PICKENS COUNTY CAREER & TECHNOLOGY CENTER COURSE GUIDE

In order to attend Pickens County Career and Technology Center, students must be enrolled in the one of the district's four public high schools. Once completing a PCCTC program and graduating from high school, students have four options available to them: continuing to a 4-year college/university; continuing to a technical college; entering the armed forces; or going directly into the workforce. Below is ls a list of available programs and courses. All of the courses offered provide an expansion of the high school curriculum through skill enhancement.

PROJECT LEAD THE WAY: PRE-ENGINEERING

This sequence of engineering honors courses which, when combined with the traditional mathematics and science courses in high school, introduces students to the scope, rigor and discipline of engineering. These courses provide students with the basic background needed to further their education in engineering or engineering technology. These courses were designed by the organization Project Lead the Way. You may check out the website at: (www.pltw.org). Successful completion of the courses (including an end of course exam) offers the opportunity for college credit at some universities and technical colleges.

Courses

Aerospace Engineering (AE)
Civil Engineering and Architectural (CEA)
Computer Integrated Manufacturing (CIM)
Digital Electronics (DE)
Engineering Design and Development (EDD)
Environmental Sustainability (ES)
Introduction to Engineering (IED)
Principles of Engineering (POE)

INTRODUCTION TO ENGINEERING DESIGN (IED)
Semester Course (1 unit)
Prerequisite: Algebra 1 (success in honors math is strongly suggested)
This course is recommended for students with a strong math and science background and an interest in engineering. This is an introductory course designed to develop the student's problem solving skills with emphasis placed upon the concept of developing a 3-D model or solid rendering of an object. Students focus on the application of visualization processes and tools provided by modern, state-of-the-art computer hardware and software. The course will emphasize the design development process of a product and how a model of that product is produced, analyzed and evaluated, using a Computer Aided Design System. Various design applications will be explored with discussion of possible career opportunities.
Students will pay a $20.00 materials fee.
NOTE: First priority will be given to rising ninth and tenth grade students.

PRINCIPLES OF ENGINEERING (POE)
Semester Course (1 unit)
Prerequisite: Successful completion of Introduction to Engineering Design
This course is designed to help students understand the field of engineering and engineering technology and its career possibilities. Students will develop engineering problem solving skills used in engineering careers by applying math and science skills learned in their high school classes. They will explore various engineering systems and manufacturing processes. They will also learn how engineers address concerns about the social and political consequences of technological change. The main purpose of this course is to experience, through theory and hands-on problem solving activities, what engineering is all about and to answer the question, "Is a career in engineering or engineering technology for me?"
Students will pay a $20.00 materials fee.

CIVIL ENGINEERING AND ARCHITECTURE (CEA)
Semester Course (1 unit)

Prerequisites: Introduction to Engineering Design and Principles of Engineering
Students learn about various aspects of civil engineering and architecture and apply their knowledge to the design and development of residential and commercial properties and structures. In addition, students use 3D design software to design and document solutions for major course projects. Students communicate and present solutions to their peers and members of a professional community of engineers and architects. Students will pay a $20.00 materials fee.

COMPUTER INTEGRATED MANUFACTURING SYSTEMS (CIM)
Semester Course (1 unit)
Prerequisites: Introduction to Engineering Design, Principles of Engineering
This course builds upon the computer solid modeling design skills developed in Introduction to engineering Design. Students will be presented with design problems that require the use of Inventor CAD software to develop solutions to problems. Students evaluate the solutions using mass property analysis (study of the relationship among design, function and materials used), make appropriate modifications and use prototyping equipment to produce three-dimensional models of the solutions. This course provides students with the essential knowledge and skills to design, build, and program a robot.
Students will pay a $20.00 materials fee.

AEROSPACE ENGINEERING (AE)
Semester Course (1 unit)
Prerequisites: Introduction to Engineering Design, Principles of Engineering
This 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. They also explore robot systems through projects such as remotely operated vehicles.

ENVIRONMENTAL SUSTAINABILITY (ES)
Semester Course (1 unit)
Prerequisites: Introduction to Engineering Design, Principles of Engineering
ES develops students' thinking skills and prepares them for emerging careers through topics such as genetic engineering, biofuels, and bio-manufacturing.

DIGITAL ELECTRONICS (DE)
Semester Course (1 unit)
Prerequisites: Introduction to Engineering Design, Principles of Engineering
DE is the study of electronic circuits that are used to process and control digital signals as opposed to analog signals that are varying. The major focus of the DE course is to expose students to the design process of combinational and sequential logic design, teamwork, communication methods, engineering standards, and technical documentation

ENGINEERING DESIGN AND DEVELOPMENT (EDD)
Semester Course (1 unit)
Prerequisites: Introduction to Engineering Design, Principles of Engineering,
This course lets students apply what they have learned in academic and pre-engineering courses as they complete challenging, self-directed projects. Students work in teams to design and build solutions to authentic engineering problems. This course equips students with the independent study skills that they will need in postsecondary education and careers in engineering and engineering technology. Students will pay a $20.00 materials fee.

PROJECT LEAD THE WAY: BIOMEDICAL SCIENCES

This is a two year sequence of biomedical honors courses which, when combined with the traditional mathematics and science courses in high school, introduces students to the scope, rigor and discipline of biomedical science. These courses provide students with the basic background needed to further their education in biomedical science and health care. These courses were designed by the organization Project Lead the Way. You may check out the website at: (www.pltw.org). Successful completion of the courses (including an end of course exam) offers the opportunity for college credit at some universities and technical colleges.

Course Sequence

Principles of Biomedical Sciences (PBS)
Human Body Systems (HBS)
Medical Interventions (MI)
Biomedical Innovations (BI)

PRINCIPLES BIOMEDICAL SCIENCES (PBS)
Semester Course (1 unit)
Prerequisite: Completed or enrolled in Honors Physical Science/ Honors Algebra 1/Honors Biology This course provides an introduction to the biomedical sciences through exciting "hands-on" projects and problems. Student work involves the study of human medicine, research processes and an introduction to bioinformatics. Students investigate the human body systems and various health conditions including heart disease, diabetes, sickle-cell disease, hypercholesterolemia, and infectious diseases. A theme through the course is to determine the factors that led to the death of a fictional person. After determining the factors responsible for the death, the students investigate lifestyle choices and medical treatments that might have prolonged the person's life. Key biological concepts including: homeostasis, metabolism, inheritance of traits, feedback systems, and defense against disease are embedded in the curriculum. Engineering principles including: the design process, feedback loops, fluid dynamics, and the relationship of structure to function are incorporated in the curriculum where appropriate. The course is designed to provide an overview of all the courses in the Biomedical Sciences program and to lay the scientific foundation necessary for student success in the subsequent courses. To be eligible for college credit a student will have to have at least a B average in the course and will also have to obtain the necessary score as determined by the colleges/universities that award credit for the course. College credit will have a cost depending on the college the student decides to use for transfer credit. There is a $35.00 lab fee (plus $15 if student wants a white lab coat) for this course. NOTE: Priority will be given to rising freshmen and sophomores.

HUMAN BODY SYSTEMS (HBS)
Semester course (1 unit)
Prerequisite: Successful completion of Principles of Biomedical Sciences with a 'B' average. Must have completed Honors Physical Science and Algebra 1 with a 'B' average in each. Using real-world cases, students take the role of biomedical professionals and work together to solve medical mysteries. Handson projects include designing experiments, investigating the structures and functions of body systems, and using data acquisition software to monitor body functions such as muscle movement, reflex and voluntary actions, and respiratory operation. Students examine the processes, structures, and interactions of the human body systems to learn how they work together to maintain homeostasis (internal balance) and good health. To be eligible for college credit a student will have to have at least a B average in the course and will also have to obtain the necessary score as determined by the colleges/universities that award credit for the course. College credit will have a cost dependent upon the college that the student chooses to award the credit. There is a $35.00 lab fee for this course (plus $15 for a lab coat if needed).

MEDICAL INTERVENTIONS (MI)
Semester course (1 unit)
Prerequisites: Completion or enrolled in Honors Chemistry/Honors Algebra II, completion of Principles of Biomedical Sciences and Human Body Systems with at least a 'B' average. In this class, students investigate the variety of interventions involved in the prevention, diagnosis and treatment of disease as they follow the lives of a fictitious family. The course is a "How-To" manual for maintaining overall health and homeostasis in the body as students explore how to prevent and fight infection, how to screen and evaluate the code in human DNA, how to prevent, diagnose and treat cancer, and how to prevail when the organs of the body begin to fail. Through these scenarios, students are exposed to the wide range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics. Each family case scenario introduces multiple types of interventions and reinforces concepts learned in the previous two courses, as well as presenting new content. Interventions may range from simple diagnostic tests to treatment of complex diseases and disorders. These interventions are showcased across the generations of the family and provide a look at the past, present and future of biomedical science. Lifestyle choices and preventive measures are emphasized throughout the course as well as the important roles scientific thinking and engineering design play in the development of interventions of the future. To be eligible for college credit a student will have to have at least a B average in the course and will also have to obtain the necessary score as determined by the colleges/universities that award credit for the course. College credit will have a cost dependent upon the college that the student chooses to award the credit. There is a $55.00 lab fee for this course.

BIOMEDICAL INNOVATION (BI)
Semester course (1 unit)
Prerequisites: Completion or enrolled in Honors Chemistry/Honors Algebra 2, completion of Principles of Biomedical Sciences, Human Body Systems, and Medical Intervention with at least a 'B' average in each course listed. This course is the capstone course for Project Lead the Way Biomedical Sciences curriculum. In this course students will design and conduct experiments related to the diagnosis, treatment, and prevention of disease or illness. They will apply their knowledge and skills to answer questions or to solve problems related to the biomedical sciences. They may work with a mentor or advisor from a university, hospital, physician's office, or industry as they complete their work. Students will provide their own transportation for their independent research project. Students will be expected to present the results of their work to an adult audience, which may include representatives from the local healthcare or business community or the school's PLTW® partnership team. To be eligible for college credit a student will have to have at least a B average in the course. College credit will have a cost dependent upon the college that the student chooses to award the credit. There is a $40.00 fee for this course (which will include the cost of the BLS certification card).

Southern Regional Educational Board (SREB) Courses
(Aerospace Engineering; Global Logistics & Supply Chain Management)

AEROSPACE ENGINEERING
Course Sequence
Aerospace Engineering 1 (Fundamentals of Aerospace Technology)
Aerospace Engineering 2 (Advanced Aerospace Technology)
Aerospace Engineering 3 (Aeronautics Engineering Applications)
Aerospace Engineering 4 (Astronautics Engineering Applications)

FUNDAMENTALS OF AEROSPACE TECHNOLOGY
Semester course (1 unit)
This project-based learning course engages students who are curious about aviation and aerospace careers. This course will introduce students to an engineering design process, tools to collect and analyze data, the science of aviation, materials and structures, and safety. Students will participate in real-world experiences such as designing, building and testing a pilot seat, kite, straw rocket and launcher, motor powered rocket and a model glider.

ADVANCED AEROSPACE TECHNOLOGY
Semester course (1 unit)
This course builds on the foundation of Course 1 and engages students in applying the design process, using tools to collect and analyze data, exploring a deeper level of the science of aviation and discovering how quality control systems work in the aviation field. Students will work collaboratively in teams to design, build and test a wing; plot a course for a plane to take off and land; design, build and test a wing attachment system; test materials under stress; and design, build and test an electric-powered plane. Students will demonstrate their newly acquired knowledge and skills by presenting their innovative ideas, techniques and solutions to business and industry partners.

AERONAUTICS ENGINEERING APPLICATIONS
Semester course (1 unit)
This project-based learning course is for students who have successfully completed Courses 1 and 2. Students will learn about systems such as flight control, remote-control vehicles and the virtual world. Students will learn to fly using flight simulators. They will work collaboratively to propose a shift from a VOR navigation system to a GPS system and determine the cost savings. In addition, students will develop rotor blades for helicopters and design and program an unmanned flying vehicle.

ASTRONAUTICS ENGINEERING APPLICATIONS
Semester course (1 unit)
Students in this capstone course will focus on outer space and underwater applications. During the six projects, they will work collaboratively to design, build and test a laser communication system; develop a plan for space survivability in hostile

environments; and utilize software to create a three-dimensional model of a satellite orbit and a team remote vehicle for underwater exploration. Depending on articulation agreements or state policy, students who successfully complete the course may be able to earn dual credit.

GLOBAL LOGISTICS & SUPPLY CHAIN MANAGEMENT

Course Sequence

Logistics 1 (Introduction to Logistics)
Logistics 2 (Functional Areas in Logistics)
Logistics 3 (Global Logistics Management)
Logistics 4 (Logistics and Supply Chain Management)

INTRODUCTION TO LOGISTICS

Semester course (1 unit)

This course engages students in solving contextual problems related to the concepts of supply chains, warehouse location, contingency planning, insourcing and outsourcing, and expanding existing supply chains. These concepts form the basis of global logistics and supply chain management and help students understand how professionals examine options to maximize the use of resources across distribution networks.

FUNCTIONAL AREAS IN LOGISTICS

Semester course (1 unit)

This course compels students to explore deeper understandings of the concepts they discovered in the previous course as they navigate projects on warehouse design, inventory management, transportation optimization, information technology, emergency responsiveness and the supply chain for manufacturing. Students use their experiences in this course to discover ways that professionals minimize the outlay of resources while improving efficiency and ability in the global market.

GLOBAL LOGISTICS MANAGEMENT

Semester course (1 unit)

This advanced course offers challenging projects that require students to look at the global implications of the industry in more earnest as they experiment with decisions over intermodal transportation, route selection, international shipping regulations, emergency preparedness, cultural awareness, business ethics and international trade restrictions related to a distribution strategy. Students develop their understanding of the industry in this course and truly build their awareness of the challenges of doing business in a world with multiple borders that must be traversed.

LOGISTICS AND SUPPLY CHAIN MANAGEMENT

Semester course (1 unit)

This advanced course allows students to see the implications of all the concepts they learned in the previous three courses as they consider environmental impact, selecting business partners in a global and domestic chain, information technology and decisions regarding e-commerce. Students explore the ongoing need to balance dependability and resource outlay in meeting customer demands around the world. Projects will expand students' decision-making skills as they tackle issues related to transportation, distribution networks and manufacturing.

HEALTH SCIENCE PATHWAYS

NURSING PATHWAY

Health Science 1
Health Science 2
Health Science 3
Health Science Clinicals
Medical Terminology

HEALTH SCIENCE 1
Semester Course (1 unit)
Health Science 1 is the first of four courses offered to students interested in pursuing a career in the healthcare field. During this first course students are introduced to healthcare history, careers, law and ethics, cultural diversity, healthcare language and math, infection control, professionalism, communication, basics of the organization of healthcare facilities, and types of healthcare insurance. Students get a good grasp 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 hear from guest speakers in the healthcare field. Students will learn first-aid procedures. The skills and knowledge that students learn in Health Science 1 serve to prepare them for future clinical experiences such as job shadowing or internships as they advance in the Health Science courses.

General Requirements – This course is recommended for students in grades 9 or 10. Biology is recommended as a pre or corequisite. Students should have an interest in learning about all facets of healthcare. To advance to Health Science 2, it is required that students should have a 75 score or higher in Health Science 1. Students may earn certification in the American Heart Association's Heartsaver First Aid Course, including CPR and the use of an AED. COST: Supply Fee - $30.00.. Optional Cost: HOSA - $35.00

HEALTH SCIENCE 2
Semester Course (1 unit)
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 about the stages of life and Maslow's Hierarchy of needs. 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 be certified in American Heart Association Basic Life Support (BLS) in this course. Career pathways and scenarios are introduced through each section. This course is recommended for students in the 10th grade who have successfully completed Health Science 1 with a 75. This course provides a foundation for further advancement in Health Science. It is required that students should score a 75 or higher in this course to advance to Health Science 3. COST: $30.00 Optional Cost: HOSA - $35.00

HEALTH SCIENCE 3
Semester Course (1 unit)
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. Students will job shadow at local healthcare facilities. This course does not count as a lab science. To take this class, a grade of 75 or higher in all previous Health Science classes is required. Students are recommended to be First Aid and CPR certified prior to this course. Students should be familiar with general medical terminology as well as technical skills associated with vital signs. (Skills learned in HS2). Students are responsible for providing their own transportation to and from job shadowing and purchasing appropriate scrubs. Students are also responsible for any vaccines or blood tests required by the healthcare facility. This is the

3rd course in a 4 course sequence for Health Science. COST: Supply fee - $30.00 plus the additional cost of scrubs, Flu vaccine, and a two-step PPD test.

HEALTH SCIENCE CLINICAL STUDY
Semester Course (2 units) Grade Level: 12
(Nurse Aide Training or other Clinical Experience)
Health Science Clinical Study is a course that guides students to make connections from the classroom to the healthcare industry through work –based learning 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 student, teachers and work-based learning coordinators will work together to create opportunities for the students to get the best experience available in the districts geographic region. Students in this course should be First-Aid and CPR certified before participating in any healthcare experience outside of the classroom. Nurse-Aide candidates: under the direction and supervision of a registered nurse, students are prepared to perform nursing related services to patients and residents in hospitals or long-term care facilities. For Nurse –Aide programs students will review all foundation standards in the clinical study program as well as the addition of the South Carolina Nurse Aide Curriculum found in the training program packet http://www.asisvcs.com/publications/pdf/074118.pdf This course meets all DHHS federal and state requirements for a certified nurse aide program in an approved NA training facility. Students are responsible for providing their own transportation to and from clinicals and purchasing appropriate scrubs. Students are also responsible for any vaccines or blood tests required by the healthcare facility.

General Requirements: Prerequisites are Health Science 1, 2 & 3 with a grade of 75 or higher in each course. Students enrolled in this course as their 4th earned unit are considered completers in the Health Science Program and are expected to take the end of program National Health Science Assessment.

Approximate cost: Clinical Rotation - $150 Nurse Aide Exam - $101 CPR Certification - $5 HealthCenter21 - $20 Lab Fee - $25. The approximate cost does not include: Scrubs, vaccines, drug screening test. HOSA dues optional, but highly recommended - $35

MEDICAL TERMINOLOGY
Semester Course (2 units)
This semester course introduces the fundamental principles of medical terminology and includes a survey of human anatomy and physiology. College credit may be earned by articulation with Tri-County Technical College and Greenville Technical College. Recommended pre-requisites or co-requisites for the course are Biology and Chemistry. Cost for course is $5 for materials. HOSA dues of $25 are optional, but highly recommended.

SPORTS MEDICINE PATHWAY

Course Sequence

Sports Medicine 1
Sports Medicine 2
Health Science 3
Sports Medicine Work-based

SPORTS MEDICINE 1
Semester Course (1 unit)
This course is designed as an introduction for those students interested in sports medicine career exploration, anatomy, kinesiology, athletic injuries, principles of safety, first aid, CPR/AED, nutrition, protective sports equipment, environmental safety issues, and principles of taping and wrapping. At a minimum, students may earn First Aid certification through the American Heart Association. Cost for course supplies and certification processing is $30.

SPORTS MEDICINE 2
Semester Course (1 unit)

Prerequisite: Students must have successfully completed Sports Medicine and other Health Science courses with an 75% or higher. 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. Other career roles in Sports Medicine will be discussed as the class takes the injured athlete through the pathway of recovery. Students may earn Basic Life Support certification through the American Heart Association during this course. Cost for course supplies and certification processing is $30..

HEALTH SCIENCE 3 for Sports Medicine Students
Semester Course (1 unit)
Prerequisite: Students must have successfully completed previous Sports Medicine 1 and Sports Medicine 2 with an 75% or higher and/or teacher recommendation. This course acquaints students with basic anatomy and physiology of the human body with a sports medicine emphasis. Students learn how the human body is structured and the function of each of the body systems. Students will study the relationship that body systems have with disease from a sports medicine point of view. This course is one of three completer courses for the sports medicine track. Other Sports Medicine completer course options include PLTW HBS or Medical Terminology. Cost for course supplies is $30.

SPORTS MEDICINE WORK-BASED CREDIT
Semester Course (1 unit)
Prerequisite: Successful completion of two Sports Medicine courses plus BLS certification. Students are able to obtain credit for their volunteer or job-shadowing experiences in the field of sports medicine. This course is a structured, stand-alone course that is taken in a CATE Classification of Instructional Programs (CIP)-coded program. Each work-based learning (credit bearing) course has an assigned CATE course code. The guidelines listed in the CATE Work-Based Learning Implementation Guide must be followed in order to award the Carnegie unit of credit upon successful completion of the course. Students completing 120 hours of experience will earn 1 credit.

AGRICULTURAL PATHWAYS

AGRICULTURAL MECHANICS PATHWAY

Courses

Agricultural Mechanics and Technology for the Workplace 1
Agricultural Mechanics and Technology for the Workplace 2
Agriculture Science
Agribusiness and Marketing
Biosystems Mechanics & Engineering
Equipment Operations and Management

ENVIRONMENTAL & NATURAL RESOURCES PATHWAY

Courses

Agriculture Science for the Workplace
Aquaculture
Agribusiness and Marketing
Environmental and Natural Resources
Floriculture
Outdoor Recreation
Nursery & Greenhouse
Wildlife Management

ANIMAL SCIENCE PATHWAY

Courses

Agribusiness and Marketing
Equine Science
Small Animal
Veterinary Science for the Workplace 1
Veterinary Science for the Workplace 2

AGRIBUSINESS AND MARKETING

The course in Agricultural Business and Marketing is designed for the student who plans to seek employment, management, or further their education in the agriculture industry. This course is cooperative learning based with placement at the responsibility of the individual student with district approval. Students must submit the district work-based learning packet, obtaining placement in a related area, in the semester prior to which the student is enrolled. Student transportation is not provided. Students must be completers of the Plant & Animal Systems, Horticulture, or Environmental Natural Resources Pathway. A $30.00 agricultural activity fee is utilized which covers FFA activities and awards, at tee shirt and some class equipment.

AGRIBUSINESS AND MARKETING: AG MECHANICS

This course is a component of the Agriculture, Food and Natural Resources pathways including Horticulture, Agricultural Mechanics and Technology, and Plant and Animal Systems. The course is designed for the student who plans to seek employment on, manage, or own a farm; or seek employment in an agribusiness field. Students will be involved in learning activities that generally prepare him/her to apply the economic and business principles involved in the organization, operation, and management of the farm, ranch, or agribusiness. Typical instructional activities include hands-on experiences with applying modern economic and business principles involved in the organization, operation, and management of agricultural businesses including the production and marketing of agricultural products and services; applying computer application models; participating in personal and community leadership development activities; planning and implementing a relevant school-to-work transition experience; and participating in FFA activities is required. A separate application and interview is required which will be scored with a rubric to determine a student's admittance into the course. Offered on B day afternoons. Ag. Fees are $30.00 a year which includes a T-shirt. Must be a senior level student who has successfully completed the junior year in an agriculture course, has received the FFA Chapter Degree, and submitted an application to the career center.

AGRICULTURAL MECHANICS AND TECHNOLOGY FOR THE WORKPLACE 1

Year Course (2 units)

The courses in Agricultural Mechanics and Technology are designed to give students basic knowledge and skills in the many mechanical fields relating to the agricultural industry. Instructional activities are designed to teach technical knowledge and skills in selling, selecting, and servicing agricultural equipment and facilities, including computers, gasoline, diesel and electrical power units, machinery, equipment, structures and utilities. Typical instructional activities include hands-on experiences in woodworking, metal working; welding, small engine repair, electrification and electrical motors along with basic farm construction and homestead improvements. Participation in personal and community leadership development activities will be offered through the FFA chapter and classroom activities. All qualified students have opportunities for work based learning through a Supervised Agricultural Experience Program. The Agricultural Activity Fee is $45 for the year and it covers (2) tee-shirts, 1 each semester.

AGRICULTURAL MECHANICS AND TECHNOLOGY FOR THE WORKPLACE 2

Year Course (2 units)

Prerequisite: Agricultural Mechanics and Technology for the Workplace 1

The courses in Agricultural Mechanics and Technology are designed to qualify the student completing the courses for job entry into farm, business, or industrial phases of agricultural mechanics or to continue advanced training in post-secondary 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 agribusiness technical equipment and facilities, including computers, power units (tractors, small engines, turf equipment and grading equipment), machinery and equipment, structures and utilities. Typical instructional activities include hands-on experiences with: 1) agricultural power units with both diesel and gasoline engines; 2) power transfer through means such as chains, transmissions, hydraulics; 3) applied metal and woodworking fabrication methods; and 4) applied construction such as fencing and livestock housing. All students are expected to participate in personal and community leadership development activities by planning and participating in FFA activities. This is a list of core competencies

to be completed in one year by each student enrolled in these courses. The teacher may select additional competencies based on a local needs assessment. All qualified students have opportunities for work based learning through a supervised Agricultural Experience Program. The Agricultural Activity Fee is $45 for the year and it covers (2) tee-shirts, 1 each semester.

AGRICULTURAL SCIENCE - INTRO

Semester Course (1 unit)

Be a part of the nation's largest and most vital industry of agriculture, accounting for 20% of the nation's workforce and offering an exciting variety of career opportunities. This course is a semester long introductory course in wildlife, plant science, animal science and basic agricultural mechanics skills. Learning activities are varied with classroom, laboratory, and field experiences will be emphasized in all areas of study. Hands on applications will be emphasized in all areas of study. Students taking agriculture classes will have the opportunity to participate in the FFA organization, a student agriculture leadership association. A $25.00 agricultural activity fee is utilized which covers FFA activities and awards, a tee shirt, and some class equipment.

AGRICULTURE SCIENCE FOR THE WORKPLACE

Year Course (2 units)

The Agricultural Science and Technology course is designed to teach essential concepts and understanding related to plant and animal life including biotechnology, the conservation of natural resources, and the impact of agriculture and natural resource utilization on the environment. Emphasis is placed on the role of agriculture in our society and the importance of agriculture to the welfare of the world. Basic personal and community leadership and safety, and agricultural mechanical technology are included as a part of the instructional program. Each student is expected to design and participate in a supervised agricultural experience. Typical learning activities include hands-on learning experiences including performing basic principles of plant, soil, and animal science; studying and modeling the significance of humankind's interrelationship with soil, water, and air; participating in FFA activities. NOTE: A $30.00 agricultural activity fee is utilized which covers FFA activities and awards, a tee shirt, and some class equipment.

AQUACULTURE

Semester Course (1 unit)

The Aquaculture course is designed to teach knowledge and skills required for job entry into alternative agriculture through the husbandry of aquatic plants and animals. The ultimate objective of this course is to help students plan, build, stock, and run aquaculture facilities of varied sizes. Aquaculture projects require planning and management comparable to any other commercial endeavor. Typical learning activities include selecting a site, evaluating soil types, selecting equipment and planning a facility, managing water quality to promote good health and growth of selected aquatic species, participating in FFA personal and leadership development activities, and planning and conducting a supervised occupational experience program relevant to aquaculture. A $25.00 agricultural activity fee is utilized which covers FFA activities and awards, a tee shirt, and some class equipment.

BIOSYSTEMS MECHANICS & ENGINEERING

Semester Course (1 unit)

All of agriculture is dependent on mechanization and technology. The Mechanics and Engineering course is designed to teach basic physical science skills in relation to agricultural engineering. In addition it provides for the development of general mechanical skills that are required in all areas of agricultural industry. Typical instructional development of general mechanical skills that are required in all areas of the agricultural industry. Typical instructional activities include hands-on experiences in developing research projects to examine ways to utilize agricultural crops in unique ways, to include, the development of biofuels and other alternative energy sources and to discover new uses for agricultural products. Students will be involved in design and fabrication projects involving wood, metal and plastics. Energy and environmental projects will also be implemented that will utilize real life situations relevant to agricultural industries. In addition, students will participate in personal and community leadership development activities, plan and implement a relevant school-to-work transition experience, and participate in FFA activities. A $25 agricultural activity fee covers FFA activities and awards, a T-shirt, and some class equipment.

EQUINE SCIENCE

Semester Course (1 unit)

This course is designed to help students learn specific concepts and principles about the science of horses and how these concepts and principles relate to horse management. This course will help the students to learn about careers related to horse management and help them determine their interest in such careers. Emphasis is on horse management, care, and career opportunities in equine science. Topics of study include the selection of foundation stock, anatomy, nutrition, exercise physiology, diseases, reproduction, and genetics of horses. Supervised agricultural experience programs and the FFA

leadership activities are integral components of the course and provide many opportunities for practical application of instructional competencies. **This is **not** a riding class.** Students are encouraged to join and participate in FFA. A $25.00 agricultural activity fee is utilized which covers FFA activities and awards, a tee shirt and some class equipment.

EQUIPMENT OPERATION AND MAINTENANCE
Semester Course (1 unit)
Today's modern agriculture needs power equipment to function efficiently. This course is designed to teach students how to safely operate and maintain equipment commonly used in the agricultural and turf industries: such as farm and utility tractors, all-terrain vehicles and utility vehicles; lawn and turf equipment; skid loaders and earth moving equipment; hay and forage equipment; tillage and plowing equipment. Other equipment that will be studied will include small 2-cycle power equipment such as chainsaws and string trimmers. Hands on activities maintaining gasoline, diesel and electrical power units will be utilized. Typical instructional activities include hands-on experiences with agricultural power units; participating in personal and community leadership development activities; planning and implementing a relevant agricultural school-to-work experience program; and participating in FFA activities. A $25.00 agricultural activity fee is utilized which covers FFA activities and awards, a tee shirt and some class equipment.

ENVIRONMENTAL AND NATURAL RESOURCES
Semester Course (1 unit)
Environmental and Natural Resource is the introductory course for the Environmental and Natural Resources is a combination of subject matter and planned learning experiences on the principles 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. Typical learning activities include constructing a model watershed; identifying and/or measuring the levels of air, water, noise, and solid waste pollution in a selected site; participating in hands-on experiences with site analysis; evaluating competing interests; and analyzing biological and physical aspects of the environment and environment-related issues including methods of abating and controlling pollution. Students participate in personal and community leadership development activities, plan and implement a relevant school-to-work transition experience, and participate in FFA activities. A $25.00 agricultural activity fee is utilized which covers FFA activities and awards, a tee shirt, and some class equipment.

OUTDOOR RECREATION
Semester Course (1 unit)
This course is a combination of subject matter and planned learning experiences on the principles involved in outdoor safety, planning outdoor recreational activities, designing parks and special use areas, and outdoor recreational resources on public lands. Instruction also emphasizes such factors as the establishment, management, and operation of land for recreational purposes. Typical learning activities include hunter and boater education; ATV safety; Survival and first aid techniques; planning, designing and maintaining an outdoor recreational area; and participating in personal and community leadership development activities; planning and implementing a relevant school-to-work transition experience; and participating in FFA activities..** Students are encouraged to join and participate in FFA. A $25.00 agricultural activity fee is utilized which covers FFA activities and awards, a tee shirt and some class equipment.

SMALL ANIMAL CARE
Semester course (1 unit)
A semester long course aimed at those who wish to care for dogs, cats and small animals in a professional capacity with an emphasis on anatomy, nutrition requirements, classifications, breed characteristics, handling/training, grooming, and reproduction. Classroom and laboratory activities are supplemented through supervised agricultural experiences (SAE) and FFA leadership programs and activities. Students are encouraged to join and participate in FFA. A $25.00 agricultural activity fee is utilized which covers FFA activities and awards, a tee shirt and some class equipment.

NURSERY and GREENHOUSE
Semester Course (1 units)
This course gives practical experiences related to the culture of plants used principally for ornamental or aesthetic purposes. Students learn how to establish, maintain, and manage ornamental horticulture enterprises. Propagation, growing, and maintaining plants, shrubs, and trees; designing, establishing, and maintaining landscapes; vegetable and fruit production; sales analysis and management; participating in personal and community leadership development are reinforced in this course. Students will be working towards Master Gardener certification. They will be expected to purchase a manual

(approximately $30.00). Students are encouraged to join FFA. A $30.00 agricultural activity fee is utilized which covers FFA activities and awards, a tee shirt and some class equipment.

VETERINARY SCIENCE FOR THE WORKPLACE 1
Year Course (2 units)
This course covers the scientific study of the husbandry of animals. Instruction is included on livestock species selection, husbandry and techniques, equipment operation and maintenance, reproduction and herd health, feeding systems and nutrition, maintenance and use of records, critical thinking and problem-solving skills, effective working relationships with personnel and professionals, and other manager responsibilities. Career opportunities and educational preparation are examined. Classroom and laboratory activities are supplemented through supervised agricultural experiences and FFA leadership programs and activities. Students are encouraged to join and participate in FFA. A $45.00 agricultural activity fee is utilized which covers FFA activities and awards, at tee shirt and some class equipment.

VETERINARY SCIENCE FOR THE WORKPLACE 2
Semester Course (2 units)
Prerequisite: Animal Science for the Workplace 1
This course introduces students to the general concepts and principles related to Veterinary Science and associated processes, industries, and occupations of all animal species. Emphasis is placed on career opportunities, animal nutrition and husbandry, pharmacology, and health and management of animals. Critical thinking and reasoning, and oral and written communication skills are reinforced in this course. Supervised agricultural experience (SAE) programs and the FFA leadership activities are integral components of the course and provide many opportunities for practical application of instructional competencies. Students may purchase another uniform shirt (embroidered with name and school) if needed. Students are encouraged to join and participate in FFA. A $45.00 agricultural activity fee is utilized which covers FFA activities and awards, at tee shirt and some class equipment.

WILDLIFE MANAGEMENT
Semester Course (1 unit)
Prerequisite Environmental and Natural Resources Management
The Wildlife Management course is designed to be introductory course for the Environmental and Natural Resources pathway. The course is a combination of subject matter and planned learning experiences on the principles 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. A $25.00 agricultural activity fee is utilized which covers FFA activities and awards, a tee shirt, and some class equipment.

ARTS, AV TECHNOLOGY AND COMMUNICATIONS PATHWAYS

GRAPHIC COMMUNICATIONS

Course Sequence

Graphic Communications 1
Graphic Communications 2
Graphic Communications 3
Graphic Communications 4

GRAPHIC COMMUNICATIONS 1
Semester Course (1 unit
This course is designed to introduce students to the area of layout and design on Macintosh computers. A student will learn the use of computers, scanners, and various software to generate documents such as newspapers, business forms, brochures, stationery incorporating photographs, artwork, and text.-Screen printing is also introduced in this class. Students will pay a $10.00 materials fee. NOTE: Successful completion of this course fulfills the computer science requirement for graduation.

GRAPHIC COMMUNICATIONS 2
Year Course (2 units)
The Graphic Communication 2 course is designed to provide students with a broad scope of graphic communication tasks. The curriculum includes instruction in layout and design on Macintosh computers, copy preparation, plate making, presswork and finishing. The course is directed to students with no previous knowledge of the printing industry. The students will also be exposed to digital imaging, the use of digital cameras, as well as video production. An introduction to screen-printing is also included in the Graphic Communication 1 course. Students have the opportunity to participate in leadership activities by joining the SkillsUSA Club for $15.00. Students will also pay a $10.00 materials fee. NOTE: This course is offered on "A" day. Successful completion of this two year course fulfills the computer science requirement for graduation.

GRAPHIC COMMUNICATIONS 3
Semester Course (2 units)
Prerequisite: Graphic Communications 1, 2
The Graphic Communication 3 course is designed to give students advanced skills in offset lithography. Students will increase their knowledge of the printing industry and prepare for employment in the field. Students will continue to work on Macintosh computers, screen print and work with digital imaging equipment. Students will also pay a $10.00 materials fee. NOTE: This course is offered on "A" and "B" days first semester.

GRAPHIC COMMUNICATIONS 4
Semester Course (2 units)
Prerequisites: Graphic Communications 1, 2, 3
The Graphic Communication 4 course builds on techniques and practices mastered in the previous courses. It introduces more in-depth instruction and "hands on" training including video production. This course is offered on "A" and "B" days second semester.

CONSTRUCTION PATHWAYS

BUILDING CONSTRUCTION

Course Sequence

Building Construction 1
Building Construction 2
Building Construction 3
Building Construction 4

BUILDING CONSTRUCTION 1
Semester Course (1 unit)
Building Construction 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. Students will experience hands-on projects that will be related to the construction process.

BUILDING CONSTRUCTION 2
Year Course (2 units)
Prerequisites: Building Construction 1
Building Construction prepares individuals to apply technical knowledge and skills in the building, inspecting, and maintaining of structures and related properties. This course will include instruction in masonry, concrete forming & pouring, carpentry, building/construction finishing, management, inspection, and other construction-related applications. Students who finish the course and take the extra classes will graduate with a NCCER certification and a 10-hour OSHA safety card. Students will pay a $30.00 class fee. This includes becoming a member of Skills-USA, materials fee, and safety glasses.
NOTE: This course is offered on "A" day.

BUILDING CONSTRUCTION 3
Semester Course (2 units)
Prerequisites: Building Construction 1 & 2
Building Construction prepares individuals to apply technical knowledge and skills in the building, inspecting, and maintaining of structures and related properties. This advanced course will include instruction in masonry, concrete forming & pouring, carpentry, building/construction finishing, management, inspection, and other construction-related applications. Students will be working on various jobs, off campus as a class, to further their construction experience. Students who finish the course and take the extra classes, will graduate with a NCCER certification and a 10-hour OSHA safety card. Students will pay a $55.00 class fee. This includes becoming a member of Skills-USA, materials fee, safety glasses, and the 10-hour OSHA certification.
NOTE: This course is offered on "A" and "B" days first semester.

BUILDING CONSTRUCTION 4
Semester Course (2 units)
Prerequisites: Building Construction 1, 2 & 3
This advanced Building Construction class prepares students in all phases of construction. Residential and Commercial construction will be covered in this course. Students will build foundations, retaining walls, floor systems, framing walls, and commercial masonry walls. Students will continue to work on jobsites, as a class, to further their construction experience. Students will also have the opportunity to compete in state competitions. After completion of Building Construction 2, students will also have the opportunity to enroll in a school-to work activity. Students can enter the construction field, continue receiving credit, while getting paid on the job. Students who finish the course, pass the end-of-course test, and take the extra classes will graduate with a NCCER certification and a 10-hour OSHA safety card. Students will pay a $10.00 materials fee.
NOTE: This course is offered on "A" and "B" days second semester.

ELECTRICITY

Course Sequence

Electricity 1
Electricity 2
Electricity 3
Electricity 4

ELECTRICITY 1
Semester Course (1 unit)
Electricity courses provide a survey of the theory, terminology, equipment, and practical experience in the skills needed for careers in the electrical field. These courses typically include AC and DC circuitry, safety, and the National Electrical Code and may cover such skills as those involved in building circuits; wiring residential, commercial, and/or industrial buildings; installing lighting, power circuits, and cables; and estimating job costs. As students' progress, their projects become more complex and expansive. In these courses, safety is stressed, and a career exploration component may be offered.

ELECTRICITY 2
Year Course (2 units)
Prerequisite: Electricity 1
This course, offered on A days, introduces students to the basic theory of residential electricity. Emphasis is placed on safety and the National Electrical Code. Students will work on real job situations to put into practice the theory they have learned. Students have the opportunity to develop their leadership skills by joining the SkillsUSA Club ($15). Qualified students have the opportunity to participate in electrical wiring and leadership contests at both the district and state level. Students will experience on the job training while installing electrical wiring in off campus projects. Students will be certified in the latest modules offered by the National Center for Construction Education and Research. As jobs become available, students will be placed on internship while being employed in a summer job with an electrical company. Students will pay a materials fee of $10.00.

ELECTRICITY 3
Semester Course (2 units)
Prerequisite: Electricity 1 & 2
This course is a continuation of the first year course with more in-depth study of electrical theory and its application as it applies to residential, commercial and industrial electrical systems. Youth Apprenticeship and school-to-work opportunities are available for qualifying students. Qualified students have the opportunity to participate in electrical wiring and leadership contests at both the state level. Certifications available for students include CPR, National Center for Construction Education and Research, and the 10 hour OSHA certification (at a cost of $5 to the student). Students will pay a materials fee of $10.00.

ELECTRICITY 4
Semester Course (2 units)
Prerequisites: Electricity 1, 2 & 3
This course is designed to prepare students to perform electrical wiring tasks under the supervision of an experienced electrician. Students will experience on-the-job training through the school-to-work program. Electricity 3 students will receive training in industrial motor control wiring, which involves blueprint reading, alarm systems, relays, timers, communication controls, controls and devices and motor characteristics. Certifications available for students include CPR, National Center for Construction Education and Research, and the 10 hour OSHA certification (at a cost of $5 to the student). Students can receive TAP credit towards an associate's degree in Industrial Electronics at TriCounty Technical College.

HOSPITALITY AND TOURISM PATHWAY

CULINARY ARTS
Course Sequence
Introduction to Culinary Arts
Culinary Arts 1
Culinary Arts 2
Baking and Pastry

CULINARY ARTS 1
Semester Course (1 unit)
Prerequisite: None
This course (ProStart 1) prepares students for gainful employment and/or entry into postsecondary education in the food production and service industry. Content provides students the opportunity to acquire marketable skills by examining both the industry and its career opportunities. Laboratory experiences simulate commercial food production and service operations. Students will have an opportunity to join and participate in SkillsUSA, FCCLA, and ProStart Competitions. Students will also be required to take the ServSafe Examination upon completion of our 8 week Sanitation course. Full Uniforms including Chef jacket, Chef pants, Chef hat, and black skid resistant shoes are required for this course. This course is offered to juniors on A-day. Estimated Program Fees are $80.00 and include uniform. FCCLA and SkillsUSA dues are additional and SkillsUSA membership ($15) is required. Competitions will require additional fees.

CULINARY ARTS 2
Semester Course (1 unit)
Prerequisite: Culinary Arts 1
This course (ProStart 2) prepares students for gainful employment and/or entry into postsecondary education in the food production and service industry. Content provides students the opportunity to acquire marketable skills by examining both the industry and its career opportunities. Additionally students will focus on Culinary Math and Menu Planning in addition to the emphasis on skills and ethics of the hospitality industry. Students will have an opportunity to join and participate in SkillsUSA and ProStart Competitions. Laboratory experiences simulate commercial food production and service operations. Integration of the Family and Consumer Sciences student organization, Family Careers, and Community Leaders of America (FCCLA), greatly enhances this curriculum. Full uniforms including Chef jacket, Chef pants, Chef hat, and black skid resistant shoes are required

for this course. Estimated Program Fees are $80.00 and include Uniform. FCCLA and SkillsUSA dues are additional and SkillsUSA membership ($15) is required. Competitions will require additional fees. NOTE: This course is offered on "A" and "B" days first semester.

BAKING and PASTRY
Semester Course (2 Units)
Baking and Pastry for secondary students is a course that provides students an opportunity to develop foundational skills needed for a seamless transition to a postsecondary program, workforce, or military. Students will develop advanced skills in safety and sanitation in addition to management and professionalism. Specialized content includes units on formulas and techniques, basic baking principles, specialized dietary baking, breads, desserts and pastries, and advanced techniques for specialty cakes, confections, piping, plate presentation, and flavor pairing. Concepts are aligned with competencies from the American Culinary Federation (ACF) Education foundation assessment, ACF Retail Commercial Baking Certification.

LAW ENFORCEMENT AND FIREFIGHTING PATHWAYS

LAW ENFORCEMENT SERVICES
Course Sequence
Introduction to Law & Public Safety
Law Enforcement Services 1
Law Enforcement Services 2

FIREFIGHTING SERVICES
Course Sequence
Introduction to Law & Public Safety
Fire Fighting 1 (Must be 16 before first day of school)
Fire Fighting 2

LAW ENFORCEMENT SERVICES 1
Yearlong course (2 units)
This course is for students interested in pursuing a career in the Criminal Justice field or in Homeland Security. This course can be taken by rising sophomores and juniors. It is a year-long course. Students will learn about self-defense, police tactics, criminal law, crime scene investigation, courtroom procedures, terrorism response, public safety mobilization in mass casualty incidents, and CPR/First Aid. This is a physical course. Students are required to join their fraternal organization, SkillsUSA, to develop additional employability and leadership skill. Students will be certified in CPR/First Aid through the American Red Cross. There is a $50.00 fee to offset the cost of: CPR/First Aid Training ($35.00) and SkillsUSA Membership ($15.00).

LAW ENFORCEMENT SERVICES 2
Semester Course (1 unit)
Prerequisites: **Law Enforcement Services 1**
This course is offered for students who are interested in a career in the Criminal Justice Field and builds on **Law Enforcement Services I**. Students will receive instruction in collection of evidence, forensics, investigative techniques, criminology, constitutional law, interviewing, report writing, 911 communications, domestic violence, terrorism response, court testimony and CPR for the Professional Rescuer. This is a physically active and challenging course. Students are required to join their fraternal organization, SkillsUSA, to develop additional employability and leadership skills.
This course is offered on A-day afternoons. This is a year-long course.
Students will be certified as 911 Telecommunicators through the Pickens County 911 office.
Students will also receive certification in CPR for the Professional Rescuer
There is a $50.00 fee to offset the costs of:

CPR for the professional rescuer certification - $30.00
SkillsUSA Membership - $15.00
CPR mask - $10

INTRODUCTION TO LAW and PUBLIC SAFETY
Semester Course (1 unit)
This course provides basic career information in public safety including corrections, 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 for students interested in law enforcement services.
There is a $50 class fee.

FIRE FIGHTING 1 (MUST BE 16 YEARS OLD BEFORE AUGUST 20, 2018)
Yearlong course (2 units)
This course is for students interested in going into fire and emergency medical services. Students will be introduced to basic fire chemistry, use of fire extinguishers, firefighting protective gear, the use of self-contained breathing apparatus, search and rescue, fire appliances and hoses, ladders, and knots. This is a physically active and demanding course. Students will be climbing ladders, carrying hoses, doing building searches, lifting victims and doing maintenance on the equipment and the fire truck. Students will be certified in Red Cross CPR/First Aid.
Class Fee - $35 for CPR/First Aid certification

FIRE FIGHTING 2
Semester Course (1 unit)
Prerequisites: Firefighting 1
Prerequisites: You must be 16 years of age. You must also have a physical. SDPC sports physicals are acceptable.
Upon satisfactory completion of all testing on both content and hands on skills, students will be certified as a **Fire Fighter I** through the S.C. Fire Academy. Students will learn about fire chemistry, fire extinguishers, protective gear, the use of self-contained breathing apparatus, search and rescue, fire appliances and hoses, ladders, mass casualty events, incident management, setting up a fire attack, emergency vehicle operations, pump operations, hazardous materials, and terrorism response. This is a physically active and demanding course. There will be daily work such as climbing ladders, carrying hoses, doing building searches, and doing maintenance on the equipment and the fire truck.
NOTE:
Students upon satisfactory completion of all testing, will be certified as **Firefighter I** in the state of S.C.
You must have a physical to take this course.
You must be 16 to enroll in this course.
There is a $65 class fee to offset the costs of:
BSA Explorer fee (includes insurance) - $25
Professional Rescuer CPR certification or recertification - $30
Fire Academy course fees - $10

MANUFACTURING PATHWAYS

MACHINE TECHNOLOGY
Course Sequence
Machine Technology 1
Machine Technology 2
Machine Technology 3
Machine Technology 4

MECHATRONICS
Course Sequence

Mechatronics 1
Mechatronics 2
Mechatronics 3
Mechatronics 4

WELDING

Course Sequence

Welding 1
Welding 2
Welding 3
Welding 4

MACHINE TECHNOLOGY 1
Semester Course (1 unit)
Students taking this course will be introduced to the operation of machines such as lathes, milling machines, and drill presses through an exciting selection of hands-on projects. They will learn to use precision measuring instruments, layout tools, and interpret blueprints. This course also includes an emphasis on industrial safety and the many career opportunities available to the high tech machinist. Note: There is a $55.00 materials fee for this class.

MACHINE TECHNOLOGY 2
Year Course (2 units)
Prerequisite: Machine Technology 1
This course covers the study of metals, blueprint reading, machine operations and precision measuring. Students will operate lathes, mills, grinders, and drill presses to make hands-on projects. Most of the learning takes place in the shop (lab) as students make tools, etc. that they will use as they complete the course. There will be access to CNC/CAD/CAM software and training for students that want to begin the study of advanced manufacturing. This online training will be available year round. A good general knowledge of mathematics and being mechanically inclined helps a student to be successful in this course. This field of work has many opportunities with good paying jobs available. There are also Registered Youth Apprenticeships available with local businesses. There will be a $55.00 fee for this class which will include a $15.00 SkillsUSA membership, class T-Shirt, and a materials fee. NOTE: This course is offered on "A" day.

MACHINE TECHNOLOGY 3
Semester Course (2 units)
Prerequisite: Machine Technology 1 & 2
This course builds on topics studied in the first year course while introducing more advanced methods of machine tool operations. Students study surface grinding, manual machining, and CNC programming and operations by both designing and making functional parts. Students have access to Learn Haas CNC, Expert Tech mold and die making, as well as CAD/CAM software and training 24-7 via our internet based software. There are Registered Youth Apprenticeships, Co-Ops, scholarships and many job opportunities available for the motivated students. There is a $55.00 fee for this class which will include $15.00 for SkillsUSA membership, $25.00 for OSHA 501 certification and $15.00 materials fee. **A student may also receive NIMS certifications at a cost of $35.00 each.** NOTE: This course is offered on "A" and "B" days first semester.

MACHINE TECHNOLOGY 4
Semester Course (2 units)
Prerequisites: Machine Technology 1, 2 & 3
This course is a continuation of study from Machine Technology 2, using more advanced methods of machine tool operations. Students study surface grinding, manual machining, and CNC programming and operations by both designing and making functional parts. Students have access to Learn Haas CNC, Expert Tech mold and die making, as well as CAD/CAM software and training 24-7 via our internet based software. There are Registered Youth Apprenticeships, Co-Ops, scholarships and many job opportunities available for the motivated student. There is a $55.00 fee for this class which will cover Work -Keys Certifications and materials. **A student may also receive NIMS certifications at a cost of $35.00 each.** NOTE: This course is offered on "A" and "B" days second semester.

MECHATRONICS INTEGRATED TECHNOLOGY 1
Semester Course (1 unit)

This course is designed to introduce students to the many different skills needed by business and industry in the area of industrial maintenance. Students will work with shop drawings, industrial machine mechanisms, hydraulic, pneumatic, and electrical systems as well as power and hand tools. Students interested in learning about many different industrial specialty areas will want to enroll in this course.
NOTE: There is a $15.00 materials fee for this class.

MECHATRONICS INTEGRATED TECHNOLOGY 2
Year Course (2 units)
Prerequisite: Mechatronics Integrated Technology 1
This exciting program is designed to prepare students to perform different tasks demonstrating skills required to maintain, service, and repair industrial machines, hydraulic systems, pneumatic systems, and electrical systems. Troubleshooting, safety, and repair will be emphasized. Students will develop skills required to operate power tools, portable tools, and hand tools. Students will learn a variety of skills necessary for successful employment in the high demand area of Mechatronics Integrated Technologies. Students interested in being multi-skilled and highly employable will want to enroll in this course. Students may also develop their leadership skills by joining the SkillsUSA Club. **Students will get some certification in Siemens online at no cost to the student and receive 6 college credits.** NOTE: There is a $25.00 materials fee for this class for the year. SkillsUSA dues are $15.00.

MECHATRONICS INTEGRATED TECHNOLOGY 3 HONORS
Semester Course (2 units)
Prerequisite: Mechatronics Integrated Technology 1 & 2
This course is a continuation of the first year course. Emphasis is placed on refining the skills needed to maintain, service, and repair various mechanical and electrical components of industrial equipment. There will be heavy areas of concentrated study in problem solving and troubleshooting, technical document writing, advanced programming with robots and other automated equipment.
NOTE: This course meets on "A" and "B" days first semester and has $15.00 materials fee, a $25.00 fee for Career-Safe Online OSHA Training Program, and $15.00 for SkillsUSA dues.

MECHATRONICS INTEGRATED TECHNOLOGY 4 HONORS
Semester Course (2 units)
Prerequisites: Mechatronics Integrated Technology 1, 2 & 3
New areas of learning in this course include computer literacy skills, orientation to robotics and work cells, job keeping skills, developing project plans for senior mentoring project, writing all technical documentation, developing time lines, constructing senior projects, and making project presentation. Troubleshooting skills will be emphasized during this class and all skills learned will be practiced in lab activities such as senior project development and construction. **Students will get all certification in Siemens online and an OSHA Ten Hour Card. If a student completes level two and three they will receive 7 more college credits for a total of thirteen transcripted credits.** NOTE: This course is offered on "A" and "B" days second semester and has a $15.00 materials fee.

WELDING 1
Semester Course (1 unit)
This course is designed to introduce students to a variety of techniques and operations learned in the welding field. This course offers hands-on learning experience in safety, equipment, oxy-fuel cutting, and steel SMAW welding. Students will pay a $20 class fee, which includes safety glasses and welding gloves. Leather boots are highly encouraged but are not required for this class.

WELDING TECHNOLOGY 2
Year Course (2 units)
Prerequisite: Welding Technology 1
This course is designed to build on the skills students acquired in Welding 1. Students will develop their SMAW and GMAW skills by passing visual inspection criteria in multiple position fillet welds. Students will also have the opportunity to work on various fabrication projects throughout the course which will enhance their math, and basic fabrication principles as they apply to the welding industry. Students will pay a $35 class fee which includes gloves and safety glasses. Students are encouraged to develop their leadership skills by joining the SkillsUSA Club for $15. A fire-resistant welding jacket and leather boots are required for this class.

WELDING TECHNOLOGY 3
Semester Course (2 units)
Prerequisite: Welding Technology 1 & 2
This course focuses on SMAW of steel for application in the structural steel industry, which includes properties and characteristics of metals, blueprint reading, and basic fabrication. Students will undergo a welding qualification test at the completion and have the opportunity to gain an AWS certification to AWS D1.1 structural steel welding code. Students will pay a $35 class fee which includes gloves and safety glasses and SkillsUSA membership. A fire-resistant welding jacket and leather boots are required for this class.

WELDING TECHNOLOGY 4
Semester Course (2 units)
Prerequisites: Welding Technology 1, 2 & 3
This course is a continuation of Welding Technology 3. In addition, Students will learn GTAW welding as well as become more proficient blue print reading skills and basic fabrication. The students will work in small groups in order to design and construct classroom projects. To be better prepared for the transition from school to work or higher education, students will take field trips to various industries in the upstate. OSHA 10 certification will be offered in this course. Students will pay a $35 class fee which includes gloves and safety glasses and SkillsUSA membership. A fire-resistant welding jacket and leather boots are required for this class.

MARKETING PATHWAY

MARKETING
Course Sequence
Social Media in Business
Marketing 1
Digital Media in Marketing

SOCIAL MEDIA IN BUSINESS
Semester Course (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.

MARKETING 1
Semester Course (1 unit)
Prerequisite: Sports and Entertainment Marketing, and Social Media in Business
Marketing introduces marketing concepts and examines the economic, marketing, and business fundamentals, in addition to the marketing functions of selling, promotion, and distribution. The standards listed are core standards and those standards reflecting the needs of the local business community. This is the basic course in the marketing curriculum and should be taken before the specialized courses.

DIGITAL MEDIA in MARKETING
Semester Course (1 unit)
This course is an overview of techniques in digital marketing media, including non-linear editing introducing students to the primary feature set and basic interface of industry standard editing software. Students will plan and execute a storyboard for producing their final product, to include podcasts, DVDs, video blogs, and webcasts. Students learn to demonstrate basic digital video camera technique, digital sound, and lighting. In addition, students will perform basic editing functions while familiarizing themselves with the software's user interface. Topics include basic setup, adjusting and customizing preferences and settings, capturing video and audio, various editing and trimming techniques, audio editing and audio creation, finishing and final output.

HUMAN SERVICES PATHWAY

COSMETOLOGY

Course Sequence

Cosmetology 1
Cosmetology 2
Cosmetology 3
Cosmetology 4

COSMETOLOGY 1
Semester Course (2 units)
In order to take this course, students must be in the 11th grade. This course is an introduction to the broad field of cosmetology. It prepares students for further training in the field. Students will receive training in the care and beautification of the hair, skin and nails. Chemical services such as hair coloring, chemical relaxing, and permanent waving will be introduced. Care of the hair will include scalp treatments, hair shaping, and hair styling. Care of the skin will include facials, massage, and make-up application. Care of the nails will include manicures and pedicures. Students have the opportunity to participate in leadership activities by joining the SkillsUSA organization. **NOTE: A separate application and interview is required which will be scored with a rubric to determine a student's admittance into the program.** Student kit fees are approximately $400.00. This fee may be paid by the last day of the previous school year. ***This course is offered all day on A days first semester in order to meet state board hour requirements.***

COSMETOLOGY 2
Semester Course (2 units), Grade Level(s): 11
Prerequisite: Cosmetology 1
This course is a continuation of Cosmetology 1. The students will further their training in the care and beautification of the hair, skin, and nails. Chemistry, cells, anatomy and physiology will be included as well as expanded study in permanent waving, chemical relaxing, and hair coloring. ***This course is offered all day on A days first semester in order to meet state board hour requirements.***

COSMETOLOGY 3
Semester Course (2 units), Grade Level(s): 12
Prerequisite: Cosmetology 1 and Cosmetology 2
The student will continue to practice all phases of care and beautification of hair, skin, and nails. Further study in the techniques of permanent waving and hair color will be introduced. Students have the opportunity to participate in leadership activities by joining the SkillsUSA organization. Student fees for the 12th grade year are **$230.00** (an increase due to exam and material cost increases). This money will provide the students with a manikin head for their state board exam and the State Board Exam and Cosmetology License fee. This fee may be paid during the summer and must be paid by the first day of school. ***This course is offered all day on B days first semester in order to meet state board hour requirements.***

COSMETOLOGY 4
Semester Course (2 units), Grade Level(s): 12
Prerequisites: Cosmetology 1, 2, & 3
This course will introduce salon planning, management, and job-seeking skills. Students will continue to study new and changing techniques while preparing to take the South Carolina State Board of Cosmetology exam. Successful completion of 1500 hours of cosmetology and academic study is required. After completing the 1500 hours and passing the licensing exam, the student will be a licensed cosmetologist. ***This course is offered all day on B days second semester in order to meet state board hour requirements.***

TRANSPORTATION, DISTRIBUTION, AND LOGISTICS PATHWAY

AUTOMOTIVE TECHNOLOGY

Course Sequence

Automotive Technology 1
Automotive Technology 2
Automotive Technology 3
Automotive Technology 4

AUTOMOTIVE TECHNOLOGY 1
Semester Course (1 unit)
This course is designed to train students to function and work safely in an automotive shop. This course will develop basic skills that will assist students in becoming productive automotive technicians or assist them as they enter a related field as a skilled worker. The course will include both theory and actual repair projects to develop these skills. Approximately 40% of the time will be shop or lab work and 60% will be theory in the classroom. Hands-on activities in the shop will be used to simulate the work environment in compliance with government regulations of the handling and disposal of hazardous chemicals. Strong emphasis will be on the use of service manuals (both hard copy and computer programmed) for proper procedures as well as shop safety and participation. The Automotive Technology program is NATEF certified and has an articulation agreement with Nashville Auto Diesel College in all automotive areas. Students will purchase safety glasses ($5) and a shirt ($20) plus pay a $10.00 materials fee.

AUTOMOTIVE TECHNOLOGY 2
Year Course (2 units)
This course is covers the theory of operating major automobile components such as electrical systems, tune-ups, and fuel and ignition systems. Approximately 60% of the student's time is in the classroom and 40 % is in the lab. Students enrolled in this course begin working towards an ASE (Automotive Service Excellence) certification in the area of automotive electrical systems. Students will have the opportunity to participate in leadership activities by joining the SkillsUSA Club. The Automotive Technology program is NATEF certified and has an articulation agreement with Nashville Auto Diesel College in all automotive technology areas. **The testing fee for ASE certification will be approximately $100.00.** Students will also pay $30.00 include safety glasses, a shirt, and materials fee. Students have the opportunity to join SkillsUSA for $15.00. NOTE: This course is offered on "A" day.

AUTOMOTIVE TECHNOLOGY 3
Semester Course (2 units)
Prerequisite: Automotive Technology 1, 2
This course provides advanced study of brake systems and engine overhaul. Approximately 25 % of the time is spent in the classroom and 75% is in the lab. Students who successfully complete this two-year program will continue to work toward an ASE certification in automotive repair and brake systems. Youth apprenticeship opportunities are available for qualifying students after first semester. The Automotive Technology program is NATEF certified and has an articulation agreement with Nashville Auto Diesel College in all automotive technology areas. **The testing fee for ASE certification will be approximately $100.00.** Students will also pay $30.00 include safety glasses, a shirt, and materials fee. Students have the opportunity to join SkillsUSA for $15.00. NOTE: This course is offered on "A" and "B" days first semester.

AUTOMOTIVE TECHNOLOGY 4
Semester Course (2 units)
Prerequisites: Automotive Technology 1, 2 and 3
This course is offered A and B days, second semester of the senior year. It provides advanced study of suspension and transmission and drive train components. Approximately 25 % of the time is spent in the classroom and 75 % is in the lab. Students who successfully complete this two-year program will continue to work toward an ASE certification in automotive repair and brake systems. School-to-Work opportunities are available for qualifying students. The Automotive Technology program is NATEF certified and has an articulation agreement with Nashville Auto Diesel College in all automotive technology areas. **The testing fee for ASE certification will be approximately $100.00.** Students will also pay $30.00 include safety glasses, a shirt, and materials fee. Students have the opportunity to join SkillsUSA for $15.00. NOTE: This course is offered on "A" and "B" days second semester.