Institute of Innovation
Cherokee County

2018-2019
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COURSES OFFERED BY CLUSTER

Agriculture, Food and Natural Resources

- Introduction to Horticulture
- Equipment Operation & Maintenance
- Nursery, Greenhouse and Garden Center Technology
- Landscape Technology
- Animal Science
- Small Animal Care
- Farm Animal Production
- Introduction to Veterinary Science
- Agriculture, Food and Natural Resources work-based credit

Architecture & Construction

- CORE
- Building Construction 1,2,3,4
- HVAC 1,2,3,4
- Masonry 1,2,3,4
- Architecture & Construction work-based credit

Business Management & Administration

- Administrative Support Services
- Entrepreneurship
- Social Media in Business

Health Science

- Health Science 1
- Health Science 2
- Health Science 3
- Emergency Medical Services 1
- Emergency Medical Services 2
- Medical Terminology
- Sports Medicine 1
- Sports Medicine 2
- Health Science Clinical Study- CNA or Medical Assistant
Hospitality & Tourism

- Introduction to Culinary Arts Management
- Culinary Arts Management 1 & 2
- Hospitality & Tourism work-based credit

Human Services

- Cosmetology 1,2,3,4

Information Technology

- Administrative Support Services
- Advanced Animation
- Advanced Web Design and Development
- Entrepreneurship
- Foundations of Animation
- Fundamentals of Web Design
- Game Design & Development
- Social Media in Business

Law, Public Safety & Security

- Introduction to Law and Public Safety
- Fire Fighting 1 & 2
- Law Enforcement 1 & 2
- Law, Public Safety & Security work-based credit

Manufacturing

- CORE
- Electronics 1,2,3,4
- Machine Tool 1,2,3,4
- Welding 1,2,3,4
- Manufacturing work-based credit
Science, Technology, Engineering, and Mathematics-Project Lead the Way

- Introduction to Engineering Design
- Principles of Engineering
- Civil Engineering and Architecture
- Digital Electronics

Transportation, Distribution & Logistics

- Automotive Collision Technology 1,2,3,4
- Automotive Technology 1,2,3,4
- Transportation, Distribution & Logistics work-based credit

Fees

Due to the nature of our programs, students may be responsible for a course fee while attending class. All fees should be made payable to Institute of Innovation Cherokee County.

<table>
<thead>
<tr>
<th>Program</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Cosmetology 1 &amp; 2 (Junior Year)</td>
<td>$400- Cosmetology kit &amp; workbook</td>
</tr>
<tr>
<td>Cosmetology 3 &amp; 4 (Senior Year)</td>
<td>$400- additional kit materials &amp; State Board testing fee</td>
</tr>
<tr>
<td>Health Science Clinical Study</td>
<td>$250 Course fee (Book, workbook, background check &amp; drug screen, lab kit and name badge)</td>
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<td></td>
<td>$101 Certification exam fee</td>
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<tr>
<td></td>
<td>Students are also responsible for costs of a TB test and uniforms which are not included in these fees</td>
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Computer Science Units

These courses offered at I^2 meet computer science requirements for graduation:

- Foundations in Animation
- Advanced Animation
- Fundamentals of Web Design & Development
- Advanced Web Design & Development
- Game Design & Development
- Social Media in Business
- PLTW-Introduction to Engineering Design
- PLTW-Principles of Engineering
- PLTW-Civil Engineering & Architecture
- PLTW-Digital Electronics
Certifications Offered at

Automotive Technology
ASE-Auto Tech Maintenance & Light Repair
ASE- Auto Tech Brakes
ASE-Auto Tech Engine Performance
ASE-Auto Tech Electrical/Electronic System
ASE-Auto Tech Suspension & Steering
ASE-Auto Tech Engine Repair
ASE Auto Tech Auto Trans and Transaxle
ASE-Auto Tech Heating and AC
ASE-Auto Tech Manual Drive Train & Axles
ASE-Auto Tech Auto Service Technology
OSHA
Dual Credit- Spartanburg Community College

Automotive Collision
OSHA
ASE Auto Collision Repair

Building Construction/Masonry/Electronics
OSHA
NCCER

HVAC
OSHA
NCCER
EPA Universal
Electronics Technician
HVAC Excellence
TAP Credit

Welding/Machine Tool Technology
OSHA
NCCER
TAP Credit
Fire Fighting

American Heart Association Heartsaver CPR
American Heart Association Heartsaver First Aid
SC Fire Academy Hazardous Materials Awareness
SC Fire Academy Hazardous Materials Operations
SC Fire Academy CTC Fire Fighter 1 Certification
SC Fire Academy CTC Fire Fighter 2 Certification
SC Fire Academy Automobile Extrication
SC Fire Academy National Incident Management
First Responder
Emergency Telecommunicator

Cosmetology

SC Cosmetology License
OSHA

Culinary Arts

ServSafe Food Handler
ServSafe Manager

Health Science

Certified Nursing Aide
First Aid/CPR/AED

Information Technology

Adobe Certified Associate- Web Communication with Adobe Dreamweaver
Adobe Certified Associate- Rich Media Communication with Adobe Flash
Autodesk User Certification for Maya

Project Lead the Way

Articulation agreements with colleges in South Carolina- course credit varies with each institution
Cluster

Agriculture, Food, and Natural Resources

Courses Offered to complete Plant & Animal Systems Pathway:
Prerequisite for all courses:
Animal Science

Additional Courses:
Small Animal Care
Farm Animal Production
Equipment Operation and Maintenance
*Introduction to Veterinary Science (this is an advanced course)

Certifications
OSHA
Outdoor Power Equipment Certification

Job Opportunities
Veterinarian
Veterinary Technician
Farm and Ranch Worker
Animal Caretaker

Student Interests
Do you prefer to work outside?
Are you interested in working with animals?
Would you like to join and participate in FFA activities?
**Animal Science-1 unit**
The Animal Science course is designed to provide an overview of the animal science industry. It provides information on the biological make-up of various species of agricultural livestock. It also provides students with information on animal behavior that would be beneficial before embarking on a career in Animal Science. This course is prerequisite for other courses in Animal Science.

**Small Animal Care-1 unit**
The Small Animal Care course is designed to teach technical knowledge and skills for occupations in the pet industry or the companion animal industry. Skills also relate to the veterinarian or the veterinarian technician career field. Typical instructional activities include hands-on experiences with cats, dogs, rabbits, fish, etc. participating in personal and community leadership development activities; and planning a relevant school to work transition experience.

**Farm Animal Production-1 unit**
The Farm Animal Production course is designed to teach technical knowledge and skills for entry-level positions in an animal production enterprise by developing competencies concerning the selection, breeding, physiology, nutrition, health, housing, feeding, and marketing of farm animals. Typical instructional activities include hands-on experiences with the principles and practices essential in the production and management of farm animals and farm animal products for economic, recreational, and therapeutic uses; participating in personal and community leadership development activities; planning and implementing a relevant school-to-work transition experience; and participating in FFA activities.

**Equipment Operations & Maintenance-1 unit**
This course is designed to teach students how to operate and maintain equipment commonly used in the agricultural industry. Typical instructional activities include hands-on experiences with agricultural power units; participating in personal and community leadership development activities; planning and implementing a relevant school-to-work transition experience; and participating in FFA activities.

**Introduction to Veterinary Science-1 unit**
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. Prerequisites: Animal Science and Small Animal Care.
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. All courses in this cluster are 1 Carnegie unit of credit.

Courses Offered to complete Automotive Collision Pathway:

- Auto Collision 1
- Auto Collision 2
- Auto Collision 3
- Auto Collision 4

Transportation, Distribution, & Logistics Work Based Credit

Certifications

OSHA
ASE-Auto Collision Repair

Job Opportunities

- Auto Body Repairer
- Glass Installer
- Vehicle Painter
- Welder
- Painting & Coating Machine Operator

Student Interests

Do you like working with others as a team to get a job done?
Is working in a shop appealing to you?
Are you able to handle materials correctly and be exact in your work?
Students in Automotive Technology enjoy working with their hands, whether they are getting dirty working on automotive drivetrain systems, suspension and brake systems, or completing electrical system repairs. Technology and creative thinking skills are used by students to diagnose today’s complex automobile. Students also learn to inspect, maintain, and repair cars and light trucks from small simple repairs to complicated drivetrain repairs. All courses in the cluster are 1 Carnegie unit of credit.

Certifications
ASE Certificate
OSHA

Job Opportunities
Automotive Technician
Oil change & lube technician
Automotive Technician helper
Aircraft Mechanic
Diesel Mechanic

Student Interests
Do you work on your car in your spare time?
Do you like to disassemble components to see how they work?
Is it interesting to you to diagnose problems and find solutions?
Building Construction

Cluster

Architecture and Construction

Description

This course focuses on skills in blueprint reading, foundations, layouts, framing, finished carpentry, and cabinetmaking. Students will learn the use of materials and methods used by residential and commercial builders of the upstate. This course is endorsed by the Cherokee County Home Builder’s Association. Students mastering competencies may be eligible for cooperative work. Students earn 1 Carnegie unit of credit for each course in this cluster.

Courses Offered to Complete Building Construction

- CORE
- Building Construction 1
- Building Construction 2
- Building Construction 4
- Building Construction 3
- Architecture & Construction Work Based Credit

Certifications

OSHA
NCCER

Job Opportunities

Home Builder  Drywall Installer
Inspector       Roofer
Cabinet Maker  Vinyl Siding Installer
Contractor     Architect

Student Interests

Do you enjoy building or constructing things?
Do you like to work outdoors?
Are you interested in designing things?
Cluster

Business Management & Administration

Courses Offered to complete Administrative Services Pathway:

Required Courses
Administrative Support Technology (I²)
Integrated Business Applications 1 (BHS, GHS)

Additional Courses
Advanced Web Page Design and Development (I²)
Business Principles and Management (GHS)
Digital Publication Design (BHS, GHS)
Entrepreneurship (I²)
Fundamentals of Business, Marketing and Finance (GHS)
Fundamentals of Web Page Design and Development (GHS, I²)
Image Editing 1 (BHS,GHS)
Image Editing 2 (GHS)
Social Media in Business (I²)

Job Opportunities
Office Manager
Human Resources Specialist
Executive Secretary

Student Interests
Do you like working with computers and computer software?
Do you want to work in a business environment with other professionals?
Are you willing to work with the public?
Administrative Support Services- 1 unit

This course is designed to provide an overview of the major responsibilities and tasks in an administrative support position. The objectives of the course are to enhance technology and communication skills; solve business-oriented problems; manage processes and procedures of organizations; and demonstrate effective supervisory, management, and human relations skills.

Entrepreneurship-1 unit

This course 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.

Social Media in Business-1 unit

This course introduces students to the current field of social media and prepares them to explore and create successful social media strategies for businesses. It gives students the knowledge, tools, and methods to use different social media tools and networks in a business environment such as blogs, video and photo sharing sites, and other digital communication platforms.
COSMETOLOGY

Cluster

Human Services

Description

The Cosmetology program trains students for a career in the beauty industry. These courses are designed to prepare students to qualify and successfully complete all requirements for a South Carolina Cosmetology license. Students receive training that follows the guidelines and regulations established by the South Carolina Labor, Licensing, and Regulation 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, anatomy, and physiology of the face, head, arms, and hands is incorporated by means of theory and practical application on both mannequins and live models.

This program requires extra hours and additional fees that must be paid by the student. Students can begin the Cosmetology Program in their junior year of high school—each Cosmetology course is 2 units per semester each year.

Coursed Offered to Complete Cosmetology

Certifications
SC Cosmetology License
OSHA

Job Opportunities
Entry Level Cosmetologist/Assistant
Salon Manager/Owner
Cosmetology Instructor

Student Interests
Do you enjoy helping people feel better about themselves?
Do you enjoy styling hair?
Do you enjoy applying makeup on others?
CULINARY ARTS

Cluster

Hospitality & Tourism

Description

These courses introduce students to the concepts of cooking, recipe adjustment, consumption, accounting, cost estimation, menu planning, nutrition, and food appearance. Course content includes theory, laboratory practice, field trips, guest consultants, and practical experiences in preparing and serving food. Emphasis is placed on food preparation with instruction in preparing food and beverages in commercial operations. Good sanitation and personal hygiene habits are stressed. Catering skills are developed and implemented. Students earn 1 Carnegie unit for courses completed in this cluster.

Coursed Offered to complete Culinary Arts Pathway:

Introduction to Culinary Arts Management → Culinary Arts Management 1 → Culinary Arts Management 2 → Hospitality & Tourism Work Based Credit

Certifications

ServSafe Manager Food Safety Certification
ServSafe Food Handler

Job Opportunities

Entry level cook/prep cook
Line cook, sous chef, kitchen manager
Industry Experience: Executive Chef, Restaurant General Manager

Student Interests

Do you work well with others?
Are you a problem solver?
Do you pay attention to details and appearance?
Electronics Technology

Cluster

Manufacturing

Description

This program is designed to teach the foundation of electrical/electronics theory in which concepts will be reinforced daily through hands-on practical applications. Students taking Electronics Technology should have knowledge of the essential concepts of physical science and have algebraic and geometric reasoning skills. This program provides students with a solid foundation for college and/or other post-graduation opportunities. Each course in this pathway is 1 Carnegie unit of credit.

Courses Offered to complete Electronics Technology Pathway:

- CORE
- Electronics 1
- Electronics 2
- Electronics 3
- Electronics 4
- Manufacturing Work Based Credit

Certifications

OSHA
NCCER

Job Opportunities

- Electronics Engineering Technician
- Surveying & Mapping Technician
- Manufacturing Production Technician
- Drafter
- Electrical Engineer
- Fuel Cell Technician

Student Interests

Do you like to use math and science to solve problems?
Are you good at problem solving and communicating with others?
Would working with gauges and dials to make sure machinery is operating properly appeal to you?
FIRE MANAGEMENT SERVICES

Cluster

Law, Public Safety, Corrections, and Security

Description

This pathway is for students who are interested in becoming a Fire Fighter or working in emergency management services.
Introduction to Law and Public Safety is a prerequisite to Fire Fighter 1.

Courses Offered to complete Fire Fighting Pathway:

- Intro to Law and Public Safety
- Fire Fighting 1
- Fire Fighting 2
- Law & Public Safety Work Based Credit

Certifications

- American Heart Association Heartsaver CPR & First Aid
- SC Fire Academy CTC Fire Fighter 1 Certification
- SC Fire Academy CTC Fire Fighter 2 Certification
- SC Fire Academy Automobile Extrication
- SC Fire Academy National Incident Management
- First Responder
- Emergency Telecommunicator

Job Opportunities

- Fire Fighter
- Fire Investigator
- EMT

Student Interests

Does responding to an emergency situation appeal to you?
Do you want to wear a specialized gear and uniform when you work?
Do you work well with others on a crew?
FIRE MANAGEMENT SERVICES

Course Descriptions

Introduction to Law and Public Safety- 1 unit

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. The course includes skills in each are of Law Enforcement Services and Fire Fighter and the community to help deliver instruction to the students. **This course is a prerequisite for Fire Fighter 1.**

Fire Fighter 1 (2 units -one unit each semester)

This course is designed to teach entry level requirements of firefighting and EMS and will cover NFPA (National Fire Protection Association) standards 1152 and 1153. These standards are requirements to be a firefighter in South Carolina. Students will participate in many hands-on drills using actual firefighting/EMS equipment in addition to classroom instruction. Students will be required to wear personal protective equipment and participate in physically demanding exercises.

Fire Fighter 2 (2 units -one unit each semester)

This course is a continuation of Fire Fighter 1 that will focus on more advanced firefighting and EMS techniques using classroom instruction and hands-on drills. Students will learn strategic planning methods and operations that are applied in the fire service. Students will have the opportunity to earn Firefighter 1 Certification. This certification includes: First Aid CPR, Haz-Mat Awareness, Haz-Mat Operations, Auto Extrication, and Firefighter 1. Students will be required to wear personal protective equipment and participate in physically demanding exercises. Students will be prepared to enter co-op experiences and work at local Fire Departments upon completion of standards and requirements. **Students who successfully complete Fire Fighter 1 & 2 will have the opportunity to earn Firefighter 1 & 2 Certification from the SC Fire Academy.**
Health Science

Courses Offered to complete Health Science Pathway:

Required Courses
Health Science 1
Health Science 2

Additional Courses
Health Science 3
Medical Terminology
Emergency Medical Services 1
Emergency Medical Services 2
Sports Medicine 1
Health Science Clinical Study – Certified Nursing Assistant or Medical Assistant

Courses Offered to complete Emergency Medical Services Pathway:

Prerequisites
Health Science 1 or Sports Medicine 1
Health Science 2
Health Science 3 or Anatomy & Physiology

Required Courses
Emergency Medical Services 1
Emergency Medical Services 2

Additional Courses
Medical Terminology
Health Science 2
HEALTH SCIENCE

Description of Courses:

Health Science 1 (1 unit)
There are no prerequisites for this course, however 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. The course provides an overview of healthcare history, cultural diversity, healthcare language, medical math, infection control, basics of the organization of healthcare facilities, and personal health and lifestyle choices. Exploration of healthcare careers, personal character traits of a “professional” in the practice of employability skills is stressed throughout this course. Students get a good grasp of where healthcare has been and where it is going and how professionalism and personal characteristics impact their success. Students will be introduced to “Standard Precautions” and learn about confidentiality through HIPAA as well as first-aid procedures and fire safety. The skills and knowledge 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. Certifications offered include CareerSafe OSHA Healthcare and CyberSafety.

This course is a prerequisite for all other Health Science courses and students must score a grade of 80 or higher and obtain the CareerSafe OSHA Healthcare certification to progress to advance to Health Science 2, Health Science 3 or Medical Terminology.

Health Science 2 (1 unit)

Requirements: Successful completion of Health Science 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. Healthcare career pathways are introduced. Emphasis is placed on behaviors of a “professional” that healthcare employers are seeking and students will practice these behaviors on a daily basis through various classroom and lab activities. Students will continue to practice their employability skills. Health Science 2, will continue teaching in more detail, the units of study that include: infection control, Transmission Based Precautions, OSHA, HIPPA, and the CDC.

Students in Health Science 2 will learn how to measure vital signs, record them and learn what the data means. Students will cover topics including: stages of life, law and ethics, medical terminology, medical math and pharmacology. This course provides foundational skills for further advancement in Health Science.
Certifications offered during this course are CPR, AED and First-aid. Students are responsible for the fee to obtain CPR certification.

Students must score a grade of 80 or higher in this course to advance to Health Science 3 and/or Medical Terminolog
Health Science 3 Human Structure and Function (1 unit)
Requirements: Successful completion of Health Science 1 or Sports Medicine 1. This course may be offered for dual credit.

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.
This course does not count as a lab science.

Students must score a grade of 80 or higher in this course to advance to Emergency Medical Services 1, Medical Assistant or Certified Nursing Assistant.

Medical Terminology (1 unit)
Requirements: Successful completion of Health Science 1 or Sports Medicine 1, Biology or Anatomy and Physiology or Health Science 3, and a cumulative grade point average of 3.5 or higher. This is an anatomy and physiology course and is recommended for student who enjoy science and have a good understanding of English language. This course may be offered as dual credit.

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.
Students must score a grade of 80 or higher to advance to Emergency Medical Services 1, Medical Assistant or Certified Nursing Assistant.

Emergency Medical Services 1 (1 unit)
Requirements: Students must complete Health Science 1 or Sports Medicine 1 and Health Science 3.

Emergency Medical Services 1 is designed to teach students how to recognize and respond to various emergencies. Students will review basic anatomy and physiology as it relates to injury management and treatment. Students will review basic information needed for all phases of a healthcare professional. Information that students are exposed to will include legal and ethical implications, communications, safety, infection control and professionalism. In this course students will learn what skills are necessary to recognize and care for emergencies in adults, children, and infants until professional medical help arrives. Students will obtain FA/CPR/AED certification. Students will be required to perform light physical activity. Student fees are required for CPR training in this course.
Students should score 80% or higher in this course to advance to Emergency Medical Services 2.
Emergency Medical Services 2 (1 unit)
Requirements: Health Science 1 or Sports Medicine 1, Health Science 3 or Medical Terminology and Emergency Medical Services 1.

This is the second in a sequence of courses. Emergency Medical Services (EMS) 2 is a continuation of EMS 1. The course includes content and skills that first responders need, to provide appropriate initial care, regardless of the type of emergency. EMS 2 stresses the steps to follow in an emergency until more advanced medical personnel arrive. The skills and content taught at this level become more specific and rigorous.
Successful completion of this course may result in First Responder certification available through various national certifying bodies and/or students may be recommended to complete additional course work at the post-secondary level.

Sports Medicine 1 (1 unit)
There are no prerequisites for this course. Students are encouraged, but not required to have previous or concurrent course work in the biological sciences.

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 AED use. Subject matter also includes legal issues, members of the sports medicine team, nutrition, protective sports equipment, environmental safety issues, principles of 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. Certifications offered include CareerSafe OSHA Healthcare and CyberSafety.

Students must score 80% or higher and obtain the CareerSafe OSHA Healthcare certification to advance to Health Science 3 Medical Terminology.
Health Science

Health Science Clinical Study-Certified Nursing Assistant (2 units)
Requirements: This course is for students in grade 12 who have completed Health Science 1, 2 & 3 (Health Science 3 may be substituted with Medical Terminology). This course is offered in the spring semester.

Required course costs: 1) uniforms, 2) certification exam, 3) Two Step Tuberculin Skin Test, 4) transportation to and from long term care facility, 5) name badge

Additional requirements: Two Step Tuberculin Skin Test results must be submitted during the first week of class. Students must possess a discipline record free of assault/battery charges and students cannot have pled guilty or have been found guilty of a felony. Students must provide a complete list of immunizations during the first week of class. Students must have a Social Security Card.

CNA is a semester course for high schools seniors and is approved by the SC Department of Health and Human Services. This course is designed to provide for further development and application of knowledge and skills presented in previous courses and common to a wide variety of healthcare professions. Students will participate in classroom activities and lab practice exercises, and hands on clinical experience with elderly patients in a long term care facility. Examples of tasks students will perform include but are not limited to bathing and dressing patients, serving and helping patients eat, taking vital signs, turning or repositioning patients who are bedridden, collecting information about conditions and treatment plans for caregivers, nurses and doctors, providing and emptying bedpans, lifting patients into beds, wheelchairs, exam tables, etc., answering patient calls, examining patients for bruises, blood in urine or other injuries/wounds, cleaning and sanitizing patient areas, changing bed sheets and restocking rooms with necessary supplies. At the completion of this course, students will take the Nurse Aide Exam for certification to work. Estimated yearly income for $24,000. The CNA can find jobs in hospitals, assisted-living and nursing homes and the home setting.

Medical Assistant (MA)
Requirements: This course is for students who have completed Health Science 1, 2 and Medical Terminology with a score of 80% or higher.

Medical Assistant is a semester course that introduces students to the field of medical assisting. Expanding on the foundational knowledge and skills from previous courses, emphasis is placed on the clinical role and responsibilities of the medical assistant in the ambulatory care setting, such as medical offices, retail and mobile clinics, clinics, urgent care centers, and in general medicine or specialty practices. Students will learn clinical procedures related to medical asepsis, sterilization and disinfection, vital signs and physical examination, specialty examinations, minor office surgery (including suture and staple removal), the administration of medications by mouth and injection, cardiopulmonary procedures such as electrocardiogram (EKG), laboratory testing and phlebotomy, and emergency medical procedures.
Certification for Health Insurance Portability and Accountability Act (HIPAA) is offered. A course fee is required. Estimated yearly income for a Medical Assistant is $30,000. The Medical Assistant can find jobs in hospitals, clinics offices of physicians, podiatrists, chiropractors and other health practitioners.
Cluster
Agriculture, Food, and Natural Resources

Courses Offered to complete Horticulture Pathway:

- Intro To Horticulture
- Equipment Operations & Maintenance
- Landscape Technology
- Nursery, Greenhouse and Garden Center Technology
- Agriculture Work Based Credit

Certifications
OSHA
Outdoor Power Equipment Certification

Job Opportunities
Landscape Designer  Green House Manager
Nursery Technician  Golf Course Superintendent
Landscape Architect  Agricultural Educator

Student Interests
Do you prefer to work outside?
Are you creative and interested in designing things?
Would you like to join and participate in FFA activities?
Course Descriptions

Introduction to Horticulture- 1 unit
The Introduction to Horticulture course is designed to be an introduction to the Horticulture pathway. 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. This course is a prerequisite for all other horticulture courses.

Equipment Operation & Maintenance- 1 unit
This course is designed to teach students how to operate and maintain equipment commonly used in the agricultural industry. Typical instructional activities include hands-on experiences with agricultural power units; 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- 1 unit
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. 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.

Landscape Technology- 1 unit
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.
HVAC TECHNOLOGY

Cluster

Architecture & Construction

Description

This program provides students the basic knowledge of air conditioning systems, heating systems, and basic refrigeration. Basic electricity, electronic, refrigerant recovery, automobile a/c systems and pneumatic controls are studied. Students who successfully complete the required competencies will have the opportunity to participate in cooperative work experiences. Students earn 1 Carnegie unit for each course completed in this cluster.

Courses Offered to complete HVAC Technology Pathway:

- CORE
- HVAC 1
- HVAC 2
- HVAC 4
- HVAC 3
- Architecture & Construction Work Based Credit

Certifications

OSHA
NCCER
TAP Credit- Spartanburg Community College

Job Opportunities

HVAC Mechanic Sheet Metal Worker
Electrician Industrial Electronics Repairer
Building Maintenance Worker

Student Interests

Are you skilled with working with your hands?
Are you good at taking an item apart and putting in back together?
Do you like operating different types of tools to complete a job?
Law Enforcement Services

Cluster
Law, Public Safety, Corrections, and Security

Description
The Law Enforcement Services program prepares students for entry-level positions in local, state, and federal law enforcement agencies and private security. Students earn 1 unit for each course completed in this cluster and courses must be completed in succession. Introduction to Law and Public Safety is a prerequisite to Law Enforcement 1.

Courses Offered to complete Law Enforcement Pathway:

- Intro to Law and Public Safety
- Law Enforcement Services 1
- Law & Public Safety Work Based Credit
- Law Enforcement Services 2

Job Opportunities
- Law Enforcement Officer
- Corrections Officer
- Game Warden
- Detective/CSI
- Security Guard
- Border Patrol Officer

Student Interests
Do you like to help others solve problems?
Are you good at communicating with others?
Does responding to an emergency situation appeal to you?
Course Descriptions

Introduction to Law and Public Safety -1 unit
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. The course includes skills in each area of Law Enforcement Services and Fire Fighter and the community to help deliver instruction to the students. This course is a prerequisite for Law Enforcement 1.

Law Enforcement 1 (2 units- one unit each semester)
This is an introductory course designed to teach entry level requirements of a police officer. Instruction will include classroom lecture/demonstration and hands-on drills. Students will learn the duties and responsibilities of the police, courts and corrections. Included in this course are the historical development of the system and the study of landmark Supreme Court decisions that impact criminal justice. Students will participate in demonstrations of search and arrest techniques and fingerprinting and gain an understanding of forensic science and how it is used in the field, along with investigative procedures used to solve crimes.

Law Enforcement 2 (2 units – one unit each semester)
This course is a continuation of Law Enforcement 1, focusing on more advanced police officer techniques. Instruction will include classroom lecture, demonstration and hands-on drills. Students will learn report writing, felony traffic stops, testifying in court and many more procedures. Students will have the opportunity to become CPR certified in this course. Guest speakers from the law enforcement field will speak to students about their professions.
Manufacturing

Description

Machine Tool Technology students learn how to set up and operate standard machines to shape metal according to blueprint specifications. Equipment used includes the following: lathes, mills, band saws, and measuring instruments. Students will gain knowledge in blueprint reading, precision measuring equipment operation, and Computer Numerical Control (CNC) equipment. Courses in the pathway are 1 Carnegie unit of credit.

Courses Offered to complete Machine Tool Technology Pathway:

- CORE
- Machine Tool 1
- Machine Tool 2
- Manufacturing Work Based Credit
- Machine Tool 4
- Machine Tool 3

Certifications

- OSHA
- NCCER
- TAP credit- Spartanburg Community College

Job Opportunities

- Millwright, Tool & Die Maker, Computer Control Tool Programmer
- Quality Control Inspector, Computer Control Machine Tool Operator
- Industrial Engineer, Precision Assembler, Metallurgist

Student Interests

- Are you skilled with working with your hands?
- Are you good at taking an item apart and putting it back together?
- Do you like operating different types of tools to complete a job?
This course is designed to prepare students to perform entry-level masonry tasks. Students will receive instruction in creating durable surfaces and structures such as walkways, floors, walls and fireplaces. Skills include reading blueprints, measuring distances, calculating angles to align materials and marking guides to lay materials. Students learn to lay the foundation for a project and how to mix and spread mortar to hold materials together. Tools such as a trowel, hammer and rubber mallet will be used in this course. Students earn 1 Carnegie credit for each course completed in this cluster.

Certifications
OSHA
NCCER

Job Opportunities
Brick Mason  Stone Mason
Concrete Mason  Tile Setter
Construction Worker/Helper

Student Interests
Do you like working outdoors?
Are you good at managing your time and staying on task?
Do you like to handle and move objects?
Science, Technology, Engineering, and Mathematics

Description

The Science, Technology, Engineering, and Mathematics Cluster incorporates career opportunities in all aspects of engineering and engineering technologies. Students are engaged in courses that will expose them to scientific research and development and professional and technical services in engineering, including laboratory and testing services.

Courses Offered to complete Project Lead the Way Pathway

Required Courses
PLTW- Introduction to Engineering Design
PLTW- Principles of Engineering

Additional Courses
PLTW-Civil Engineering and Architecture
PLTW-Digital Electronics

Job Opportunities

Electrical Engineer
Civil Engineer
Mechanical Engineer
Engineer Technician

Student Interests

Do you like to find solutions to problems and turn your ideas into reality?
Are you interested in compelling, real-world challenges that will help them you become a better collaborator and thinker?
Do you want in-demand knowledge and skills you will use in high school and for the rest of your life, on any career path you take?
Course Descriptions

**Introduction to Engineering Design-1 unit**

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 use an engineering notebook to document their work.

**Principles of Engineering-1 unit**

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.

**Civil Engineering and Architecture- 1 unit**

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

**Digital Electronics-1 unit**

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.
**Project Lead the Way Articulation Agreements** - Students may receive college credit for the equivalent college courses offered. Below is a list of SC schools that accept PLTW courses and the courses accepted at each college.

The Citadel accepts Principles of Engineering.

Clemson accepts combinations of PLTW courses. Only Clemson University undergraduate students enrolled in General Engineering or an Engineering major will receive credit for these course. To be awarded credit, students must have: a minimum SAT score of 1200 or ACT score of 27; at least an 85% average grade in the pertinent PLTW courses; and a score of at least 80% on the college credit examination for the PLTW courses. Students who complete Principles of Engineering (POE) or Digital Electronics (DE) and Engineering Design and Development (EDD) will received credit for ENGR 120 (3 credits). Students who complete Introduction to Engineering Design (IED) and Aerospace Engineering (AE) or Civil Engineering and Architecture (CEA) or Computer Integrated Manufacturing (CIM) will receive credit for EG 209 (2 credits).

USC-Columbia accepts Principles of Engineering, Digital Electronics, and Intro to Engineering Design

South Carolina State University accepts Principles of Engineering.

Aiken Technical College accepts Digital Electronics and Intro to Engineering Design.

Central Carolina Technical College accepts Intro to Engineering Design.

Denmark Technical College accepts Intro to Engineering Design.

Florence-Darlington Technical College accepts Digital Electronics, Intro to Engineering Design, and Civil Engineering and Architecture.


Horry-Georgetown Technical College accepts Digital Electronics and Intro to Engineering Design.

Midlands Technical College accepts Digital Electronics and Intro to Engineering Design.


Spartanburg Community College accepts Digital Electronics and Engineering Design and Development.

Technical College of the Lowcountry accepts Principles of Engineering and Digital Electronics.

Tri-County Technical College accepts Digital Electronics and Intro to Engineering Design.


* To receive credit for these courses, students must meet course grade and college credit exam requirements.
Cluster

Information Technology

Courses Offered to complete Web & Digital Communications Pathway:

Required Courses
Fundamentals of Web Design and Development
Advanced Web Design and Development

Additional Courses
Advanced Animation
Entrepreneurship
Foundations of Animation
Game Design & Development
Social Media in Business

Certifications
Adobe Certified Associate-Web Communications with Adobe Dreamweaver
Adobe Certified Associate –Rich Media Communication with Adobe Flash
Autodesk User Certification for Maya

Job Opportunities
Web Designer
Graphic Designer
Computer Engineer
Game Programmer

Student Interests
Do you like working with computers and computer software?
Are you interested in learning about computer coding?
Do you want to work in a business environment with other computer professionals?
Course Descriptions:

Fundamentals of Web Design and Development- 1 unit
This course 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. Successful completion of this course will prepare students to take industry certification test(s).

Advanced Web Design and Development- 1 unit
This advanced course 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. Prerequisite: Fundamentals of Web Design and Development

Advanced Animation- 1 unit
Advanced Animation teaches students how to use Autodesk Maya to model, animate, and render with a focus on establishing a working knowledge of animation tools and techniques. Emphasis is placed on career awareness, fundamentals of modeling, storyboard creation, cameras and lighting. Students will learn how 3D technology is used for film, broadcast, and games and how it is rapidly becoming the medium of choice. Prerequisite: Foundations of Animation

Entrepreneurship- 1 unit
This course 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.

Foundations of Animation- 1 unit
This course prepares students to use artistic and technological foundations to create animations. The basic principles of digital animation are reviewed, including character development and story conception through production. Students learn the technical language used in the animation industry and basic animation methods. They will also learn techniques about various ways to plan, create, and prepare for animation in pre-production, production and post-production.
Game Design & Development - 1 unit

Game Design and Development is a course covering major aspects of game design including character and world development, game playing, game genres, and theories and principles of game design. Students will gain hands-on experience in simple game development. Concepts and practices will be explored to help students decide if they are interested in pursuing careers in game programming.

Social Media in Business - 1 unit

This course introduces students to the current field of social media and prepares them to explore and create successful social media strategies for businesses. It gives students the knowledge, tools, and methods to use different social media tools and networks in a business environment such as blogs, video and photo sharing sites, and other digital communication platforms.
Cluster

Manufacturing

Description

This two-year program is designed to develop the hands-on, manipulative skills in electric arc, mig, and tig welding. Students are also trained in torch cutting. Second year students are afforded the opportunity to build projects using skills learned. Articulation through Spartanburg Community College allows students to earn TAP credit at the high school level. Students mastering competencies may be eligible for cooperative work in local businesses/industries during the senior year. Students can earn 1 Carnegie unit for each course completed in this cluster.

Courses Offered to Complete Welding Technology

- Welding 1
- Welding 2
- Welding 3
- Welding 4

Certifications

- OSHA
- NCCER
- TAP Credit

Job Opportunities

- Welder
- Metal Fabricator
- Construction Worker
- Welding Inspector

Student Interests

Do you enjoy working with your hands and problem solving?
Would you be interested in learning a skill that pays well and offers employment anywhere in the world?
Do you like to be inspired to be your best and enjoy what you are learning?
9TH & 10TH GRADERS

CORE- Career Opportunity Readiness Exploration

Description

CORE is designed to be an introductory class for 9th and 10th graders attending I2. It will allow students to develop the basic employability skills business and industry demands in today’s workplace. Students will gain the preferred soft skills employers seek in order to present themselves in a professional manner for job interviews and other interactions with potential employers.

Students will also be given the opportunity to explore program areas offered in Architecture & Construction, Manufacturing, and Transportation, Distribution & Logistics clusters. Those 9th and 10th graders who are successful in CORE can move on to these program areas based on teacher recommendation and/or a grade of 80 or higher.

Certifications

OSHA
NCCER

Other Courses Available for 9th & 10th graders:

Animal Science
Health Science 1
Introduction to Culinary Arts Management
Introduction to Law & Public Safety
Introduction to Horticulture

Note: 10th Grade students may be able to sign up for first year programs based on availability and prerequisites. Available courses for 10th graders will be listed on the registration form.