Agriculture, Food, and Natural Resources Cluster

Program: Plant and Animal Systems (CIP Code 011101)
Courses: Agricultural Science & Technology
Equipment Operation and Maintenance or Soils and Soilless Research
Equine Science
Introduction to Veterinary Science
Agriculture, Food, and Natural Resources, Work-Based Credit (optional)

Program: Horticulture (CIP Code 010601)
Courses: Agricultural Science & Technology
Soils and Soilless Research
Equipment Operation and Maintenance
Sports Turf Management
Agriculture, Food, and Natural Resources, Work-Based Credit (optional)

Program: Environmental and Natural Resources Management (CIP Code 030101)
Courses: Agricultural Science & Technology
Soils and Soilless Research
Equipment Operation and Maintenance
Wildlife Management
Agriculture, Food, and Natural Resources, Work-Based Credit (optional)

Industry Certifications Available
Red Cross Animal First Aid and CPR (Introduction to Veterinary Science)
Hunter Safety, Boater Safety, First Aid and CPR (Wildlife Management)

Agricultural Science and Technology 562400CW
Maximum Enrollment: 25
Grade Level: 9, 10
Credit: 1 unit
Prerequisite: None; Required first course in all Agriculture Programs
The Agricultural Science and Technology course teaches 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 required to design and participate in a supervised agricultural experience.
Equine Science
Maximum Enrollment: 20
Grade Level: 10, 11, 12
Credit: 1 unit
Prerequisite: Agricultural Science and Technology
Equine Science teaches essential concepts and provides practical experience related to the care taking and production of horses. Instruction emphasizes knowledge and understanding of the importance of maintaining, selecting, and managing horses. Basic methods and safety techniques are included in this course. Typical instructional activities include hands-on experiences in saddling, bridling, grooming, and judging horses; feeding and health techniques; and housing design.

Equipment Operation and Maintenance
Maximum Enrollment: 20
Grade Level: 10, 11, 12
Credit: 1 unit
Prerequisite: Agricultural Science and Technology
Equipment Operation and Maintenance teaches students how to operate and maintain equipment commonly used in the agricultural industry. It includes equipment used in four of the Agriculture, Food and Natural Resources pathways: Horticulture, Plant and Animal Systems, Environmental and Natural Resources Management, and Agricultural Mechanics and Technology.

Introduction to Veterinary Science
Maximum Enrollment: 20
Grade Level: 11, 12
Credit: 1 unit
Prerequisite: Agricultural Science and Technology and Biology 1
In this advanced animal science course, students will explore the field of veterinary medicine. Students will study the role of a veterinarian and veterinary technician in the diagnosis and treatment of animal diseases. Topics to be discussed include: veterinary terminology, anatomy and physiology, pathology, genetics, handling and restraint, and physical examinations along with common surgical skills. Students will engage in a variety of laboratory activities and will participate in shadowing and/or other school-to-work experiences.

Soils and Soilless Research
Maximum Enrollment: 20
Grade Level: 10, 11, 12
Credit: 1 unit
Prerequisite: Agricultural Science and Technology
Soils and Soilless Research is designed to teach students the science involved in growing crops in both soil and soilless production systems. Students learn the importance of soil chemistry and composition as it relates to the growth of economically important crops. Students investigate common agricultural practices as well as alternative methods for growing crops to include hydroponic techniques. Students are also introduced to experimental research using the principles of experimental design.
Sports Turf Management

Maximum Enrollment: 20
Grade Level: 11, 12
Credit: 1 unit
Prerequisite: Agricultural Science and Technology

The Sports Turf Management course is designed to teach technical knowledge and skills for entry-level positions in the Sports Turf Management career field. The principles and practices involved in establishing, managing, and maintaining grassed areas for recreational purposes are studied.

Wildlife Management

Maximum Enrollment: 20
Grade Level: 11, 12
Credit: 1 unit
Prerequisite: Agricultural Science and Technology

The Wildlife Management course is designed to teach technical knowledge and skills for entry-level positions involved in the conservation and/or improvement of natural resources such as air, soil, water, land, forest, and wildlife for economic and recreational purposes. Instruction also emphasizes such factors as the establishment, management, and operation of land for recreational purposes.

Agriculture, Food, and Natural Resources, Work-Based Credit*

Agriculture—Environmental, Work-Based Credit

Agriculture—Horticulture, Work-Based Credit

Agriculture—Animal, Work-Based Credit

Maximum Enrollment: NA
Grade Level: 12
Credit: 1 unit
Prerequisite: Completion of two (2) Agriculture courses within a program and recommendation of instructor

The Agriculture, Food, and Natural Resources work-based credit course is a structured, stand-alone course providing an educational experience outside of the classroom in cooperation with a business/industry partner from the Agriculture, Food, and Natural Resources field. The work-based credit-bearing course provides an opportunity for students to enter the workplace for a specified time to gain skills and knowledge in their designated career choice. Students’ workplace activities may include working on special projects, sampling tasks from different jobs, and learning tasks related to a single occupation. This opportunity provides a chance for students to interact with proper role models and learn about appropriate behavior and ethics in the workplace. Work-based credit experiences should include at least 120 contact hours for 1 unit. Experiences may be paid or unpaid depending upon the arrangement agreed upon by the employer, school, student and parent/guardian.

*2018-2019 new course offering
Architecture and Construction Cluster

Program: Building Construction Cluster (CIP Code 460000)
Courses: Introduction to Construction or permission of instructor
Building Construction 1
Building Construction 2
Architecture and Construction, Work-Based Credit (optional)

Industry Certification Available
NCCER Core
OSHA 10-Hour Construction Industry

Building Construction 1 606000CD
Building Construction 2 606100CD
Maximum Enrollment: 18
Grade Level: 10, 11, 12
Credits: 2 units per course; each course is yearlong
Prerequisite: Introduction to Construction or permission of instructor for Level 1; successful completion of Level 1 for enrollment in Level 2
Building Construction prepares individuals to apply technical knowledge and skills in the building, inspecting, and maintaining of structures and related properties. The course includes instruction in masonry, carpentry, electrical and power transmission installation, building/construction finishing, management, inspection, and other construction-related applications.

Introduction to Construction 600100CW
Maximum Enrollment: 20
Grade Level: 9, 10
Credit: 1 unit
Prerequisite: none
Construction technology provides students with an understanding of how construction impacts their lives, both socially and professionally. Students will explore and demonstrate an understanding of five elements of construction: Career Opportunities, Design, Measurements, Tools, and Materials.

Architecture and Construction, Work-Based Credit* 669000CW
Maximum Enrollment: NA
Grade Level: 12
Credit: 1 unit
Prerequisite: Successful completion of Building Construction 2 and recommendation of instructor
The Architecture and Construction work-based course is a structured, stand-alone course providing an educational experience outside of the classroom and in cooperation with a business/industry partner from the Building Trades field. The work-based credit-bearing course provides an
opportunity for students to enter the workplace for a specified time to gain skills and knowledge in their designated career choice. Students’ workplace activities may include working on special projects, sampling tasks from different jobs, and learning tasks related to a single occupation. This opportunity provides a chance for students to interact with proper role models and learn about appropriate behavior and ethics in the workplace. Work-based credit experiences should include at least 120 contact hours for 1 unit. Experiences may be paid or unpaid depending upon the arrangement agreed upon by the employer, school, student and parent/guardian.

*2018-2019 new course offering*
Business Management and Administration Cluster

Program: Business Information Management (CIP Code 521206)
Courses: Computer Illustration and Design
Image Editing 1
Accounting 1

Program: General Management (CIP Code 520201)
Courses: Accounting 1
Entrepreneurship
Integrated Business Applications 1

Finance Cluster

Program: Business Finance (CIP Code 520804)
Courses: Accounting 1
Business Finance
Integrated Business Applications 1

Information Management Cluster

Program: Web and Digital Communications (CIP Code 110801)
Courses: Fundamentals of Web Page Design and Development
Advanced Web Page Design and Development
Digital Media Marketing or Image Editing 1

Industry Certifications Available
Adobe Certified Associate – Visual Communication Using Adobe Photoshop (Image Editing 1)
Adobe Certified Associate – Web Authoring Using Adobe Dreamweaver (Fundamentals of Web Page Design and Development)
Microsoft Office Specialist (Integrated Business Applications 1)
Accounting 1*  500100CW
Maximum Enrollment: 24
Grade Level: 10, 11, 12
Credit: 1 unit
Prerequisite: Completion of Algebra 1 or equivalent with a grade of C or better and/or instructor approval
Accounting 1 is designed to help the student develop an understanding of the concepts, principles, and practices necessary in the preparation and maintenance of financial records concerned with business management and operations. Students are exposed to the accounting cycle, cash control systems, payroll, and careers in accounting.
*2018-2019 new course offering

Advanced Web Page Design and Development+**  503300CW
Maximum Enrollment: 24
Grade Level: 10, 11, 12
Credit: 1 unit
Prerequisite: Fundamentals of Web Design and Development
Advanced Web Design and Development is designed to provide students with the knowledge and skills necessary to pursue careers in web design and development. Students will develop skills in advanced HTML and CSS coding, scripting, layout techniques, and other industry-standard practices. In Advanced Web Design and Development, students must be able to edit source code directly rather than using a WYSIWYG editor.
+ Counts as a Computer Science credit (new Computer Science Standards)
** 2019-2020 new course offering

Business Finance**  527300CW
Maximum Enrollment: 24
Grade Level: 10, 11, 12
Credit: 1 unit
Prerequisite: Accounting 1
Business Finance 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.
** 2019-2020 new course offering

Computer Applications+  5008000CH
Maximum Enrollment: 24
Grade Level: 8 (Middle School Course)
Credit: ½ unit
Prerequisite: None
This course is designed to introduce students to software applications that are necessary to live and work in a technological society. The applications covered include word processing, database, spreadsheet, and presentation.
+ Counts as Elective credit
Digital Publication Design+*  
Maximum Enrollment: 24  
Grade Level: 9, 10, 11, 12  
Credit: 1 unit  
Prerequisite: None  
Digital Publication Design (formerly known as Digital Desktop Publishing) combines the business world with graphic design and allows students to use their creativity to produce business and personal publications. Students create, format, illustrate, design, edit/revise, and print publications including newsletters, flyers, brochures, reports, advertising materials, catalogs, posters, and other publications.  
+ Counts as a Computer Science credit (through 2018-2019 school year only)  
*2018-2019 new course offering  

Digital Literacy+  
Maximum Enrollment: 24  
Grade Level: 7 (Middle School Course)  
Credit: ½ unit  
Prerequisite: None  
This course is designed to equip students with many of the needed computer skills to find, evaluate, create, and communicate information. Students will be exposed to a broad range of computer technology along with a working knowledge of computer software and hardware. Students benefit from an understanding of a wide range of applications (e.g., document processing, presentations, spreadsheets, and web-based resources). This course prepares students to be college and career-ready.  
+ Counts as Elective credit  

Entrepreneurship  
Maximum Enrollment: 24  
Grade Level: 10, 11, 12  
Credit: 1 unit  
Prerequisite: None  
Entrepreneurship is designed to provide students with the knowledge and skills needed to develop an effective business plan for small business ownership. An important part of the course will be the incorporation of economics, ethics, legal aspects, logistics, research, staffing, strategies for financing, and technology.  

Fundamentals of Web Page Design and Development+  
Maximum Enrollment: 24  
Grade Level: 10, 11, 12  
Credit: 1 unit  
Prerequisite: Keyboarding proficiency  
Fundamentals of Web Page Design and Development (formerly known as Web Page Design and Development 1) is designed to provide students with the knowledge and skills needed to design and develop websites. Students will attain skills in designing, implementing, and maintaining websites using authoring tools.  
+ Counts as a Computer Science credit (new Computer Science Standards)
Image Editing 1+  
Maximum Enrollment: 24  
Grade Level: 10, 11, 12  
Credit: 1 unit  
Prerequisite: Integrated Business Applications 1  
Image Editing 1 is designed to provide students with the knowledge and skills needed to utilize digital imaging software in editing and designing images and graphics. Students also learn the use of technologies related to digital imaging such as basic computer operations, file sharing across networks, digital scanning, digital photography, and preparing documents for output to various types of media.  
+ Counts as a Computer Science credit (through 2018-2019 school year only)

Integrated Business Applications 1+  
Maximum Enrollment: 24  
Grade Level: 9, 10, 11, 12  
Credit: 1 unit  
Prerequisite: Keyboarding proficiency  
Integrated Business Applications 1 provides in-depth instruction in Microsoft Office applications that will lead to national certifications. The applications covered include MS Word, MS Excel, MS PowerPoint, and MS Access (optional). Students will learn the features and benefits of the application program and apply their knowledge in various problem-based activities. In addition, students are engaged in applying key critical thinking skills and the practice of ethical and appropriate behavior for the responsible use of technology.  
+ Counts as a Computer Science credit (through 2018-2019 school year only)
Health Science Cluster

Program: Health Science - 3 unit completer (CIP Code 510000)
Courses: Health Science 1
Health Science 2
Health Science 3 or Medical Terminology

Program: Sports Medicine - 3 unit completer (CIP Code 310505)
Courses: Sports Medicine 1
Sports Medicine 2
Health Science 3 or Medical Terminology

Program: Health Science - 4 unit completer (CIP Code 510000)
Courses: Health Science 1
Health Science 2
Any two of the following: Sports Medicine 1, Sports Medicine 2, Health Science 3, Medical Terminology, Health Science Clinical Study, or Sports Medicine work-based credit

Program: Sports Medicine - 4 unit completer (CIP Code 310505)
Courses: Sports Medicine 1
Sports Medicine 2
Any two of the following: Health Science 1, Health Science 2, Health Science 3, Medical Terminology, Health Science Clinical Study, or Sports Medicine work-based credit

Industry Certifications Available
First Aid/CPR/AED
Certified Medical Administrative Assistant (CMAA) (Health Science Clinical Study)
Certified Electrocardiograph Technician (EKG) (Health Science Clinical Study)
OSHA 10-Hour General Industry (Healthcare)

Health Science 1
Maximum Enrollment: 24
Grade Level: 10, 11, 12
Credit: 1 unit
Prerequisite: Biology; students should have an interest in learning about all facets of healthcare. Health Science 1 is the first of four courses offered to students interested in pursuing a career in the healthcare field. In this first course, students are provided an overview of healthcare history, cultural diversity, medical terminology, medical math, infection control, basics of the organization of healthcare facilities, and personal health and lifestyle choices. A major focus is placed on introduction to health careers, professionalism and employability skills. Students achieve an understanding of where healthcare has been, where it’s going and how professionalism and
personal characteristics impact their success. Students will be introduced to standard precautions and learn about confidentiality through HIPPA. As students are guided through healthcare career exploration, they will discuss education levels and requirements needed to be successful. Students will participate in a career project and will learn from guest speakers in the healthcare field. First-aid procedures and fire safety are introduced. 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 through the Health Science courses. To advance to Health Science 2, students must achieve a score of 75% or higher in Health Science 1.

**Health Science 2**

**Maximum Enrollment:** 24  
**Grade Level:** 10, 11, 12  
**Credit:** 1 unit  
**Prerequisite:** Score of 75% or higher in Health Science 1 or Sports Medicine 1

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. Health Science 2 will continue teaching in more detail the units of study that include advanced study of infection control. They will learn about transmission-based precautions and become more familiar with OSHA, HIPPA, and the CDC. Students in Health Science 2 will learn how to take vital signs, record them and learn what the data means. Students will learn how law and ethics are applied in the healthcare setting. This course will introduce students to basic patient care skills. Medical terminology, medical math and pharmacology are incorporated throughout the lessons being taught. Students will have the opportunity to become certified in First Aid and CPR. Career pathways and scenarios are introduced through each section. Students in this course will further their knowledge of healthcare careers and future goals by participating in job shadowing experiences. This course provides a foundation for further advancement in Health Science. It is recommended that students score a 75% or higher in this course to advance to any upper level course if all other prerequisites are met.

**Health Science 3**

**SCC AHS 104 (Dual Credit)**

**Maximum Enrollment:** 24  
**Grade Level:** 11, 12  
**Credit:** 1 unit  
**Prerequisite:** Score of 75% or higher in Health Science 1 or Sports Medicine 1 plus CPR and First Aid certification  
**SCC dual credit option:** AHS 104 (there is a charge per credit hour for this course and student must meet SCC admissions criteria)

Health Science 3 acquaints students with basic anatomy and physiology of the human body. Students learn how the human body is structured and the function of each of the 12 body systems. Students will study the relationship that body systems have with disease from the healthcare point of view. This is a very hands-on course and students will learn through projects and activities in the classroom. Skill procedures and foundation standards are reviewed and integrated throughout the program. Job shadowing is encouraged. This course does not count as a lab science.

*2018-2019 new course offering*
Health Science Clinical Study

Maximum Enrollment: 16
Grade Level: 12
Credits: 2 units; course is yearlong
Prerequisite: Successful completion of Health Science 1, 2 & 3* with an overall score in each course of 75% or higher or a 3 unit completer in any Health Science pathway. (*HS 3 may be substituted with the following courses: AP Biology or Medical Terminology. **Please note: Only HS3 or Medical Terminology will count towards being a completer in the Health Science Cluster—AP Biology will not.)

Health Science Clinical Study is a course that guides students to make connections from the classroom to the healthcare industry through clinical experiences/activities. This course is designed to provide for further development and application of knowledge and skills common to a wide variety of healthcare professions. The students in this course will build on all information and skills presented in the previous required course foundation standards. The students will relay these skills into real life experiences. The students, teachers and work-based learning coordinator will work together to create opportunities for the students to get the best experience available in the district’s geographic region. Students in this course must be BLS Healthcare Providers CPR certified and HIPAA trained before participating in any healthcare experience outside of the classroom. OSHA Safety Training – Healthcare certification is highly recommended.

Medical Terminology

SCC AHS 102 (Dual Credit)

Maximum Enrollment: 24
Grade Level: 10, 11, 12
Credit: 1 unit
Prerequisite: None

SCC dual credit option: AHS 102 (there is a charge per credit hour for this course and student must met SCC admissions criteria)

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.

Sports Medicine 1

Maximum Enrollment: 24
Grade Level: 10, 11, 12
Credit: 1 unit
Prerequisite: Biology

Sports Medicine 1 emphasizes sports medicine career exploration and the prevention of athletic injuries, including the components of exercise science, kinesiology, anatomy, principles of safety, first aid, cardiopulmonary resuscitation (CPR), and vital signs. Subject matter also includes legal issues, members of the sports medicine team, nutrition, protective sports equipment, environmental safety issues, taping and wrapping, mechanisms of injury, and application of other sports medicine concepts. Students interested in healthcare careers in athletic training, physical therapy, medicine,
exercise physiology, nursing, biomechanics, nutrition, psychology, and radiology will benefit from this course.

**Sports Medicine 2**  
**Maximum Enrollment:** 24  
**Grade Level:** 10, 11, 12  
**Credit:** 1 unit  
**Prerequisite:** Successful completion of Sports Medicine 1 plus CPR and First Aid certification  
Sports Medicine 2 emphasizes the assessment and rehabilitation of athletic injuries. Subject matter will include discussion of specific conditions and injuries that may be experienced by individuals participating in athletic activities. In addition, the use of appropriate therapeutic modalities and exercise in the care and rehabilitation of injuries will be examined. A review of the body systems will be included with this course. Advanced concepts related to the administrative aspects of the sports medicine program will also be covered in this course. Other career roles in Sports Medicine will be discussed as the athletic trainer takes the injured athlete through the pathway of recovery.

**Sports Medicine, Work-Based Credit**  
**Maximum Enrollment:** NA  
**Grade Level:** 12  
**Credit:** 1 unit  
**Prerequisite:** Successful completion of Sports Medicine 1 & 2 plus CPR and First Aid certification and recommendation of instructor  
The Sports Medicine work-based course is a structured, stand-alone course providing an educational experience outside of the classroom and in cooperation with a business/industry partner from the Sports Medicine field. The work-based credit-bearing course provides an opportunity for students to enter the workplace for a specified time to gain skills and knowledge in their designated career choice. Students’ workplace activities may include working on special projects, sampling tasks from different jobs, and learning tasks related to a single occupation. This opportunity provides a chance for students to interact with proper role models and learn about appropriate behavior and ethics in the workplace. Work-based credit experiences should include at least 120 contact hours for 1 unit. Experiences may be paid or unpaid depending upon the arrangement agreed upon by the employer, school, student and parent/guardian.
Human Services Cluster

Program: Cosmetology (CIP Code 120401)
Courses: Cosmetology 1
         Cosmetology 2
         Cosmetology 3
         Cosmetology 4

State License Available
   South Carolina State Cosmetology License

Cosmetology 1  615000CD
Cosmetology 2  615100CW
Cosmetology 3  615200CW
Cosmetology 4  615300CD
Maximum Enrollment: 20
Grade Level: 11, 12
Credit: Two-year program awarding 6 units (1000 Cosmetology hours plus 540 academic hours required by SCLLR)
Prerequisite: Courses taken sequentially
The Cosmetology Program is designed to prepare students to qualify and successfully complete all requirements for a South Carolina Cosmetology license. The student receives training following the guidelines and regulations established by the South Carolina Labor, Licensing, and Regulation (SCLLR) Cosmetology Board. The course of study includes Sanitation and Safety, Professionalism and Salon Management, Sciences of Cosmetology, Professional Hair Care Skills, Professional Nail Care Skills, Professional Skin Care Skills, and Unassigned Specific Needs. Instruction in chemistry, bacteriology, and anatomy and physiology of the face, head, arms, and hands is incorporated by means of theory and of practical application on both mannequins and live models.

Program: Family and Consumer Sciences (CIP Code 190101)
Courses: Food and Nutrition 1
         Food and Nutrition 2
         Culinary Arts Management 1**

**Transitioning to Hospitality and Tourism Cluster 2019-2020 school year

Industry Certifications Available
   ServSafe Food Handler
   ServSafe Manager
Culinary Arts Management 1*

Maximum Enrollment: 20
Grade Level: 10, 11, 12
Credits: 2 units; course is yearlong
Prerequisite: None

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. Integration of the Family and Consumer Sciences co-curricular student organization, Family Careers, and Community Leaders of America (FCCLA) and SkillsUSA, greatly enhances the learning experience. Employment opportunities and qualifications are explored as well as industry certifications. Ideal course for students that have previously taken Food and Nutrition 1 and Food and Nutrition 2 or for those interested in those courses.

*2018-2019 new course offering
Law, Public Safety, Corrections, and Security Cluster

Program: Emergency and Fire Management Services (CIP Code 430203)
Courses: Introduction to Law, Public Safety, Corrections, and Security or permission of instructor
Firefighter 1
Firefighter 2

National Certifications Available
Firefighter 1
Firefighter 2

Firefighter 1 651400CD
Firefighter 2 651500CD
Maximum Enrollment: 24
Grade Level: 10, 11, 12
Credits: 2 units per course; each course is yearlong
Prerequisite: Must be 16 years old prior to enrollment in Level 1 and successful completion of Introduction to Law, Public Safety, Corrections and Security or permission of instructor for Level 1; successful completion of Level 1 for enrollment in Level 2
This program prepares individuals to do the work of fire fighters by aiding students in the achievement of national certification for Fire Fighter I and Fire Fighter II. The curriculum used in this course is based on the learning objectives listed in IFSTA’s Essentials of Fire Fighting, 6th Edition (2013), Stillwater, OK: Fire Protection Publications, Oklahoma State University. These objectives have been further modified by the South Carolina Fire Academy to meet the needs of the South Carolina fire service. Course completion alone does not meet the criteria for achieving national certification. National-level firefighter certification testing is separate. The National Fire Protection Association (NFPA) establishes minimum standards for various levels of fire service certification. Requirements for meeting NFPA 1001 (2013), Standard for Fire Fighter Professional Qualifications, can be viewed online at NFPA.org.

Introduction to Law, Public Safety, Corrections, and Security 650500CW
Maximum Enrollment: 24
Grade Level: 9, 10, 11
Credit: 1 unit
Prerequisite: None
This course provides basic career information in public safety including corrections, emergency and fire management, security and protection, law enforcement, and legal services. Additionally students will develop a personal plan for a career in public safety. This course includes skills in each area of Law Enforcement Services and Firefighting to help deliver instruction to the students.
Law Enforcement Services 1*
Maximum Enrollment: 24
Grade Level: 9, 10, 11, 12
Credit: 1 unit
Prerequisite: Introduction to Law, Public Safety, Corrections, and Security or permission of instructor
The Law Enforcement Services program prepares students for entry-level positions in local, state, and federal law enforcement agencies and private security firms.
*2018-2019 new course offering
Manufacturing Cluster

Program: Machine Tool Technology (CIP Code 480503)
Courses: Introduction to Manufacturing or permission of instructor
Machine Tool Technology 1
Machine Tool Technology 2
Manufacturing, Work-Based Credit (optional)

Program: Mechatronics Integrated Technologies (CIP Code 150404)
Courses: Offered as dual credit option with SCC-Union

Program: Welding Technology (CIP Code 480508)
Courses: Offered as dual credit option with SCC-Union

National Certifications Available
  OSHA 10-Hour General Industry
  NCCER Core
  NIMS

Introduction to Manufacturing Technology 604500CW
Maximum Enrollment: 20
Grade Level: 9, 10, 11
Credit: 1 unit
Prerequisite: None
Introduction to Manufacturing Technology is an entry-level course that provides students with an
introduction to manufacturing industries and may be used as a prerequisite for any of the
manufacturing career majors: Electronics Technology, Machine Technology, Mechatronics
Integrated Technologies, Metal Fabrication, and Welding. All standards except those in the careers
unit come from the Manufacturing Skill Standards Council’s (MSSC) worker standards in two* of
its identified four critical work functions of production: Safety*, Quality Practices and
Measurement*, Manufacturing Processes and Production, and Maintenance Awareness. Worker
standards are the basic knowledge and skills required by a mid-level production technician to
perform the work.

Machine Tool Technology 1 623000CD
Machine Tool Technology 2 623100CD
Maximum Enrollment: 18
Grade Level: 10, 11, 12
Credits: 2 units per course; each course is yearlong
Prerequisite: Introduction to Manufacturing or permission of instructor for Level 1; successful
completion of Level 1 for enrollment in Level 2
In the Machine Tool Technology courses, students will learn to read blueprints, operate a drill
press, lathe, and milling machine as well as learn grinding operations. Within the Machine Tool
field, there are also areas which use computer technology for design, production, and inspection. Students in this field will learn to apply technical knowledge and skills to fabricate and modify metal parts in support of other manufacturing, repair, or design activities, or as an independent business.

**Manufacturing, Work-Based Credit***  
**Maximum Enrollment:** NA  
**Grade Level:** 12  
**Credit:** 1 unit  
**Prerequisite:** Successful completion of Machine Tool Technology 2, two Mechatronics courses, or two PLTW courses and permission of instructor

The Manufacturing work-based course is a structured, stand-alone course providing an educational experience outside of the classroom and in cooperation with a business/industry partner from the manufacturing field. The work-based credit-bearing course provides an opportunity for students to enter the workplace for a specified time to gain skills and knowledge in their designated career choice. Students’ workplace activities may include working on special projects, sampling tasks from different jobs, and learning tasks related to a single occupation. This opportunity provides a chance for students to interact with proper role models and learn about appropriate behavior and ethics in the workplace. Work-based credit experiences should include at least 120 contact hours for 1 unit. Experiences may be paid or unpaid depending upon the arrangement agreed upon by the employer, school, student and parent/guardian.

*2018-2019 new course offering*
Science, Technology, Engineering, and Mathematics Cluster

Program: Pre-Engineering (Project Lead the Way) (CIP Code 140101)
Courses: PLTW – Introduction to Engineering Design
PLTW – Principles of Engineering
PLTW – Digital Electronics
PLTW – Aerospace Engineering

PLTW – Aerospace Engineering 605600HW
Maximum Enrollment: 24
Grade Level: 10, 11, 12
Credit: 1 unit
Prerequisite: Introduction to Engineering Design and Principles of Engineering or teacher recommendation
This PLTW course propels students’ learning in the fundamentals of atmospheric and space flight. As they explore the physics of flight, students bring the concepts to life by designing an airfoil, propulsion system, and rockets. They learn basic orbital mechanics using industry standard software and explore robot systems through projects such as remotely operated vehicles.

PLTW – Digital Electronics** 605200HW
Maximum Enrollment: 24
Grade Level: 10, 11, 12
Credit: 1 unit
Prerequisite: Introduction to Engineering Design and Principles of Engineering or teacher recommendation
From smart phones to appliances, digital circuits are all around us. This course provides a foundation for students who are interested in electrical engineering, electronics, or circuit design. Students study topics such as combinational and sequential logic and are exposed to circuit design tools used in industry including logic gates, integrated circuits, and programmable logic devices.

**2019-2020 new course offering

PLTW – Introduction to Engineering Design 605100HW
Maximum Enrollment: 24
Grade Level: 9, 10, 11
Credit: 1 unit
Prerequisite: None
In the Introduction to Engineering Design course, students dig deep into the engineering design process, applying math, science, and engineering standards to hands-on projects. They work both individually and in teams to design solutions to a variety of problems using 3-D modeling software and an engineering notebook to document their work.
PLTW – Principles of Engineering

Maximum Enrollment: 24
Grade Level: 9, 10, 11
Credit: 1 unit
Prerequisite: Introduction to Engineering Design

Through problems that engage and challenge, students explore a broad range of engineering topics including mechanisms, the strength of structures and materials, and automation. Students develop skills in problem solving, research, and design while learning strategies for design process documentation, collaboration, and presentation.
Transportation, Distribution, and Logistics Cluster

Program: Automotive Collision Repair Technology (CIP Code 470603)
Courses: Introduction to Transportation, Distribution, and Logistics or permission of instructor
Automotive Collision Repair Technology 1
Automotive Collision Repair Technology 2
Transportation, Distribution, and Logistics, work-based credit (optional)

Program: Automotive Technology (CIP Code 470604)
Courses: Introduction to Transportation, Distribution, and Logistics or permission of instructor
Automotive Technology 1
Automotive Technology 2
Transportation, Distribution, and Logistics, work-based credit (optional)

National Certifications Available
ASE – Maintenance and Light Repair
ASE – Brakes
ASE – Painting and Refinishing
ASE – Non-Structural Analysis and Damage Repair
S/P2 Automotive Collision Repair
S/P2 Automotive Technology

Automotive Collision Repair Technology 1 602000CD
Automotive Collision Repair Technology 2 602100CD
Maximum Enrollment: 18
Grade Level: 10, 11, 12
Credits: 2 units per course; each course is yearlong
Prerequisite: Introduction to Transportation, Distribution, and Logistics or permission of instructor for Level 1; successful completion of Level 1 for enrollment in Level 2

The Automotive Collision Repair Technology program is designed to prepare students to repair automobiles and light commercial vehicles under the supervision of an experienced automotive collision repair technician. Automotive Collision Repair Technology students receive instruction in frame alignment, surface finishing, and shop management. Upon successful completion of the program standards, the student will be prepared for postsecondary education and entry-level automotive collision repair-related careers. Program standards are based on NATEF-ASE, Vehicle Manufacturers, and I-CAR industry standards.
Automotive Technology 1  603000CD
Automotive Technology 2  603100CD

Maximum Enrollment:  18
Grade Level:  10, 11, 12
Credits:  2 units per course; each course is yearlong
Prerequisite:  Introduction to Transportation, Distribution, and Logistics or permission of instructor for Level 1; successful completion of Level 1 for enrollment in Level 2

In the Automotive Technology program, students become skilled in locating and diagnosing problems and making repairs on all makes and models of automobiles. Students are trained in all aspects of maintenance and light repair using the National Automotive Technicians Education Foundation (NATEF) curriculum. Students practice competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical and occupation-specific skills, and knowledge of all aspects of the Transportation, Distribution, and Logistics career cluster.

Introduction to Transportation, Distribution, and Logistics  601501CW

Maximum Enrollment:  20
Grade Level:  9, 10, 11
Credit:  1 unit
Prerequisite:  None

Introduction to Transportation, Distribution, and Logistics is a foundation course that covers a broad industry sector responsible for managing the flow of goods, information, and people between a point of origin and a point of consumption in order to meet the requirements of consumers. Major sub-sectors within the industry include air, rail, water, and truck transportation, urban transit and ground passenger transportation, warehousing and storage, and motor vehicle repair. Emphasis in this course will be placed on introducing students to careers in the Automotive Technology and Automotive Collision Repair fields.

Transportation, Distribution, and Logistics, Work-Based Credit  679000CW

Maximum Enrollment:  NA
Grade Level:  12
Credit:  1 unit
Prerequisite:  Successful completion of Automotive Technology 2 or Automotive Collision Repair Technology 2 and recommendation of instructor

The Transportation, Distribution, and Logistics work-based course is a structured, stand-alone course providing an educational experience outside of the classroom and in cooperation with a business/industry partner from the automotive field. The work-based credit-bearing course provides an opportunity for students to enter the workplace for a specified time to gain skills and knowledge in their designated career choice. Students’ workplace activities may include working on special projects, sampling tasks from different jobs, and learning tasks related to a single occupation. This opportunity provides a chance for students to interact with proper role models and learn about appropriate behavior and ethics in the workplace. Work-based credit experiences should include at least 120 contact hours for 1 unit. Experiences may be paid or unpaid depending upon the arrangement agreed upon by the employer, school, student and parent/guardian.
Concurrent Courses Offered by Spartanburg Community College

Students must be on a high school diploma track and successfully meet the entrance examination requirements for Spartanburg Community College.

HEALTH SCIENCE

SCC AHS 102 – Medical Terminology – 3 credits – 554100EW
This course covers medical terms, including roots, prefixes, and suffixes, with emphasis on spelling, definition, and pronunciation.

SCC AHS 104 – Medical Vocabulary/Anatomy – 3 credits – 554200EW
This course introduces the fundamental principles of medical terminology and includes a survey of human anatomy and physiology.

MECHATRONICS

Year 1 (Fall and Spring Terms)

SCC EEM 117 XW11 – AC/DC Circuits I – 4 credits – 611500EW
This course is a study of direct and alternating theory, Ohm’s Law, series, parallel, and combination circuits. Circuits are constructed and tested.

SCC MAT 155 XW37 – Contemporary Mathematics – 3 credits – 414001EW
This course includes techniques and applications of the following topics: properties of and operations with real numbers, elementary algebra, consumer mathematics, applied geometry, measurement, graph sketching and interpretations, and descriptive statistics.

SCC IMT 102 XW11 – Industrial Safety – 2 credits – 828000EH
This course covers safety awareness and practices found in industry.

SCC IMT 131 XW11 – Hydraulics and Pneumatics – 4 credits – 624500EW
This course covers the basic technology and principles of hydraulics and pneumatics.

Year 2 (Fall and Spring Terms)

SCC EEM 151 XW11 – Motor Controls 1 – 4 credits – 861600EW
This course is an introduction to motor controls including a study of the various control devices and wiring used in industrial processes.

SCC ENG 165 – Professional Communications – 3 credits – 373300EW
This course develops practical written and oral professional communication skills.
SCC IMT 114 XW11 – Benchwork and Assembly – 2 credits – 827400EH
This course covers the use of hand and power tools, measuring, and prints associated with an assembly project.

SCC IMT 161 XW11 – Mechanical Power Applications – 4 credits – 603700EW
This course covers mechanical transmission devices, including procedures for installation, removal, and maintenance.

WELDING

SCC WLD 103 – Print Reading I – 1 credit – 636500CQ
This is a basic course which includes the fundamentals of print reading, the meaning of lines, views, dimensions, notes, specifications, and structural shapes. Welding symbols and assembly drawings as used in fabrication work are also covered.

SCC WLD 105 – Print Reading II – 1 credit – 636600CQ
This course includes print reading, including welding symbols and their applications to pipe fabrication. Basic sketching of piping symbols, single line and double line pipe drawings, material estimating, template layout and how templates are used in pipe layouts are included.

SCC WLD 106 – Gas and Arc Welding – 4 credits – 635000EW
This course covers the basic principles and practices of oxyacetylene welding, cutting, and electric arc welding. Emphasis is placed on practice in fundamental position welding and safety procedures.

SCC WLD 115 – Arc Welding III – 4 credits – 636700CW
This course covers the techniques used in preparation for structural plate testing according to appropriate standards.

SCC WLD 212 – Destructive Testing – 2 credits – 835700EH
This course covers the destructive testing methods used in the evaluation of welds.