. A clinical internship with a minimum of 40 hours in a long term care facility is included in this 2 block course. Students will be required to meet academic, behavior and attendance standards and submit a parent/guardian permission form to participate in the internship. Clinical times will vary according to the facility need. CPR and First Aid certification will be offered.

• **Emergency Medical Services (Grades 11-12)**

**553100HW**

**PREREQUISITES:** Students must have completed Health Science 2 with an 80 or higher plus one of the following courses: Health Science 3 with an 80 or higher or Medical Terminology with an 80 or higher.

This course includes development of technical skills used during emergencies. Students will apply the concepts of safety and infection control, medical terminology, disaster preparedness and prevention of injury. Students will focus on vital signs, CPR, First Aid, Automated External Defibrillation, and First Responder skills.

• **Medical Terminology (Grades 11-12)**

**554000HW**

**PREREQUISITES:** Health Science 2 with an 80 or higher.

This course is highly recommended for students who are considering a career in the healthcare industry. Medical terminology is designed to develop a working knowledge of the language of health professions. Students acquire word-building skills by learning prefixes, suffixes, roots, combining forms, and abbreviations. Utilizing a body systems approach, students will define, interpret, and pronounce medical terms relating to structure and function, pathology, diagnosis, clinical procedures, and pharmacology. Students will use problem-solving techniques to assist in developing an understanding of course concepts.

• **Veterinary Assisting**

**697000HW**

**PREREQUISITES:** Health Science 2 with a recommended 75 or higher and Medical Terminology with a recommended 75 or higher.

*Supply fee is required.* This course will help the student to develop the skills required to work in a veterinary office or office. Skills include feeding and bathing animals, administering medication and assisting the veterinary team with medical care and treatment techniques. Students learn how to perform basic care and treatment procedures for small and large animal care. Students practice in a variety of settings as chosen by the instructor.

## ARTS, AUDIO-VIDEO TECHNOLOGY, AND COMMUNICATIONS

### • **Digital Art and Design 1: Foundation of Design and Animation (Grades 9-10)** **612000CW**

This course prepares students to use artistic and technological foundations to design and create animations. The basic design principles of digital arts and animation are taught, including image creation, character development and story conception through production. Students learn the technical language used in the digital art and animation industry along with basic design and animation methods. They will also learn techniques about various ways to plan, create, design and prepare for animation in pre-production, production and post-production. This course prepares students for the Adobe Certified Associate for Flash/Animate CC certification exam.

### • **Digital Art and Design 2: Advanced Animation and Motion Graphics (Grades 10-12)** **612100CW** **PREREQUISITE: Digital Art and Design 1 with a recommended 75 or higher.**

This course enhances the skills needed by students for careers in the commercial art and animation fields. The concepts and skills covered include storyboarding, character design, set design, audio recording and visual editing. Students learn the technical language used in the animation industry and basic animation methods. The curriculum includes basic 2D animations, 3D, motion graphics and special effects. The tools used in this class include cameras, lights, green screens, Adobe Photoshop, Adobe Premiere, Garage Band and Adobe After Effects.

### • **Digital Art and Design 3: Graphic Design and Illustration (Grades 11-12)** **612200CW/952800EW** **PREREQUISITE: Digital Art and Design 1 and 2 with a recommended 75 or higher. Student must meet York Tech admission requirements.**

Dual Credit Course: ARV110 – Computer Graphics 1 (3 credit hours)

This dual credit course studies the fundamentals of computer assisted graphic design and introduces students to the computer as an instrument to create page layout, vector art, and digital design. Industry standard software is taught and will focus on vector art using Bezier curves. Students will learn the functions of the computer and how to troubleshoot technology. Students learn the technical language used in the graphic illustration industry and basic design methods. Current software featured is: Adobe Illustrator CS6. Concepts learned are a great foundation for anyone pursuing a career in the print industry, for production artists, illustrators, animators, and graphic designers. Students must earn a B or higher in this course as a prerequisite to move on to the next level course.

### • **Digital Art and Design 4: Digital Photography (Grades 11-12)** **612300CW/453900EW** **PREREQUISITE: Digital Art and Design 1, 2 and 3 with a recommended 80 or higher. Student must meet York Tech admission requirements.**

Dual Credit Course: ARV212 - Digital Photography (3 credit hours)

This dual credit is a study of the principles, terminology, techniques, tools and materials of basic digital photography. This course is part of the Digital Art and Design Program, which introduces the skills needed by students for careers in the commercial art fields. Whether working freelance or for a large company, the modern commercial artist is expected to have skills that cover many fields. Photography and Digital Art are the focus of this class, with students learning how to capture images using different photographic methods, including digital SLR cameras, scanners, and film. Students will use the images they capture, learning how to process and incorporate them into projects that communicate an effective message. Students learn the technical language used in the digital photography industry and basic design methods. The core concepts of this class give students an introduction to a career in photography, advertising, digital art, retouching and restoration.

### • **Media Technology 1** **612401CW** *(Formerly Video Production-Media Technology)*

This behind the scenes introduction to video production course facilitates the technical applications of professional video production. Students will master all production activities including: scriptwriting, camera set-up, lighting, audio recording set up and editing methods. Students will learn and work with high-end production software programs such as; Adobe Premiere Pro, Adobe After Effects, Logic Pro, Garageband, etc. Students must

be able and willing to carry heavy field production equipment and record scenes outside regardless of the weather. This course is geared for the technically savvy student interested in exploring the many exciting careers in Television and Film Production.

• **Media Technology 2**

**612502CW**

*(Formerly Television Production-Media Technology)*

This behind the scenes television production-media technology course facilitates the technical applications of live television production. This course is geared for the motivated, disciplined student that can professionally interact with show guests including: School district office staff and local dignitaries. Students will master all the jobs in the studio including: directing, studio camera operation, floor directing, lighting techniques, graphics creation, audio mixing, set design and post-production editing. Students will continue to develop their postproduction skills by using Adobe Premiere and After Effects. Students must be able and willing to carry heavy set pieces off and on the set for the variety of shows taped during the semester. Students who are skilled in using technology and interested in LIVE television will find this an exciting class, challenging and gratifying class.

• **Media Technology 3**

**612603CW**

*(Formerly Advanced Video Editing – Media Technology)*

**PREREQUISITE: Media Technology 2 with a recommended 75 or higher.**

This advanced video editing-media technology class is geared towards the serious, self-motivated student that wants to take their video editing skills to the next level. Students in this class will master all the features of Adobe Premiere Pro and will incorporate other Adobe suite applications into their workflow. Throughout the semester, advanced editing students will work on projects ranging from professional style social media videos to documentary style videos for their home schools, the school district and the Rock Hill community. Students must be able and willing to shoot video outside of school hours, carry heavy field production equipment and record scenes outside regardless of the weather.

## ARCHITECTURE AND CONSTRUCTION

• **Introduction to Construction**

**600109CW**

Is a career in the construction trades for you? This course includes an overview of safety, an orientation to the construction trades, construction math concepts, communication skills, employability skills, and an introduction to hand tools, power tools, and blue prints. Students complete hands-on tasks as they work with tools and complete assignments from a text book or online. Students will get a brief overview of carpentry, masonry, electricity, and plumbing. Students will develop a concept of teamwork, problem solving, and utilization and conservation of resources. Subject matter will include career choices and application of concepts related to becoming a professional in the construction field.

• **Carpentry 1/Construction Engineering**

**609101CW**

*(Formerly Construction Engineering 2)*

Carpentry 1/Construction Engineering prepares students to successfully work in the carpentry field by the students gaining the basic skills needed in the trade, such as: reading blueprints, using hand and power tools, and selecting building materials. Students complete hands-on tasks as they work with tools and complete assignments from a text book or online. Techniques to construct floor systems, wall frames, basic roof framing, and roofing materials are covered. This course will also include career exploration, good work habits, and employability skills. Students will have an opportunity to complete a 10-hour OSHA safety program and earn a safety credential if successfully completed. Students will work on various projects for the classroom and other programs at the school, build storage units and other items. Students should be able to climb and work at heights. Carpentry 1/Construction Engineering is a semester course.

• **Carpentry 2 and 3/Advanced Construction Engineering**

**609200CW/609300HW**

*(Carpentry 2 formerly Construction Engineering 3)*

**PREREQUISITE: Carpentry 1/Construction Engineering with a recommended 75 or higher.**

Carpentry 2 and 3 are paired courses (2-blocks, one semester). Students review subjects covered in Carpentry 1/Construction Engineering, and learn more advanced practices of floor, wall, and roof framing.

Units on estimating materials, framing with light-gauge steel, ceiling construction, laying out building lines, roof structures, stair construction, drywall installation, installing doors and windows, interior trim and exterior finishing are also covered. Students will have an opportunity to earn an industry recognized credential sponsored through the National Home Builder's Association (NAHB) if successfully completed. Students will also develop employability skills by creating a portfolio that contains a cover letter, resume, and a letter of recommendation. The student will also participate in mock interviews to help prepare them for job placement.

• **Mechanical Design 1**

**617200CW**

*(Formerly Drafting 1)*

**PREREQUISITE: Algebra 1 strongly recommended.**

Mechanical Design 1 provides the student with an understanding of basic drafting concepts such as single ANSI drafting standards, alphabet of lines and views of objects. Students will use AutoCAD and Inventor Software to construct 2D and 3D drawings. Students will draft Single-view drawings, Geometric construction Drawings and Orthographic projections using industry standard software.

• **Mechanical Design 2**

**617300CW**

*(Formerly Drafting 2)*

**PREREQUISITE: Mechanical Design 1 with a recommended 75 or higher.**

Mechanical Design 2 will focus on the understanding of the standard engineering views used throughout the engineering profession. This course utilizes AutoCAD 2D design software as well as 3D Inventor Modeling software to help the student understand single view drawings, descriptive geometry, orthographic projection, section views, auxiliary views, pictorial drawings, threads, working drawings and gears.

• **Architectural Design 1**

**617000HW**

*(Formerly Drafting 3)*

**PREREQUISITES: Mechanical Design 1 and 2 with a recommended 75 or higher.**

Architectural Design 1 will focus on the fundamentals of civil engineering and architectural drafting. The students will utilize AutoCAD 2D design software and Revit Architectural software to design and create house plan sets that include floor plans, elevations, furniture plans, wall sections, foundation plan and details. The student will also generate 3D renderings of the house design, interiors, and landscape design. Students will also be exposed to survey coordinates and plot plan layouts used in placing their house design on a lot of land.

**Electricity**

Comprehensive courses provide a survey of the theory, terminology, equipment, and practical experience in the skills needed for careers in the electrical field. These courses typically include AC and DC circuitry, safety, and the National Electrical Code and may cover such skills as those involved in building circuits; wiring residential, commercial, and/or industrial buildings; installing lighting, power circuits, and cables; and estimating job costs. As students progress, their projects become more complex and expansive. In these courses, safety is stressed, and a career exploration component may be offered.

• **Electricity 1**

**628701CW**

*(Formerly Electricity 2)*

**PREREQUISITE: Introduction to Construction with a recommended 75 or higher.**

Level 1 students learn the basics of the electrical trade. The most important subject of this course is safety. We will cover safety with tools and on the jobsite, as well as how to correctly use personal protective equipment (PPE). Along with safety, employability skills are an area of study that is vital to students getting and maintaining employment. We will cover what it takes to be successful in the electrical industry. Students are introduced to

tools, materials, equipment, the National Electric Code (NEC), wiring diagrams, blueprints, and the basics of electrical theory.

• **Electricity 2 and 3**

**628800CW, 628900HW**

*(Formerly Electricity 3)*

**PREREQUISITE: For Electricity 2, Electricity 1 with a recommended 75 or higher. For Electricity 3, Electricity 2 with a recommended 75 or higher.**

Level 2 and 3 build on the skills from Level 1. Safety remains our #1 priority. PPE use is continued. Employability moves past soft skills to resume' building and mock interviews. Professionals from the electrical trade are invited in to share their knowledge with students as guest speakers. Students learn to navigate as well as interpret the National Electric Code. Residential mock wiring continues with an emphasis on specialty circuits and service entrance equipment. Students also learn the aspects of "Old Work" by cutting boxes and fishing wires in finished drywall. Level 2/3 also includes mock commercial wiring using Metallic Cable (MC) and electrical metallic tubing (EMT). Students are taught the use of various meters for installation and trouble shooting. Upon completion students wishing to enter the electrical field are given assistance with job placement.

• **Welding Technology 1 and 2 (Grades 10-12)**

**634000CW, 634100CW**

*(Formerly Welding Technology 1)*

**Prerequisite for Welding 2: Welding 1 with a recommended 75 or higher.**

*Welding 1 and Welding 2 are paired-as a year-long class or 2-block one semester course.*

*Dress code: Student required to wear all protective clothing and safety attire including: leather boot/work shoes, long-sleeve denim shirt, jeans or coveralls, welding shields and safety glasses. Students may choose to purchase their own personal welding shield.*

The Welding 1 and 2 courses cover welding trade theory with a strong emphasis on safety including cutting torch safety, tool usage, equipment set-up and standard terms and definitions. Basic welding and cutting techniques will be taught. In the lab, students observe demonstrations and obtain experience in both gas and arc welding through practice exercises. Instruction topics include: SMAW Welding, Industry GMAW Welding (MIG), Blueprint Reading, Planning and Estimation. Students will also begin learning basic metal fabrication skills using various metal working equipment. Equipment such as plate rolls, hydraulic press brake, and structural rolls. Metal identification shapes and sizes will also be taught.

• **Welding Technology 3 and 4 (Grades 11-12)**

**6351000CW, 635200CW**

*(Formerly Welding Technology 2)*

Dual credit as WLD 111 and WLD 113 through York Technical College.

**PREREQUISITE: Welding 1 and 2 with a recommended 75 or higher. Student must meet York Tech admission requirements.**

*Welding 3 and 4 are paired as a 2-block one semester course. Same dress code as listed for Welding 1 and 2.*

Welding 3 and Welding 4 students enhance their skills in Stick, MIG and TIG welding on various types of steel. The concentration will be on position welds Flat, horizontal, vertical, and overhead. SMAW, GTAW, GMAW, and FCAW on bead building and joint welds. This course has an emphasis on accuracy of measurements, basic line and views on prints, as well as focusing on Math for Welders. Students will complete selected projects for fabrication and layouts with assembly and focus on advanced welding and cutting techniques. Students will concentrate on fillet and groove position welds and conforming to AWS welding codes. Students will learn to identify weld defects and determine weld sizes. They will increase their skill level in reading prints and identifying weld symbols. Students will complete individual and group projects. Intro to pipe welding, SMAW and GTAW, plasma cutting and plasma cutting safety.



## MARKETING AND FINANCE

### • Marketing (Grades 10-12)

542100CW

This course introduces marketing concepts, economic marketing, and business fundamentals. Students are provided an overview of the marketing functions of selling, promotion, pricing, financing, and distribution. Communication and oral presentation skills are mandatory. The marketing course is designed to prepare students for entry-level employment in areas related to planning and performing wholesale and retail services. Potential employment sites include businesses of all types, such as financial institutions, real estate, retail establishments, public relations, and sports and entertainment venues.

### • Business Finance (Grades 10-12)

527300CW

**PREREQUISITE:** Accounting 1 recommended.

This course is designed to provide students with an understanding of how corporations, organizations, and businesses handle money. Concepts include the management of money, accounting methodologies, investing strategies, and effective financial management.

### • Advertising (Grades 10-12)

547000CW

This course introduces the concepts of advertising, planning strategies, communication skills and professional development. Course content includes budget development, media selection, design and the preparation of ads for various media. Students are expected to participate in oral presentations.

### • Advertising and Digital Media Marketing (Grades 10-12)

542200CW

**PREREQUISITE:** Marketing with a recommended 75 or higher.

This course examines all aspects of advertising and digital media marketing. Students will creatively plan, design, and develop an advertising campaign for a product or service using real-world applications and considerations. Students will integrate technology commonly used in the advertising industry.

### • Marketing Management (Grades 10-12)

543100HW

**PREREQUISITE:** Marketing with a recommended 75 or higher.

This course further prepares students for careers in financial institutions, real estate, retail establishments and sports and entertainment venues. It expands the student's knowledge to make more detailed and specific decisions concerning location, promotion, pricing, financing and distribution. Each student selects a type of business and develops a business plan to include financing, organization, management and marketing. Students develop fundamental business competencies including human resources, communications, selling, promotion, and financing.

## TRANSPORTATION, DISTRIBUTION, AND LOGISTICS

### Automotive Service Technology

This is a three-level program that studies the industry, maintenance and repair of automobiles. This is a progressive program with each consecutive level building on the information and skills learned in the previous levels. Areas of study include, but are not limited to: brakes, steering and suspension, electrical systems, engine performance, manual and automatic transmissions, HVAC and engine repair. **All** potential Automotive Service Technology students along with a parent or legal guardian are required to attend an individual conference and pre-course orientation with the instructor prior to full enrollment into the program. Additionally, a supply fee is required to allow students to have individualized lab appropriate work shirts, gloves and certified safety glasses. The Automotive Technology program is designed to prepare the student for entry-level position in the automotive industry or for greater success in a post-secondary automotive training school. The curriculum used in this program has a heavy emphasis on computer usage and is very technical and challenging. Students must

work well independently in order to utilize the online curriculum which includes a significant amount of rigorous reading, writing, math and science content.

• **Automotive Service Technology 1**

**603000CW**

**PREREQUISITE:** Algebra 1 and English 1.

This class requires completion of a safety unit in addition to the regular course work. Safety module **MUST** be completed successfully prior to the students gaining access to the Lab facilities. Extensive on-line course work is used through-out **ALL** levels of this program. Automotive service, tools and equipment, steering and suspension and basic electrical taught in Level 1. Class structure is set up so that the classroom/lab time ratio is 70%/30% with a heavy emphasis on theory and understanding prior to application. All lab work is done on Trainers, NOT live work.

• **Automotive Service Technology 2**

**603100CW**

**PREREQUISITE for:** Automotive Service Technology 1 with a recommended 75 or higher.

This class requires a safety unit be completed in addition to the regular course work. Safety module **MUST** be completed successfully prior to the students gaining access to the Lab facilities. Extensive on-line course work is used through-out **ALL** levels of this program. HVAC, diesel engines, brakes, automatic/manual transmissions and drivetrains, and starting and charging systems are all taught in level 2. Class structure is set up so that the classroom/lab time ratio is 60%/40% with a heavy emphasis on theory and understanding prior to application. All lab work is done on Trainers and some live work.

• **Automotive Service Technology 3 and 4**

**603200CW, 603300HW**

*(Formerly Automotive Service Technology 3)*

**PREREQUISITE:** Automotive Service Technology 2 with a recommended 75 or higher.

Automotive Service Technology 3 and 4 are paired as a two block, one semester class. This class requires a safety unit be completed in addition to the regular course work. Safety module **MUST** be completed successfully prior to the students gaining access to the lab facilities. Extensive on-line course work is used through-out **ALL** levels of this program. Engine repair, engine performance, electrical/computer control systems, and hybrid/alternative fuels are taught in level 3 and 4. Class structure is set up so that the classroom/lab time ratio is 50/50 with a heavy emphasis on theory and understanding prior to application. Lab work is conducted on Trainers and live work.

**Automotive Collision Repair Technology**

This course of study prepares students for employment in the collision repair industry. Students who successfully complete this rigorous program are prepared to continue their education in a post-secondary setting or may enter the workforce in collision repair and refinish related jobs.

• **Automotive Collision Repair Technology 1**

**602000CW**

**PREREQUISITE:** Algebra 1 and English 1.

In Automotive Collision Repair Tech 1, students will have classroom instruction that includes I-CAR and SP2 computer modules in safety, automobile parts identification, repair methods, chemical safety, tool usage, automotive refinishing and other topics. The curriculum used in this program has a heavy emphasis on computer usage and is very technical and challenging ~~rigorous~~. Students must work well independently and use their time wisely to complete the required computer modules. Completion of the assigned I-CAR and SP2 computer courses are mandatory for shop/lab admittance. Certifications, which are nationally and internationally recognized are available. Some students prefer to purchase an organic vapor respirator and compressed air blow nozzle for personal use in the class, which total approximately \$25.00. These expenses are optional, and students can take the class without the personal equipment. Appropriate dress is a must for the class; work clothes, closed toes shoes, and safety glasses are required.

• **Automotive Collision Repair Technology 2**

**602100CW**

**PREREQUISITE:** Automotive Collision Repair Tech 1 with a recommended 75 or higher.

Students continue instruction including computer modules in I-CAR and SP2. The curriculum used in this program has a heavy emphasis on computer usage and is very technical and rigorous. Students must work well

independently and use their time wisely to complete the required computer modules. Completion of the assigned I-CAR and SP2 computer courses are mandatory for shop/lab admittance. Classroom and lab activities include lecture, research, writing assignments, and hands-on experience involving tools, equipment, and a variety of vehicles. Training includes non-structural repair, panel replacement, plastic filler work, and collision repair welding. Students work in a state of the art facility. Students can earn certificates for completed I-CAR and SP2 modules. Appropriate dress is a must for the class; work clothes, closed toes shoes and safety glasses are required.

• **Automotive Collision Repair Technology 3 and 4**

**602200CW, 602300HW**

*(Formerly Collision Repair 3)*

**PREREQUISITE: Automotive Collision Repair Tech 2 with a recommended 75 or higher.**

*Auto Collision Repair 3 and 4 are paired as a 2 block, one semester course.*

Students continue instruction including computer modules in I-CAR, SP2, and Sherwin-Williams e-learning Classroom. The curriculum used in this program has a heavy emphasis on computer usage and is very technical and rigorous. Students must work well independently and use their time wisely to complete the required computer modules. Completion of the assigned I-CAR, SP2 and Sherwin-Williams elearning computer courses are mandatory for shop/lab admittance. Lab activities include lecture, research, writing assignments, and hands-on experience involving tools, equipment, and a variety of vehicles. Students work directly with customers, and assess vehicle damage, order parts and materials necessary for repairs, make repairs, and ensure customer satisfaction with the work. Students are responsible for the paperwork/computer records necessary for the repair process. Students can earn certificates for completed computer modules. Students who successfully complete Collision Repair 1, 2, 3, and 4 will complete a portfolio documenting their progress, and including any earned certificates. They will earn a certificate of completion from the Applied Technology Center upon successful completion of the Collision Repair program of study as a SC CTE (Career and Technical Education) Completer. Appropriate dress is a must for the class; work clothes, closed toes shoes and safety glasses are required.

• **Logistics and Distribution 1 - Introduction**

**699001CW**

This course is designed specifically for ninth and tenth grade students to provide them with essential knowledge, skills, and experiences related to career opportunities in warehouse, distribution, logistics, and transportation. Students will learn and work in authentic environments using industry standard equipment and procedures, as well as have opportunities to obtain information through field trips and guest speakers from the respective industries. Each of these industries has a significant presence in our area and is projected to continue their pattern of growth. Students must earn a 75 or higher in this course as a prerequisite for higher level courses.

• **Logistics and Distribution 2 - Warehouse Distribution**

**699102CW**

**PREREQUISITE: Logistics and Distribution 1 with a recommended 75 or higher.**

This course is designed to actively engage students in the processes of receiving, shipping, order-picking, inventory control, and the operation of numerous types of material handling equipment. Students will acquire information and skills that relate directly to potential career objectives in the warehouse and distribution industry. Successful completers of this course will have the opportunity to sit for either or both of the following nationally recognized industry certifications: (CLA) Certified Logistics Associate and/or (CLT) Certified Logistics Technician. Students will have an opportunity to complete a 10 hour OSHA safety program and earn a safety credential, if successfully completed. A small fee may be assessed for the credential.

• **Logistics and Distribution 3 - Warehouse Inventory**

**699203CW, 699203EW**

**PREREQUISITE: Logistics and Distribution 2 with a recommended 75 or higher.**

*This course may qualify as 3 dual credit hours with York Technical College as LOG 110/Intro to Logistics.*

This course is a basic overview of logistics management. Logistics involves the flow of goods and services involving such aspects as warehousing, materials handling, inventory control, and transportation from the raw material to the end user. Students will begin to explore management and supervisory level aspects of the warehousing industry, including staffing, quality control, resource management, problem solving, and group dynamics.

• **Logistics and Distribution 4 - Work-Based**

**699304CW**

**PREREQUISITES:** Logistics and Distribution 1, 2, and 3 with a recommended 75 or higher in all three courses.

The students in Materials Handling 4 will perform general equipment operations, execute the receipt of shipment of goods, and be expected to research and present a portfolio related to their experience in Warehousing and Logistics Technology. In addition, the student will study and relate to the impact of globalization on the supply chain process. Eligible students will have the opportunity for a Work-Based learning experience. This level is an **Internship** for students that have completed the three previous levels of the Warehousing and Logistics curriculum at the Applied Technology Center. An internship is a one-on-one relationship that provides “hands-on” learning in an area of student interest. A learning contract outlines the expectations of and responsibilities of both parties. The protégé works regularly during or after school for three or four hours a week in exchange for the mentor’s time in teaching and demonstrating. The internship generally lasts from three to six months and may or may not include financial compensation.

• **Power Equipment Technology 1**

**630000CW**

(Formerly Power Equipment 2)

**PREREQUISITE:** Algebra 1 and English 1.

*Levels 1 and 2 may not be scheduled in the same year as levels 3 and 4.*

This course introduces students to basic small engines at a basic level. Students will learn the basic operation of an engine. Students will also learn the main basic parts of an engine. Safety in the lab and industry will also be taught.

• **Power Equipment Technology 2**

**630100CW**

(Formerly Power Equipment 3)

**PREREQUISITE:** Power Equipment 1 with a recommended 75 or higher.

*Level 1 and 2 may not be scheduled in the same year as level 3 and 4.*

This course will cover both two and four cycle theory in the lab. Students will have more hands-on experience in this class small than level 1. Safety in the lab and industry along with safe tool usage will be taught. Students will receive training on both engines and equipment such as lawnmowers, tillers, chainsaws, trimmers and other outdoor equipment.

**Power Equipment Technology 3 and 4**

**630200CW, 630300HW**

**PREREQUISITE:** Power Equipment Technology 2 with a recommended 75 or higher.

*Power Equipment Technology 3 and 4 are paired as a year-long course. Level 1 and 2 may not be scheduled in the same year.*

This course will cover more complex equipment and engines in the lab. Students will work in groups on various projects during the year. Safety in the lab and industry along with safe tool usage will also be covered again. Students will receive training on both two and four-cycle engines and more training on chainsaw repairs. Overhead valve engines and training will be covered in more depth in this program. Students may be able to participate in cooperative learning or apprenticeships in this program.

## MANUFACTURING

• **Integrated Production Technologies 1: Advanced Technology for Design and Production** **622200CW**

This foundational course focuses on the use of modern technologies in the design and improvement of products. Students explore the following questions using project-based and problem-based scenarios: How do we reverse engineer and document a product and capture design decisions and physical characteristics? How can we design a manufacturing process to mass produce a new product? How can we design a working DC Motor Hobby Kit with accompanying instructional manual? How can we design a system to monitor the manufacturing process and quality of the product? How can we make sure the proper amount of liquid is placed in a container for safe storage or transportation? How can optical sensors and various machines sort goods on a manufacturing assembly

line? Students interact with professionals in the integrated production technologies field throughout the course, conducting interviews or participating in on-site and/or virtual field trips.

**• Integrated Production Technologies 2: Systems of Advanced Technology 622300CW**

**PREREQUISITE: IPT 1 with a recommended 75 or higher.**

In this course, students apply the technologies that are found in modern, clean production environments. Students study effective and energy efficient control of pumping, conveyors, piping, pneumatic and hydraulic control systems. Students apply total quality management to production design to assure quality. Students also focus on properties of materials and material testing, creating documentation to support designs, examining properties and justifying material selections based on properties. Students learn that old products become the new raw materials for new products.

**• Integrated Production Technologies 3: Mechatronic Systems for Advanced Production 622400CW**

**PREREQUISITE: IPT 2 with a recommended 75 or higher.**

Students will design cost-effective work cells incorporating automation and robotics to improve quality of final products. Students will focus on advanced production, will design and create mechatronic systems, and produce authentic documentation about their cyber-mechanical system using data to control and monitor processes.

**• Integrated Production Technologies 4: Design for the Production of Advanced Products 622500CW**

**PREREQUISITE: IPT3 with a recommended 75 or higher.**

Students will create plant designs to process and automatically assemble materials into new products. Students will use a prototype to create a production flow plan, analyze and evaluate all aspects of the design and production, and use data, quality control processes and Six Sigma methodology to control production.

## AGRICULTURE

Students must complete all four courses to be a South Carolina CTE Completer.

**• Agriculture Science and Technology (Grades 9-12) 562400CW**

This course will teach essential concepts and understanding related to plant and animal life including biotechnology, the conservation of natural resources, and the impact of agriculture and natural resource utilization on the environment. Emphasis is placed on the role of agriculture in our society and the importance of agriculture to the welfare of the world. Basic personal and community leadership and safety, and agricultural mechanical technology are included as a part of the instructional program. Each student is expected to design and participate in a supervised agricultural experience. Students in this program of study will be outside in the greenhouse and garden with exposure to the elements of weather and nature. Typical learning activities include classroom instruction and activities as well as hands-on learning experiences including performing basic principles of plant, soil, and animal science; studying and modeling the significance of humankind's interrelationship with soil, water, and air. Students are encouraged to join and participate in the Rock Hill Chapter of the FFA and the community garden.

**• Introduction to Horticulture (Grades 9-12) 565000CW**

The Introduction to Horticulture course is designed to be an introduction to the Horticulture pathway. It is recommended as a prerequisite for all other horticulture courses. This course includes organized subject matter and practical experiences related to the culture of plants used principally for ornamental or aesthetic purposes. Instruction emphasizes knowledge and understanding of the importance of establishing, maintaining, and managing ornamental horticulture enterprises. Typical instructional activities include hands-on experiences with propagating, growing, establishing, and maintaining nursery plants and greenhouse crops; tissue culture techniques; designing landscapes; preparing designs; sales analysis and management; participating in personal

and community leadership development activities; planning and implementing a relevant school-to-work transition experience; and participating in FFA activities.

• **Nursery, Greenhouse, and Garden Center Technology (Grades 11-12)**

**567200CW**

The course in Nursery, Greenhouse and Garden Center Technology includes organized subject matter and practical experiences related to the operation and management of nursery, greenhouse or a garden center. Instruction emphasizes knowledge and understanding of the importance of establishing, maintaining, and managing “green industry” enterprises. Typical instructional activities include hands-on experiences with propagating, growing, establishing, and maintaining nursery plants and greenhouse crops; tissue culture techniques; designing landscapes; preparing designs; sales analysis and management; participating in personal and community leadership development activities; planning and implementing a relevant school-to-work transition experience; and participating in FFA activities. Students will be outside in the greenhouse and headhouse and are expected to participate in all outside activities.

• **Landscape Technology (Grades 11-12)**

**567000CW**

The course in Landscape Technology is designed to qualify the student completing the course for job entry into landscaping fields or to continue advanced training in post high school education. A combination of subject matter and activities is designed to teach technical knowledge and skills for entry-level positions in selling, selecting, and servicing. Typical instructional activities include hands-on experiences with the planning and selection of materials for the construction of hardscapes, the mechanical practices associated with irrigation and water conservation, erosion control, participating in personal and community leadership development activities, planning and implementing a relevant supervised agricultural experience, and participating in FFA activities. The teacher may select additional competencies based on a local needs assessment. Additional consideration of skills from the Certified Landscape Technician program are recommended. Students taking this course will have the opportunity to operate various landscaping tools and power equipment. Students will be in the greenhouse, headhouse, community garden, and various parts of the school. Students will participate in a semester long project that includes landscaping and maintaining school landscapes. This is the last course offered in the horticulture pathway and should only be taken if you have taken all of the previous courses.






## **WORK BASED LEARNING OPPORTUNITIES**

• **WBL Internship**

**Agriculture 569000CW, Construction 669000CW, Arts and Audio 529000CW, Business 549000CW, Education 639000CW Health Science 559000CW, Hospitality 519000CW, Manufacturing 649000CW, Transportation 679000CW**

An Internship is a Work-Based Learning opportunity that allows the student to work in a real workplace environment. The internship experience allows students to develop and practice career-related knowledge and skills needed for a specific job. Internships may last a semester or a full school year and may be paid or non-paid. Placement in specific internships is at the discretion of the employer, teacher and the Work-Based Learning Coordinator. Students must have completed two additional CATE courses to qualify and must turn in all required paperwork. To earn credit for the course, students must satisfy the hour requirement, receive satisfactory evaluations from the employer and WBL Coordinator, and complete the final project requirement.

# CURRICULUM PLANNING FOR HIGH SCHOOL DIPLOMA

	<b>MS – 9th</b> 	<b>10<sup>th</sup></b> 	<b>11<sup>th</sup></b> 	<b>12<sup>th</sup></b> 	<b>Other</b>
<b>English</b> <b>(4 required)</b>					
<b>Mathematics</b> <b>(4 required)</b>					
<b>Science</b> <b>(3 required)</b>					
<b>Social Studies</b> <b>(3 required)</b>  <b>US History and Constitution (1)</b> <b>US Government (0.5)</b> <b>Economics (0.5)</b> <b>Other SS Elective (1)</b>					
<b>Physical Education</b> <b>(1 required)</b>  JRROTC or Marching Band may fulfill this credit.					
<b>Computer Science</b> <b>(1 required)</b>					
<b>World Language or Career and Technical Education (CATE)</b> <b>(1 required)</b>					

**2019-2020**

**This course catalog belongs to:**

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**Name**

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**School**

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**Contact Information**

**Class of 20\_\_\_\_\_**