The South Carolina Department of Education does not discriminate on the basis of race, color, national origin, sex, or handicap in admission to, treatment in or employment in its programs and activities. Inquiries regarding the nondiscrimination policies should be made to Human Resources Director, 1429 Senate Street, Columbia, South Carolina 29201, 803-734-8781.
INTRODUCTION

The South Carolina Career and Technology Education (CATE) Course Catalog is a listing of CATE courses categorized by career clusters and includes course codes, recommended maximum enrollments, numbers of credits/seat time hours per course, prerequisites, and course descriptions. A credit-bearing course that is not listed in this document is either a locally designed elective course approved by the local board of trustees or a locally designed subject-area course approved by the SCDE. Sixth grade courses listed in the document are not supported with federal Perkins funds.

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The Table of Contents provides a list of CATE courses, categorized by career cluster. A cluster or course section and page number can be quickly found, then immediately accessed without having to scroll or page through the document. Clicking anywhere within the text of a cluster or course title will immediately take you to that cluster or course. To execute a link, move the cursor over the text until a pointing finger appears, then click the mouse button.

ADDITIONAL INFORMATION

Refer to the following hyperlinked pages for additional information:

2016-2017 CATE Student Reporting Procedures Guide

The 2016-2017 CATE Student Reporting Procedures Guide is the Office of Career and Technology Education’s official guide for PowerSchool data entry and reporting.

2016-2017 South Carolina Educator Certification

The 2016-2017 South Carolina educator certification information.


The 2016-2017 Required Credentials Manual is a tabular listing of most district office and school positions, along with the required credentials for each of those positions. All professional instructional staff must hold South Carolina educator licenses in order to meet accreditation standards mandated by State Board of Education Regulation 43-300.

2016-2017 Activity Coding System

The 2016-2017 Activity Coding System includes the standardized codes for courses, instructional activities, and non-instructional activities used in the student information system in South Carolina public schools.
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</table>

Introduction to Career Clusters is designed to provide middle schools with a course in which students are introduced to career possibilities in the sixteen national career clusters adopted by the South Carolina Department of Education. Students will have an opportunity to explore job tasks and career opportunities in each cluster while identifying pathways from high school to post-secondary education and the workplace. Students will learn skills needed for success in college and careers with relevance to academic standards. This course is exposure to help each student gain an understanding of careers in order to assist in the development of an initial Individual Graduation Plan (IGP) in the 8th grade. *Perkins funds CANNOT be used below the seventh grade.
SOUTH CAROLINA CATE COURSE CATALOG

AGRICULTURE, FOOD, AND NATURAL RESOURCES
MIDDLE SCHOOL

Introduction to Agriculture – *6th Grade
Course Code 1856
Recommended Maximum Enrollment 30
Grade Level 6
Credits NA
Prerequisite NA
Introduction to Agriculture for sixth grade is designed to develop in middle school students an awareness of the relationships between agriculture and science. Major concepts covered in the course include an awareness of agriculture, the world of work, agribusiness careers, human relations, and scientific principles applied in agriculture. The course is offered on a semester or less basis for sixth-grade students and units include Orientation to Agriscience, Plants and Animals in Agriscience, Communication Skills, Orientation to Agricultural Technology, Orientation to Ecology and Conservation, and Orientation to Agriscience Careers. *Perkins funds CANNOT be used below the seventh grade.

Introduction to Agriculture - 7th Grade
Course Code 2856
Recommended Maximum Enrollment 30
Grade Level 7
Credits NA
Prerequisite NA
Introduction to Agriculture for the seventh grade is designed to assist students in exploring science as it relates to agriculture. Through well planned instructional activities, students have the opportunity to develop an understanding of human relations, communication, the importance of agriculture to the economy, and key scientific terms related to the field of agriculture concepts. The course is offered on a semester or less basis for seventh-grade students and units include Exploration of Agriscience, Recognizing the Importance of Agriculture/Agriscience, Exploration of Natural Resources and the Environment, Exploration of Science Process in Agriculture, Soil and Plant Science, Animal Science, Introduction to Basic Laboratory Principles, and Personal Development Through Agriscience Activities.

Introduction to Agriculture - 8th Grade
Course Code 2856
Recommended Maximum Enrollment 30
Grade Level 8
Credits NA
Prerequisite NA
Introduction to Agriculture for the eighth grade is designed to allow students to apply scientific principles to the field of agriculture in a laboratory setting. Students are introduced to new technology and its impact on agriculture. An introduction to regional and/or international agriculture and marketing concepts in agriculture are also included. The course is offered on a semester or less basis for eighth-grade students.
# Agribusiness and Marketing

<table>
<thead>
<tr>
<th>Course Code</th>
<th>5600</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended</td>
<td>30</td>
</tr>
<tr>
<td>Maximum Enrollment</td>
<td></td>
</tr>
<tr>
<td>Grade Level</td>
<td>10, 11, 12</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>One of the following courses: Agricultural Science and Technology, Agricultural Mechanics and Technology, Environmental and Natural Resources Management, Introduction to Horticulture, or Agricultural Biosystems Sciences (depending on the pathway)</td>
</tr>
</tbody>
</table>

Agribusiness and Marketing is designed for the student who plans to seek employment on, manage, or own a farm or who seeks employment in an agribusiness field. Students will be involved in learning activities that generally prepare them to apply the economic and business principles involved in the organization, operation, and management of a farm, ranch, or agribusiness. Typical hands-on learning experiences include 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.

# Agricultural and Biosystems Science

<table>
<thead>
<tr>
<th>Course Code</th>
<th>5691</th>
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</thead>
<tbody>
<tr>
<td>Recommended</td>
<td>30</td>
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<tr>
<td>Maximum Enrollment</td>
<td></td>
</tr>
<tr>
<td>Grade Level</td>
<td>9, 10, 11, 12</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>None</td>
</tr>
</tbody>
</table>

Agricultural and Biosystems Science teaches essential concepts related to skills needed to pursue a career in a biotechnology field. Emphasis is placed on scientific research and development (R&D) and how it can be used to create future advancements in agriculture. Students will learn the basic principles of plant and animal science as well as 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 practices are included, and each student designs and participates in a supervised agricultural experience. Typical hands-on learning experiences include performing research on the basic principles of plant, soil, and animal science; studying and modeling the significance of humankind’s interrelationship with soil, water, and air; and participating in FFA activities.
Agricultural Crop Production and Management
Course Code 5614
Recommended Maximum Enrollment 20
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite Agricultural Science and Technology or Agricultural Biosystems Science

The Agricultural Crop Production and Management course prepares students to operate enterprises producing cereal grain, fiber, forage, oilseed, tree fruits and nuts, small fruits, vegetables and other plant products and includes instruction in soils, plant physiology, crop cultivation practices, plant diseases, pest management, harvesting, and marketing.

Agricultural Mechanics and Technology
Course Code 5660
Recommended Maximum Enrollment 20
Grade Level 9, 10
Credits 1 (120 hours)
Prerequisite None

The Agriculture Mechanics and Technology course is designed as an introductory course to the Agriculture Mechanics Career Pathway. In addition, it provides development of general mechanical skills, which are required in all areas of Agricultural Education. Typical instructional activities include hands-on experiences in woodworking, metalworking, welding, small engine repair, basic farm and homestead improvements, participating in personal and community leadership development activities, planning and implementing a relevant school-to-work transition experience, and participating in FFA activities.

Agricultural Mechanics and Technology for the Workplace 1
Course Code 5604
Recommended Maximum Enrollment 20
Grade Level 9, 10, 11
Credits 2 (240 hours)
Prerequisite None

The Agriculture Mechanics and Technology for the Workplace 1 course is designed as an introductory course to the Agriculture Mechanics Career Pathway. Typical instructional activities include hands-on experiences in woodworking, metalworking, welding, small engine repair, basic farm and homestead improvements, participating in personal and community leadership development activities, planning and implementing a relevant school-to-work transition experience, and participating in FFA activities.
Agricultural Mechanics and Technology for the Workplace 2
Course Code 5605
Recommended Maximum Enrollment 20
Grade Level 11, 12
Credits 2 (240 hours)
Prerequisite Agricultural Mechanics and Technology for the Workplace 1

Agricultural Mechanics and Technology for the Workplace 2 combines subject matter and activities to teach technical knowledge and skills required for entry-level positions in selling, selecting, and servicing agribusiness technical equipment and facilities, including computers, specialized software, power units, machinery equipment, structures, and utilities. Courses in the Agricultural Mechanics and Technology program 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 post high school.

Agricultural Power Mechanics
Course Code 5610
Recommended Maximum Enrollment 20
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite Agricultural Mechanics and Technology

The courses in Agricultural Mechanics 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 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 agribusiness technical equipment and facilities, including computers, specialized software, power units, machinery equipment, structures and utilities. Typical instructional activities include hands-on experiences with agricultural power units, participation in personal and community leadership development activities, and planning and participation in FFA activities.

Agricultural Science and Technology
Course Code 5624
Recommended Maximum Enrollment 30
Grade Level 9, 10
Credits 1 (120 hours)
Prerequisite None

The Agricultural Science and Technology course teaches essential concepts and understanding related to plant and animal life including biotechnology, the conservation of natural resources, and the impact of agriculture and natural resource utilization on the environment. Emphasis is placed on the role of agriculture in our society and the importance of agriculture to the welfare of the world. Basic personal and community leadership and safety and agricultural mechanical technology are included as a part of the instructional program. Each student is required to design and participate in a supervised agricultural experience.
Agricultural Science and Technology for the Workplace
Course Code  5620
Recommended Maximum Enrollment  30
Grade Level  9, 10, 11
Credits  2 (240 hours)
Prerequisite  None
The Agricultural Science and Technology for the Workplace course teaches essential concepts and understanding related to plant and animal life including biotechnology, the conservation of natural resources, and the impact of agriculture and natural resource utilization on the environment. Emphasis is placed on the role of agriculture in our society and the importance of agriculture to the welfare of the world. Basic personal and community leadership and safety, and agricultural mechanical technology are included as a part of the instructional program. Each student is required to design and participate in a supervised agricultural experience.

Agricultural Structural Mechanics
Course Code  5611
Recommended Maximum Enrollment  20
Grade Level  10, 11, 12
Credits  1 (120 hours)
Prerequisite  Agricultural Mechanics and Technology
The courses in Agricultural Mechanics 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 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 constructing structures and utilities. Typical hands-on instructional experiences include the planning and selection of materials for the construction of agricultural facilities, the mechanical practices associated with irrigation and water conservation, erosion control, metal fabrication, participation in personal and community leadership development activities, and planning and participation in FFA activities.

Animal Science
Course Code  5603
Recommended Maximum Enrollment  20
Grade Level  9, 10
Credits  1 (120 hours)
Prerequisite  Agricultural Science and Technology
Animal Science provides an overview of the animal science industry, including information on the biological makeup of various species of agricultural livestock. It also provides students with beneficial information on animal behavior before they decide to embark on a career in Animal Science. Animal Science is recommended as a prerequisite for other courses in Animal Science. 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.

**Animal Science for the Workplace 1**
- **Course Code**: 5608
- **Recommended Maximum Enrollment**: 20
- **Grade Level**: 10, 11
- **Credits**: 2 (240 hours)
- **Prerequisite**: None

Animal Science for the Workplace 1 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 and companion animals. Typical instructional activities include hands-on experiences with the principles and practices essential in the production and management of animals and 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.

**Animal Science for the Workplace 2**
- **Course Code**: 5609
- **Recommended Maximum Enrollment**: 20
- **Grade Level**: 11, 12
- **Credits**: 2 (240 hours)
- **Prerequisite**: Animal Science for the Workplace 1

The Animal Science for the Workplace 2 course covers animal care and veterinary science and 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.

**Aquaculture**
- **Course Code**: 5663
- **Recommended Maximum Enrollment**: 20
- **Grade Level**: 10, 11, 12
- **Credits**: 1 (120 hours)
- **Prerequisite**: Agricultural Science and Technology, Agricultural Biosystems Science or Environmental and Natural Resources Management

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.

**Biosystems Mechanics and Engineering**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>5692</th>
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<tbody>
<tr>
<td>Recommended Maximum Enrollment</td>
<td>20</td>
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<tr>
<td>Grade Level</td>
<td>10, 11</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>Agricultural and Biosystems Science and/or Agricultural Mechanics and Technology</td>
</tr>
</tbody>
</table>

The Biosystems 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 Education. 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. 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.

**Biosystems Technology 3**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>5695</th>
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<tbody>
<tr>
<td>Recommended Maximum Enrollment</td>
<td>20</td>
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<tr>
<td>Grade Level</td>
<td>11</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>Agricultural and Biosystems Science and Biosystems Mechanics and Engineering</td>
</tr>
</tbody>
</table>

The Biosystems Technology 3 course expands upon information and material introduced in the Agricultural and Biosystems Science and Biosystems Mechanics and Engineering courses. Content focuses on biological and engineering sciences important to the bioprocessing and biofuels industry, including microbial concepts, reactor design, and laboratory techniques inherent. 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 laboratory safety are included. Each student is required to design and participate in a supervised agricultural experience. Typical hands-on learning experiences include performing basic principles of plant, soil, and animal science; studying and modeling the significance of humankind’s interrelationship with soil, water, and air; and participating in FFA activities.
Biosystems Technology 4
Course Code 5696
Recommended Maximum Enrollment 20
Grade Level 12
Credits 1 (120 hours)
Prerequisite Agricultural and Biosystems Science, Biosystems Mechanics and Engineering and Biosystems Technology I

The Biosystems Technology 4 course introduces the major unit operations and technology used in bioprocessing, including heat exchangers, bioreactors, pumps, and cell/product separation systems. The content directly expands upon information and material introduced in the Agricultural and Biosystems Science and Biosystems Mechanics and Engineering courses. 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 laboratory safety are included. Each student is required to design and participate in a supervised agricultural experience. Typical hands-on learning experiences include performing basic principles of plant, soil, and animal science; studying and modeling the significance of humankind’s interrelationship with soil, water, and air; and participating in FFA activities.

Biosystems Technology Career Development 1
Course Code 5693
Recommended Maximum Enrollment 20
Grade Level 9, 10, 11
Credits 2 (240 hours)
Prerequisite None

Biosystems Technology Career Development 1 is designed to teach essential concepts and understanding related to skills required to pursue a career in a biotechnology field. Emphasis is placed on scientific research and development (R&D) and how it can be used to create future advancements in Agriculture. In addition, the course teaches basic mechanical and engineering skills and their application to scientific research. Basic principles of plant and animal science as well as the role of agriculture in our society and the importance of agriculture to the welfare of the world are also included. Basic personal and community leadership and safety practices are included, and each student is required to design and participate in a supervised agricultural experience.

Biosystems Technology Career Development 2
Course Code 5694
Recommended Maximum Enrollment 20
Grade Level 11, 12
Credits 2 (240 hours)
Prerequisite Biosystems Technology Career Development 1

The Biosystems Technology Career Development 2 course expands upon information and material introduced in the Level 1 course. Content focuses on biological and engineering sciences important to the bioprocessing and biofuels industry, including microbial concepts, reactor design, and laboratory
techniques inherent. 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 laboratory safety are included as a part of the instructional program, and each student is required to design and participate in a supervised agricultural experience.

**Cattle Production**

**Course Code** 5646  
**Recommended Maximum Enrollment** 20  
**Grade Level** 10, 11, 12  
**Credits** 1 (120 hours)  
**Prerequisite** Agricultural Science and Technology or Agricultural and Biosystems Science

The Cattle 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 cattle. Typical hands-on instructional experiences include the principles and practices essential in the production and management of cattle and cattle products for economic, recreational, and therapeutic uses; participation in personal and community leadership development activities; planning and implementation of a relevant school-to-work transition experience; and participation in FFA activities.

**Environmental and Natural Resources Management**

**Course Code** 5626  
**Recommended Maximum Enrollment** 20  
**Grade Level** 9, 10  
**Credits** 1 (120 hours)  
**Prerequisite** None

Environmental and Natural Resource Management is the introductory course for the Environmental and Natural Resources Career Pathway. It 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.
Environmental and Natural Resources Management for the Workplace 1
Course Code 5628
Recommended Maximum Enrollment 20
Grade Level 9, 10, 11
Credits 1 (120 hours)
Prerequisite None

Environmental and Natural Resources Management for the Workplace 1 is the introductory course for the Environmental and Natural Resources Career Pathway. It 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.

Environmental and Natural Resources Management for the Workplace 2
Course Code 5629
Recommended Maximum Enrollment 20
Grade Level 11, 12
Credits 2 (240 hours)
Prerequisite Environmental and Natural Resources Management for the Workplace 1

Environmental and Natural Resources Management for the Workplace 2 is the second level course designed for programs in the Environmental Natural Resources Career Pathway. It is a combination of subject matter and planned learning experiences on the principles of conservation and/or improvement of forest and wildlife resources for economic and recreational purposes. Instruction also emphasizes such factors as the establishment, management, and operation of land for recreational purposes. Typical forestry hands-on instructional activities include experiences in assessing environmental factors affecting forest growth; cruising timber; planting trees; managing an established forest; selecting, grading, and marketing forest raw materials for converting into a variety of consumer goods; harvesting timber or pulpwood; operating and maintaining equipment; and managing forests for multiple purpose uses such as game preserves and recreation. Typical wildlife management hands-on instructional activities include experiences in analyzing problems and developing site plans, including the essential elements, concepts, and skills related to wildlife management; understanding basic ecological concepts; implementing habitat management practices; identifying wildlife and fish species; and analyzing policies, laws, and regulations and using natural resources for outdoor recreation. Students also participate in personal and community leadership development activities, plan and implement a relevant school-to-work transition experience, and participate in FFA activities.
Equine Science
Course Code  5679
Recommended Maximum Enrollment  20
Grade Level  10, 11, 12
Credits  1 (120 hours)
Prerequisite  Agricultural Science and Technology or Agricultural and Biosystems Science

Equine Science teaches essential concepts and provides practical experience related to the care taking and production of horses. Instruction emphasizes knowledge and understanding of the importance of maintaining, selecting, and managing horses. Basic methods and safety techniques are included in this course. Typical instructional activities include hands-on experiences in saddling, bridling, grooming, and judging horses; feeding and health techniques; and housing design.

Equipment Operation and Maintenance
Course Code  5621
Recommended Maximum Enrollment  20
Grade Level  10, 11, 12
Credits  1 (120 hours)
Prerequisite  Agricultural Science and Technology, Agricultural Biosystems Science, Agricultural Mechanics and Technology or Introduction to Horticulture

Equipment Operation and Maintenance teaches students how to operate and maintain equipment commonly used in the agricultural industry. It includes equipment used in four of the Agriculture, Food and Natural Resources pathways: Horticulture, Plant and Animal Systems, Environmental and Natural Resources Management, and Agricultural Mechanics and Technology. 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.

Farm Animal Production
Course Code  5647
Recommended Maximum Enrollment  20
Grade Level  10, 11, 12
Credits  1 (120 hours)
Prerequisite  Agricultural Science and Technology or Agricultural Biosystems Science

Farm Animal Production teaches technical knowledge and skills for entry-level positions in an animal production enterprise by developing students’ competency in 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.
Floriculture
Course Code 5634
Recommended Maximum Enrollment 20
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite Introduction to Horticulture
Floriculture teaches technical knowledge and skills for entry-level positions in the production, processing, and distribution of flowers, foliage, and related plant materials, including best management practices in field and greenhouse production of flowers and related plant materials and the arrangement of plant materials for ornamental purposes. Typical instructional activities include hands-on experiences with planning, designing, and growing representative flower crops; preparing and analyzing growing medium; tissue culture; alternative propagation methods; greenhouse management practices including environmental controls; participating in personal and community leadership development activities; planning and implementing a relevant school-to-work transition experience; and participating in FFA activities. The instructor selects units of instruction based on a local needs assessment.

Food Processing
Course Code 5657
Recommended Maximum Enrollment 30
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite Agricultural Science and Technology or Agricultural and Biosystems Science
Food Processing generally prepares individuals to process food and nonfood products and to inspect those products preparatory to marketing. The course also includes instruction in the characteristics and properties of agricultural products and of agriculture-related processing techniques and skills (including quality control and mechanical operations involved in marking, grading, inspecting, packaging, storing, and marketing). Typical learning activities include cutting meat; packaging, canning, testing, and grading food products; participating in FFA contests or other club activities; and planning and conducting a supervised practice program or occupational work experience program related to agricultural products.

Forestry
Course Code 5642
Recommended Maximum Enrollment 20
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite Environmental and Natural Resources Management
Forestry teaches technical knowledge and skills for entry-level positions in the production, protection, and management of timber and specialty forest resources. Typical instructional activities include hands-on experiences in assessing environmental factors affecting forest growth; cruising timber; planting trees; managing an established forest; selecting, grading, and marketing forest raw materials for
converting into a variety of consumer goods; harvesting timber or pulpwood; operating and maintaining equipment; and managing forests for multiple purpose uses such as game preserves and recreation. Students participate in personal and community leadership development activities, plan and implement a relevant school-to-work transition experience, and participate in FFA activities.

**Golf Course Technology**

**Course Code** 5667  
**Recommended Maximum Enrollment** 20  
**Grade Level** 10, 11, 12  
**Credits** 1 (120 hours)  
**Prerequisite** Introduction to Horticulture

Golf Course Technology is designed to qualify the student completing the program for job entry into golf course and turf fields, as well as to continue advanced training post high school. A combination of subject matter and activities teaches technical knowledge and skills for entry-level positions. Typical instructional activities include hands-on experiences with agricultural power units, the planning and selection of materials, the mechanical practices associated with irrigation and water conservation, erosion control, participation in personal and community leadership development activities, planning and implementation of a relevant supervised agricultural experience, and participation in FFA activities.

**Horticulture for the Workplace 1**

**Course Code** 5652  
**Recommended Maximum Enrollment** 20  
**Grade Level** 9, 10, 11  
**Credits** 2 (240 hours)  
**Prerequisite** None

Horticulture for the Workplace 1 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.

**Horticulture for the Workplace 2**

**Course Code** 5653  
**Recommended Maximum Enrollment** 20  
**Grade Level** 11, 12  
**Credits** 2 (240 hours)  
**Prerequisite** Horticulture for the Workplace 1

Horticulture for the Workplace 2 is the second level course designed for programs involved in the Horticulture Career Pathway. The course is a combination of subject matter and planned learning experiences on the principles involved in the 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.
Introduction to Horticulture
Course Code 5650
Recommended Maximum Enrollment 20
Grade Level 9, 10
Credits 1 (120 hours)
Prerequisite None
The Introduction to Horticulture course is designed to be an introduction to the Horticulture pathway. It is recommended as a prerequisite for all other horticulture courses. This course includes organized subject matter and practical experiences related to the culture of plants used principally for ornamental or aesthetic purposes. Instruction emphasizes knowledge and understanding of the importance of establishing, maintaining, and managing ornamental horticulture enterprises.

Introduction to Veterinary Science
Course Code 5613
Recommended Maximum Enrollment 20
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite Agricultural Science and Technology or Agricultural Biosystems Science
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.

Landscape Technology
Course Code 5670
Recommended Maximum Enrollment 20
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite Introduction to Horticulture
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.
## Nursery, Greenhouse, and Garden Center Technology

**Course Code** 5672  
**Recommended Maximum Enrollment** 20  
**Grade Level** 10, 11, 12  
**Credits** 1 (120 hours)  
**Prerequisite** Introduction to Horticulture  

The course in Nursery, Greenhouse, and Garden Center Technology includes organized subject matter and practical experiences related to the operation and management of nursery, greenhouse or a garden center. Instruction emphasizes knowledge and understanding of the importance of establishing, maintaining, and managing “green industry” enterprises.

## Outdoor Recreation

**Course Code** 5602  
**Recommended Maximum Enrollment** 20  
**Grade Level** 10, 11, 12  
**Credits** 1 (120 hours)  
**Prerequisite** Environmental and Natural Resources Management  

The Outdoor Recreation 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.

## Small Animal Care

**Course Code** 5612  
**Recommended Maximum Enrollment** 20  
**Grade Level** 10, 11, 12  
**Credits** 1 (120 hours)  
**Prerequisite** Agricultural Science and Technology or Agricultural and Biosystems Science  

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.

## Soil and Water Conservation

**Course Code** 5627  
**Recommended Maximum Enrollment** 20  
**Grade Level** 10, 11, 12  
**Credits** 1 (120 hours)  
**Prerequisite** Agricultural Science and Technology, Agricultural and Biosystems Science, Environmental and Natural Resources Management or Agricultural Mechanics and Technology  

The Soil and Water Conservation course is a combination of subject matter and planned learning experiences related to the operation and management of nursery, greenhouse or a garden center. Instruction emphasizes knowledge and understanding of the importance of establishing, maintaining, and managing “green industry” enterprises.
experiences on the principles involved in the conservation and/or improvement of soil and water resources for economic and recreational purposes.

### Soils and Soilless Research

**Course Code**: 5630  
**Recommended Maximum Enrollment**: 20  
**Grade Level**: 10, 11, 12  
**Credits**: 1 (120 hours)  
**Prerequisite**: Agricultural Science and Technology, Agricultural and Biosystems Science, Environmental and Natural Resources Management or Introductory Horticulture

Soils and Soilless Research is designed to teach students the science involved in growing crops in both soil and soilless production systems. Students learn the importance of soil chemistry and composition as it relates to the growth of economically important crops. Students investigate common agricultural practices as well as alternative methods for growing crops to include hydroponic techniques. Students are also introduced to experimental research using the principles of experimental design.

### Sports Turf Management

**Course Code**: 5655  
**Recommended Maximum Enrollment**: 20  
**Grade Level**: 10, 11, 12  
**Credits**: 1 (120 hours)  
**Prerequisite**: Introduction to Horticulture

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

### Turf and Lawn Management

**Course Code**: 5654  
**Recommended Maximum Enrollment**: 20  
**Grade Level**: 10, 11, 12  
**Credits**: 1 (120 hours)  
**Prerequisite**: Introduction to Horticulture

The Introduction to Horticulture course is designed to be an introduction to the Horticulture pathway. It is recommended as a prerequisite for all other horticulture courses. This course includes organized subject matter and practical experiences related to the culture of plants used principally for ornamental or aesthetic purposes. Instruction emphasizes knowledge and understanding of the importance of establishing, maintaining, and managing ornamental horticulture enterprises.
Wildlife Management
Course Code 5674
Recommended Maximum Enrollment 20
Grade Level 10, 11, 12
Credits 1 (120 hours)
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.

Agriculture, Food and Natural Resources, Work-Based Credit
Course Code 5690
Recommended Maximum Enrollment NA
Grade Level 12
Credits 1 (120 hours)
Prerequisite Completion of two (2) CATE courses/units within a program

The Agriculture, Food and Natural Resources work-based 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.
ARCHITECTURE AND CONSTRUCTION

Building Construction Cluster 1, 2, 3, 4
Course Codes 6060, 6061, 6062, 6063
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours), 2 (240 hours), 3 (360 hours) per course code
Prerequisite No prerequisite for Level 1; Courses taken sequentially
Building Construction prepares individuals to apply technical knowledge and skills in the building, inspecting, and maintaining of structures and related properties. Includes instruction in masonry, carpentry, electrical and power transmission installation, building/construction finishing, management, inspection, and other construction-related applications.

Cabinetmaking 1, 2, 3, 4
Course Codes 6080, 6081, 6082, 6083
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours), 2 (240 hours), 3 (360 hours) per course code
Prerequisite No prerequisite for Level 1; Courses taken sequentially
Cabinetmaking courses provide students with experience in constructing cases, cabinets, counters, and other interior woodwork. Students learn to distinguish between various types of furniture construction and their appropriate applications, and how to use various woodworking machines and power tools for cutting and shaping wood. Cabinetmaking courses cover the different methods of joining pieces of wood, how to use mechanical fasteners, and how to attach hardware. Initial topics may resemble those taught in Woodworking courses; more advanced topics may include how to install plastic laminates on surfaces and how to apply spray finishes.

Carpentry 1, 2, 3, 4
Course Codes 6091, 6092, 6093, 6094
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours), 2 (240 hours), 3 (360 hours) per course code
Prerequisite No prerequisite for Level 1; Courses taken sequentially
Carpentry courses provide information related to the building of wooden structures, enabling students to gain an understanding of wood grades and construction methods and to learn skills such as laying sills and joists; erecting sills and rafters; applying sheathing, siding, and shingles; setting door jambs; and hanging doors. Carpentry courses may teach skills for rough construction, finish work, or both. Students learn to read blueprints, draft, use tools and machines properly and safely, erect buildings from construction lumber, perform finish work inside of buildings, and do limited cabinet work. Carpentry courses may also include career exploration, good work habits, and employability skills.
Electricity 1, 2, 3, 4
Course Codes 6287, 6288, 6289, 6290
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours), 2 (240 hours), 3 (360 hours) per course code
Prerequisite No prerequisite for Level 1; Courses taken sequentially
Electricity—Comprehensive courses provide a survey of the theory, terminology, equipment, and practical experience in the skills needed for careers in the electrical field. These courses typically include AC and DC circuitry, safety, and the National Electrical Code and may cover such skills as those involved in building circuits; wiring residential, commercial, and/or industrial buildings; installing lighting, power circuits, and cables; and estimating job costs. As students progress, their projects become more complex and expansive. In these courses, safety is stressed, and a career exploration component may be offered.

Home System Technology
Course Codes 5330
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours), 2 (240 hours), 3 (360 hours) per course code
Prerequisite None
Home System Technology targets skills in the multiple industries that touch the home, including technology integrators, security system technicians, cable, satellite, telecommunications, and A/V installers, electricians, and network administrators. Students will develop the skills and knowledge of basic PC hardware, hand and tool skills, safety precautions, basic electrical awareness, local regulations and building codes. This course leads to the CEA-CompTIA DHTI+ certification.

HVAC Technology 1, 2, 3, 4 (formerly Air Conditioning Refrigeration Technology-ACRT)
Course Codes 6003, 6004, 6005, 6006
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours), 2 (240 hours), 3 (360 hours) per course code
Prerequisite No prerequisite for Level 1; Courses taken sequentially
HVAC Technology courses offer students specialized training related to the design, installation, and repair of air conditioning systems for residential and commercial use. These courses may emphasize the theory and design of electrical, electronic, mechanical, and pneumatic control systems used in air conditioning systems; they might also (or instead) focus on procedures used in troubleshooting, servicing, and installing components of air conditioning systems.
Introduction to Construction
Course Code 6001
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours)
Prerequisite None
Construction technology provides students with an understanding of how construction impacts their lives, both socially and professionally. Students will explore and demonstrate an understanding of five elements of construction: Career Opportunities, Design, Measurements, Tools, and Materials.

Masonry 1, 2, 3, 4
Course Codes 6250, 6251, 6252, 6253
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours), 2 (240 hours), 3 (360 hours) per course code
Prerequisite No prerequisite for Level 1; Courses taken sequentially
Masonry courses enable students to learn to construct interior and exterior walls, columns, doorways, window openings, fireplaces, chimneys, and foundations from brick and concrete block. Along with other activities, students may mix and spread cement and mortar, read blueprints and plans, and estimate materials needed for a project. Other topics may also include how to layout buildings on footings and how to establish grades using a surveying transit.

Plumbing 1, 2, 3, 4
Course Codes 6280, 6281, 6282, 6283
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours), 2 (240 hours), 3 (360 hours) per course code
Prerequisite No prerequisite for Level 1; Courses taken sequentially
Plumbing courses provide students with instruction in installing waste and vent systems, water and gas pipes, trim, and fixtures. Skills taught include cutting and joining various types of pipe (for instance, steel, plastic) using various methods (cement, seat method, and so on).
## Architecture and Construction, Work-Based Credit

<table>
<thead>
<tr>
<th>Course Codes</th>
<th>6690</th>
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</thead>
<tbody>
<tr>
<td>Recommended Maximum Enrollment</td>
<td>NA</td>
</tr>
<tr>
<td>Grade Level</td>
<td>11, 12</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>Completion of two (2) CATE courses/units within a program</td>
</tr>
</tbody>
</table>

The Architecture and Construction work-based 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.
Fashion Design and Apparel Construction 1
Course Code 5710
Recommended Maximum Enrollment 20
Grade Level 10, 11, 12
Credits 1 (120 hours), 2 (240 hours), 3 (360 hours)
Prerequisite None

Ready to create your own look? Tired of having clothes that don’t fit? Make a skirt or vest out of your dad’s old neckties. Open the world of fashion from your own closet. Fashion Design and Apparel Construction 1 focuses on the study of the fashion and garment industry with emphasis on the basics of design and construction. Students will develop a global view and weigh design decisions within the parameters of ecological, socio-economic, and cultural contents. Concepts are applied with hands-on learning experiences as students study career pathways, textiles, fashion design, apparel construction, consumer behavior, products, and materials of the fashion industry. Projects are integrated throughout the course work and at least one garment will be completed. South Carolina standards for English/Language Arts, Mathematics, Science, and Social Studies, and Visual Arts are reinforced. The Family and Consumer Sciences student organization Family, Career, and Community Leaders of America (FCCLA) greatly enhances this curriculum.

Fashion Design and Apparel Construction 2
Course Code 5711
Recommended Maximum Enrollment 20
Grade Level 10, 11, 12
Credits 1 (120 hours), 2 (240 hours), 3 (360 hours)
Prerequisite Fashion Design and Apparel Construction 1

Design and make your own prom dress or outfit! Professionalism is showcased as preparations are made to enter the world of fashion design and apparel construction. Unfold the world of fashion merchandising and marketing. The skills of fashion design and apparel construction are refined. Creativity is on the runway in this hands-on course. Emphasis is placed on the development of problem solving, decision-making and technological applications in a real-world context. South Carolina standards for English/Language Arts, Mathematics, Science, and Social Studies, and Visual Arts are reinforced. The Family and Consumer Sciences student organization Family, Career, and Community Leaders of America (FCCLA) greatly enhances this curriculum.

Interior Design 1
Course Code 5455
Recommended Maximum Enrollment 20
Grade Level 10, 11, 12
Credits 1 (120 hours), 2 (240 hours), 3 (360 hours)
Prerequisite None

Interior Design 1 focuses on the study of interior planning with emphasis on the basics of design.
Students will develop a global view and weigh design decisions within the parameters of ecological, socio-economic, and cultural contents. Concepts are applied with hands-on learning experiences as students study career paths, design, products, materials, and professionalism. Projects are integrated throughout the course work. Computer access is strongly recommended for this course. The Family and Consumer Sciences student organization Family, Career, and Community Leaders of America (FCCLA) greatly enhances this curriculum.

**Interior Design 2**
Course Code: 5456
Recommended Maximum Enrollment: 20
Grade Level: 10, 11, 12
Credits: 1 (120 hours), 2 (240 hours), 3 (360 hours)
Prerequisite: Interior Design 1

Interior Design 2 focuses on design applications incorporating business basics of the design industry. Students will have an opportunity to develop advanced skills by learning about green design concepts and the principles and theories of sustainability as they pertain to design decisions, i.e. building materials, and methods, systems, and occupants. Course content consists of career development, industry trends, design applications, client relations, presentation techniques and business practices. Job shadowing, mentorships, internships, and/or apprenticeships are an integral part of this course. Portfolios and projects are integrated throughout the course work. Computer access is strongly recommended for this course. The Family and Consumer Sciences student organization Family, Career, and Community Leaders of America (FCCLA) greatly enhances this curriculum.

**Architectural Design 1, 2**
Course Codes: 6170, 6171
Recommended Maximum Enrollment: 24
Grade Level: 10, 11, 12
Credits: 1 (120 hours), 2 (240 hours), 3 (360 hours) per course code
Prerequisite: No prerequisite for Level 1; Courses taken sequentially

The Architectural Design program prepares students to perform entry-level tasks under the supervision and guidance of architects and/or architectural engineers in the development and preparation of plans for residential and/or commercial buildings. Instruction is given in design technology and techniques, computer-aided design, zoning laws, building codes, cost planning, material requirements, styling, and client preferences. Upon successful completion of the architectural design program, students will be prepared for postsecondary education and entry-level architectural-related careers.
Digital Art and Design 1, 2, 3, 4

Course Codes  
6120, 6121, 6122, 6123

Recommended Maximum Enrollment  
24

Grade Level  
10, 11, 12

Credits  
1 (120 hours), 2 (240 hours), 3 (360 hours) per course code

Prerequisite  
No prerequisite for Level 1; Courses taken sequentially

The Digital Art and Design program prepares students for careers in the graphic design field. Skills may be applied in any media, such as print, digital media, product design, packaging, etc. Most of the standards require students to combine text and graphics to communicate an effective message in the format intended for commercial reproduction. Students are also expected to use industry software and design concepts, principles, and processes to manipulate text and graphics, utilize and output appropriate file formats for Web and print, and meet client expectations.

Introduction to Graphic Communications and Graphic Communications 1, 2, 3, 4

Course Codes  
5205, 6200, 6201, 6202, 6203

Recommended Maximum Enrollment  
24

Grade Level  
10, 11, 12

Credits  
1 (120 hours), 2 (240 hours), 3 (360 hours) per course code

Prerequisite  
No prerequisite for Level 1; Courses taken sequentially

The competencies in this accreditation area require that students are competent in their overall understanding of the industry and its major operations, and have the fundamental measurement, math, and interpersonal skills needed for starting a career. The competencies are broken into 11 subsections: introduction, digital file preparation, image capture, color theory, digital file output, press operations, bindery operations, measurement, safety and first aid, basic math, and job application and interpersonal skills. All competencies are theory-based and require students to list, describe, identify, and/or calculate production-related issues, rather than actually demonstrate performance.

Mechanical Design 1, 2

Course Codes  
6172, 6173

Recommended Maximum Enrollment  
24

Grade Level  
10, 11, 12

Credits  
1 (120 hours), 2 (240 hours), 3 (360 hours) per course code

Prerequisite  
No prerequisite for Level 1; Courses taken sequentially

The Mechanical Design program prepares students to perform entry-level tasks under the supervision of an experienced drafter or engineer. Instruction includes safety, basic drafting techniques, geometric constructions, sketching, shape description, size description, drawing conventions, computer-aided design, manufacturing processes, applied geometry, and technical illustration. Upon successful completion of the Mechanical Design program, students will be prepared for postsecondary education and entry-level mechanical-related careers.
**Media Technology 1, 2, 3, 4**  
**Course Codes**: 6124, 6125, 6126, 6127  
**Recommended Maximum Enrollment**: 24  
**Grade Level**: 10, 11, 12  
**Credits**: 1 (120 hours), 2 (240 hours), 3 (360 hours) per course code  
**Prerequisite**: No prerequisite for Level 1; Courses taken sequentially  

In the Media Technology program, students will explore the general field of communications and will focus primarily on audio and motion media industries. Students will also learn about related fields such as radio, graphic design, computer graphics, animation, special effects, online media development, advertising, public relations, and corporate communications. Students will get hands-on experience in basic production techniques for audio, video, and film. They will learn how to use industry-standard equipment and will develop skills including writing, directing, producing, and editing video pieces of increasing complexity.

**Arts, Audio-Video Technology and Communications, Work-Based Credit**  
**Course Codes**: 5290  
**Recommended Maximum Enrollment**: NA  
**Grade Level**: 11, 12  
**Credits**: 1 (120 hours)  
**Prerequisite**: Completion of two (2) CATE courses/units within a program  

Arts, Audio-Video Technology and Communications work-based 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.
Administrative Support Technology

Course Code: 5122
Recommended Maximum Enrollment: 24
Grade Level: 10, 11, 12
Credits: 1 (120 hours)
Prerequisite: Computer Applications or Integrated Business Applications 1 (IBA 1)

Administrative Support Technology 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 technical skills; solve business-oriented problems; manage general office tasks; and demonstrate effective supervisory, management, and human relations skills.

Business Law

Course Code: 5044
Recommended Maximum Enrollment: 24
Grade Level: 11, 12
Credits: 1 (120 hours)
Prerequisite: None

Business Law is designed to provide the student with knowledge of the legal environment in which a consumer operates, to provide the student with knowledge of the legal environment in which a business operates, and to provide the student with knowledge of legal principles.

Business Principles and Management

Course Code: 5092
Recommended Maximum Enrollment: 24
Grade Level: 10, 11, 12
Credits: 1 (120 hours)
Prerequisite: Integrated Business Applications 1 (IBA 1)

Students in Business Principles and Management will develop a foundation in the many activities, problems, and decisions that are intrinsic to the management of a successful business, as well as an appreciation for the importance of these responsibilities. Areas to be examined include business organization, ethical and legal responsibilities, communication, decision-making, personnel, safety, professional development and related careers. By gaining an understanding of these areas, students will be better prepared to enhance the business decisions of tomorrow.
Computer Applications
Course Code 5008
Recommended Maximum Enrollment 24
Grade Level 7, 8, 9
Credits .5 (60 hours)
Prerequisite Keyboarding 5100 or successful completion of SCDE state keyboarding proficiency exam

Computer Applications is designed to introduce students to software applications that are necessary to live and work in a technological society. The applications covered include word processing, database, spreadsheet, and presentation.

Digital Desktop Publishing
Course Code 5176
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite Computer Applications or Integrated Business Applications I (IBA 1)

Digital Desktop Publishing brings together graphics and text to create professional level documents and publications. Students create, format, illustrate, design, edit/revise, and print publications. Improved productivity of digitally produced newsletters, flyers, brochures, reports, advertising materials, catalogs, and other publications is emphasized.

Digital Literacy
Course Code 5181
Recommended Maximum Enrollment 24
Grade Level 7, 8, 9
Credits .5 (60 hours)
Prerequisite None

Digital Literacy is designed to equip students with many of the needed computer skills to excel in a digital world. Students will be exposed to a broad range of computer technology from basic hardware/software to applications and the internet. Digital Literacy will support the student with the concepts in the 8th grade technology proficiency assessment. This course includes two options:

• Option 1 standards are for students who have not passed a formal keyboarding course. All remaining standards with the exception of Option 2 standards are to be completed.
• Option 2 standards are for students who have passed a formal keyboarding course. All remaining standards with the exception of Option 1 standards are to be completed.
Digital Multimedia
Course Code  5030
Recommended Maximum Enrollment  24
Grade Level  9, 10, 11, 12
Credits  .5 (60 hours), 1 (120 hours)
Prerequisite  None
Digital Multimedia covers multimedia concepts and applications utilizing text, graphics, animation, sound, video, and various multimedia applications in the design, development, and creation of multimedia presentations and publications within an interactive environment. Students will create a digital portfolio and other independent projects.

Digital Technologies (formerly Digital Input Technologies)
Course Code  5180
Recommended Maximum Enrollment  24
Grade Level  9, 10, 11, 12
Credits  .5 (60 hours), 1 (120 hours)
Prerequisite  None
Digital Input Technologies introduces students to new and emerging technologies that are impacting the way we utilize information when accessing computers and other technology devices. Students will be introduced to speech recognition software, mobile application, and online collaboration tools. Tablets, iPads, and Smart Phones will be introduced as tools for personal and business applications.

Entrepreneurship
Course Code  5400
Recommended Maximum Enrollment  24
Grade Level  11, 12
Credits  1 (120 hours)
Prerequisite  None
Entrepreneurship is designed to provide students with the knowledge and skills leading to the development of a business plan for small business ownership. An important part of the course will be the incorporation of traditional and non-traditional marketing strategies, technology, staffing, and financial considerations.

Essential Communications
Course Code  5041
Recommended Maximum Enrollment  24
Grade Level  9, 10, 11, 12
Credits  1 (120 hours)
Prerequisite  None
In the Essential Communications course, students will learn to communicate in a clear, courteous, concise, complete, and correct manner on both personal and professional levels. Competency will be developed in oral, written, interpersonal, technological, and employment communication. Listening skills will be incorporated throughout the course.
Fundamentals of Business, Marketing and Finance
Course Code 5090
Recommended Maximum Enrollment 24
Grade Level 9, 10
Credits 1 (120 hours)
Prerequisite None

Fundamentals of Business, Marketing and Finance curriculum is designed to encourage students to pursue successful careers in business, marketing, and finance. Students will gain a basic understanding of business operations and management concepts. This course will increase students’ knowledge about corporate enterprise and its role in a global society.

Fundamentals of Project Management
Course Code 5480
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite Integrated Business Applications I and Business Principles and Management

The Fundamentals of Project Management curriculum is designed to introduce students to processes of initiating, planning/executing, monitoring/controlling, and closing projects. Students will learn the nine knowledge areas of Project Management (integration, scope, time/cost, quality, human resources, risk/procurement management, and communication) through projects, simulations, and work-based scenarios.

Global Business (formerly International Business and Marketing)
Course Code 5032
Recommended Maximum Enrollment 24
Grade Level 11, 12
Credits 1 (120 hours)
Prerequisite None

International Business and Marketing (Global Business) provides a basic understanding of global business operations to prepare students for an increasingly global future. Students gain an understanding of global trade, international and political culture, legal issues, finance, distribution, and marketing.
Google Applications

Course Code 5007
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite None

Google Applications is designed to introduce students to many of the applications that Google offers. The course builds on skills beyond the traditional introduction of computer concepts and incorporates technologies using emerging applications for productivity, creativity, collaboration, and third party add-ons. It will prepare students for learning and working in the 21st century through communication and collaboration tools. Real world student-centered activities, projects, and collaborative works will strengthen students’ technology skills in the continually changing online Google community.

Google Basics

Course Code 5011
Recommended Maximum Enrollment 24
Grade Level 7, 8, 9
Credits .5 (60 hours)
Prerequisite None

Google Basics introduces the student to basic Google tools and applications through the completion of real-world, student-centered activities and projects.

Human Resource Management

Course Code 5093
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite Teacher Recommendation

Human Resource Management is designed to provide students with a basic understanding of Human Resources Management and its role in business.

Image Editing 1

Course Code 5340
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite Integrated Business Applications 1 or Digital Input Technologies or Computer Applications

Image Editing 1 is designed to provide students with the knowledge and skills needed to utilize digital imaging software in editing and designing images and graphics. Students also learn the use of technologies related to digital imaging such as basic computer operations, file sharing across networks, digital scanning, digital photography, and preparing documents for output to various types of media.
### Image Editing 2

<table>
<thead>
<tr>
<th>Course Code</th>
<th>5341</th>
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<tbody>
<tr>
<td>Recommended Maximum Enrollment</td>
<td>24</td>
</tr>
<tr>
<td>Grade Level</td>
<td>10, 11, 12</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>Image Editing 1</td>
</tr>
</tbody>
</table>

Image Editing 2 is designed to provide the student with advanced and in-depth knowledge and skills necessary for utilizing digital imaging software to edit and design images, web graphics, animation, and video. Successful completion of this course will prepare the student to take industry certification test(s).

### Integrated Business Applications 1

<table>
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<th>Course Code</th>
<th>5020</th>
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<tbody>
<tr>
<td>Recommended Maximum Enrollment</td>
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</tr>
<tr>
<td>Grade Level</td>
<td>9, 10, 11, 12</td>
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<tr>
<td>Credits</td>
<td>1 (120 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>Keyboarding 5100 or successful completion of SCDE state keyboarding proficiency exam</td>
</tr>
</tbody>
</table>

Integrated Business Applications 1 is designed to teach students software applications that are necessary to live and work in a technological society. The applications covered include word processing, database, spreadsheet, and presentation. Other content areas may include computer hardware, terminology, and concepts.

### Integrated Business Applications 2

<table>
<thead>
<tr>
<th>Course Code</th>
<th>5021</th>
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<tbody>
<tr>
<td>Recommended Maximum Enrollment</td>
<td>24</td>
</tr>
<tr>
<td>Grade Level</td>
<td>10, 11, 12</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>Integrated Business Applications 1 (IBA 1)</td>
</tr>
</tbody>
</table>

Integrated Business Applications 2 of study is designed to teach the student advanced computer concepts as related to processing data into useful information needed in business situations by using advanced database, spreadsheet, word processing, and presentation software capabilities.

### Keyboarding

<table>
<thead>
<tr>
<th>Course Code</th>
<th>5100</th>
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<tbody>
<tr>
<td>Recommended Maximum Enrollment</td>
<td>24</td>
</tr>
<tr>
<td>Grade Level</td>
<td>7, 8, 9</td>
</tr>
<tr>
<td>Credits</td>
<td>.5 (60 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>None</td>
</tr>
</tbody>
</table>

The beginning of the Keyboarding course provides an opportunity for students to master the skill of entering alphabetic, numeric, and symbolic information on a keyboard and a ten-key pad using the touch...
method of key stroking. Emphasis is placed on development of accuracy and speed, proper techniques, and correct finger ing. The second part of the course emphasizes formatting of basic letters, reports, tables, and other business documents. Composition and language skills are important components of the Keyboarding course.

Logistics and Business Processes

| Course Code | 5482 |
| Grade Level | 10, 11, 12 |
| Credits | 1 (120 hours) |
| Prerequisite | Integrated Business Applications 1 (IBA 1) |

For a business, logistics means having the right thing, at the right place, at the right time. This course spans the complete order to cash lifecycle and gives students an overview of the processes involved in order management from its inception to its fulfillment. Students will learn about fundamental logistics concepts and processes including defining items and customers, entering and processing orders, inventory and warehouse operations, shipping and RFID technology, pricing and invoices, and payment processing. Students will have online access to Oracle’s virtual company, Vision Enterprises, enabling them to carry out the practices using the same software used by many companies around the world today. Assuming the roles of managers and employees of Vision Enterprises, students will enter new customers and items to the system and understand how inventory is ordered, stored, shipped, and replenished.

Multimedia Basics

| Course Code | 5010 |
| Grade Level | 7, 8, 9 |
| Credits | .5 (60 hours) |
| Prerequisite | None |

Multimedia Basics covers basic multimedia concepts and applications utilizing text, graphics, animation, sound, video, and various multimedia applications in the design, development, and creation of multimedia presentations and publications in an interactive environment.

Professional and Leadership Development

| Course Code | 5178 |
| Grade Level | 10, 11, 12 |
| Credits | .5 (60 hours) or 1(120 hours) |
| Prerequisite | Recommended current membership in one or more of the career and technology education student organizations. |

The purpose of Professional and Leadership Development is to help students develop leadership skills necessary for success in business careers through effective communications, problem-solving techniques, and managing resources and meetings. The students will develop an understanding of the need for community service as part of their overall civic and professional responsibilities. In situations
where several career and technology student organizations (CTSOs) are represented in the class, preference should not be given to any one student organization. The standards are generic to all of the career and technology education student organizations.

Social Media in Business

Course Code: 5034
Recommended Maximum Enrollment: 24
Grade Level: 11, 12
Credits: 1 (120 hours)
Prerequisite: Teacher approval and successful completion of two business education courses

Social Media in Business 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.

Virtual Enterprise 1, 2, 3, 4

Course Code: 5150, 5151, 5152, 5153
Recommended Maximum Enrollment: 24
Grade Level: 10, 11, 12
Credits: 1 (120 hours)
Prerequisite: IBA 1 or Keyboarding and Computer Applications prerequisites for Level 1; Levels 2-4 taken sequentially

The Virtual Enterprise courses allow students to experience within a simulated business environment all facets of being an employee in a firm. The program allows students to run simulated offices in their schools and engage in virtual trading with other practice firms and provides students with interdisciplinary instruction and an in-school work experience to develop school-to-career skills.

Business Management and Administration, Work-Based Credit

Course Code: 5490
Recommended Maximum Enrollment: NA
Grade Level: 11, 12
Credits: 1 (120 hours)
Prerequisite: Completion of two (2) CATE courses within a program

Business Management and Administration work-based 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.
Child Development 1
Course Code  5800
Recommended Maximum Enrollment  24
Grade Level  9, 10, 11, 12
Credits  1 (120 hours)
Prerequisite  None

Child Development 1 focuses on the physical, social, emotional, and cognitive growth and development of children. Emphasis is placed on helping students acquire knowledge and skills essential to the care and guidance of children. Students learn to create environments that promote optimal development. Factors influencing a child’s development from conception through childhood are explored. Opportunities for service and project-based learning are incorporated throughout the course. Integration of the Family and Consumer Sciences student organization, Family, Career and Community Leaders of America (FCCLA), greatly enhances this curriculum.

Child Development 2
Course Code  5801
Recommended Maximum Enrollment  24
Grade Level  9, 10, 11, 12
Credits  1 (120 hours)
Prerequisite  Child Development 1

Child Development 2 is a specialized course that provides students with knowledge and skills related to children’s growth and development. Students are equipped to develop positive relationships with children and effective care giving skills. Emphasis is on promoting the well-being and healthy development of children and strengthening families in a diverse society. Opportunities to investigate careers related to the care and education of children are provided. Observations, job shadowing, and service learning experiences are encouraged. This course builds on skills and information introduced in Child Development 1. Skills acquired in Child Development 1 and 2 provide a foundation for further studies and employability in Childcare and Early Childhood Education. Critical thinking and practical problem-solving are emphasized in a co-curricular approach that incorporates principles of mathematics, science, writing, and communications. Integration of the Family and Consumer Sciences student organization, Family, Career and Community Leaders of America (FCCLA), greatly enhances this curriculum.

Early Childhood Education 1
Course Code  5700
Recommended Maximum Enrollment  24
Grade Level  10, 11
Credits  1 (120 hours), 2 (240 hours), 3 (360 hours)
Prerequisite  None

Early Childhood Education 1 is designed to provide students with hands-on opportunities to actively
explore and observe the world of children and prepare them for educational and administrative careers in the field. This course provides an in-depth study of career paths, developmentally appropriate practices, curriculum development, safe and healthy learning environments, and collaborative relationships. Participation in student organizations, Educators Rising (former Future Educators Association) and/or Family, Career and Community Leaders of America (FCCLA) greatly enhance the learning experience.

**Early Childhood Education 2**
- **Course Code**: 5701
- **Recommended Maximum Enrollment**: 24
- **Grade Level**: 11, 12
- **Credits**: 1 (120 hours), 2 (240 hours), 3 (360 hours)
- **Prerequisite**: Early Childhood Education 1

Early Childhood Education 2 is an advanced course focusing on the competencies needed to plan, guide, and care for young children in a safe, healthy, and developmentally appropriate environment. Students can acquire certification in pediatric safety, CPR, and first aid. Students interact with professionals in the field and participate in various school-to-work activities. Student laboratory/field experiences may be school based or in the community and include job shadowing and internships. This course may be taken for dual credit or may be articulated to local technical colleges (ECD 135: Health, Safety, and Nutrition; ECD 101: Introduction to Early Childhood Development). Students who successfully complete ECD 101 will be eligible for the South Carolina Early Childhood Credential. Participation in student organizations Educators Rising (former Future Educators Association) and/or Family, Career and Community Leaders of America (FCCLA) greatly enhance the learning experience.

**Introduction to Early Childhood Education**
- **Course Code**: 5702
- **Recommended Maximum Enrollment**: 24
- **Grade Level**: 9, 10, 11
- **Credits**: 1 (120 hours)
- **Prerequisite**: None

Introduction to Early Childhood Education is designed as an introduction of skills required for a career in the care, education and administration of programs for young children. Students will develop skills in areas including career paths, developmentally appropriate practices, safe and healthy learning environments, and collaborative relationships. Academics and employability skills are integrated throughout the course. Units from this course could be applied to education and training, health sciences, business, and human services clusters. Participation in student organizations Educators Rising (former Future Educators Association) and/or Family, Career and Community Leaders of America (FCCLA) greatly enhance the learning experience.
**Introduction to Teaching 1**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>5703</th>
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</thead>
<tbody>
<tr>
<td>Recommended Maximum Enrollment</td>
<td>24</td>
</tr>
<tr>
<td>Grade Level</td>
<td>10, 11</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours), 2 (240 hours), 3 (360 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>None</td>
</tr>
</tbody>
</table>

Introduction to Teaching 1 is designed to prepare students for employment and/or postsecondary opportunities in the education field. The program provides instruction in the teaching profession, communication skills, human growth and development, planning and instructional strategies, and school-societal relationships. Technology is integrated throughout the course work. Participation in student organizations Educators Rising (former Future Educators Association) and/or Family, Career and Community Leaders of America (FCCLA) greatly enhance the learning experience.

**Introduction to Teaching 2**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>5704</th>
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</thead>
<tbody>
<tr>
<td>Recommended Maximum Enrollment</td>
<td>24</td>
</tr>
<tr>
<td>Grade Level</td>
<td>11, 12</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours), 2 (240 hours), 3 (360 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>Introduction to Teaching 1</td>
</tr>
</tbody>
</table>

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

**Teacher Cadet – CATE**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>5705</th>
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<tbody>
<tr>
<td>Recommended Maximum Enrollment</td>
<td>24</td>
</tr>
<tr>
<td>Grade Level</td>
<td>11, 12</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>Completion of ECE 1 and 2 or Intro to Teaching 1 and 2 and satisfy the requirements for enrollment in the Teacher Cadet program</td>
</tr>
</tbody>
</table>

The Teacher Cadet Program uses an innovative approach designed to attract talented young people to the teaching profession through a challenging introduction to teaching. The Program seeks to provide high school students with insight into the nature of teaching, the problems of schooling, and the critical issues affecting the quality of education in America's schools. **Note:** The Teacher Cadet – CATE course code should only be used as a part of a CATE Early Childhood Education (ECE) or Introduction to Teaching (IT) Completer.
**Education and Training, Work-Based Credit**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>6390</th>
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</thead>
<tbody>
<tr>
<td>Recommended Maximum Enrollment</td>
<td>NA</td>
</tr>
<tr>
<td>Grade Level</td>
<td>11, 12</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>Completion of two (2) CATE courses/units within a program</td>
</tr>
</tbody>
</table>

Education and Training work-based 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.
### Accounting 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>5001</th>
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</thead>
<tbody>
<tr>
<td>Recommended Max Enrollment</td>
<td>24</td>
</tr>
<tr>
<td>Grade Level</td>
<td>10, 11, 12</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>Completion of Algebra I or equivalent with a grade of C or better and/or instructor approval.</td>
</tr>
</tbody>
</table>

Accounting 1 is designed to help the student develop the skills necessary for the highly technical interaction between accounting and business, to develop an understanding of the steps of the accounting cycle as applied to several different kinds of business operations, and to develop an understanding of accounting concepts, principles, and practices. Use of the computer in simulated activities gives the student an opportunity to see the advantages of technology in accounting procedures.

### Accounting 2

<table>
<thead>
<tr>
<th>Course Code</th>
<th>5005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended Max Enrollment</td>
<td>24</td>
</tr>
<tr>
<td>Grade Level</td>
<td>10, 11, 12</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>Accounting 1 with minimum grade of C or better and/or instructor approval.</td>
</tr>
</tbody>
</table>

Accounting 2 expands the student’s understanding of accounting subsystems and develops an understanding of various methods of internal control procedures. The student develops competence in using subsidiary ledgers, in preparing financial statements, and in performing end-of-period procedures. The student will demonstrate the use of accounting principles through the use of computer software and simulated activities.

### Banking Services

<table>
<thead>
<tr>
<th>Course Code</th>
<th>5271</th>
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<tbody>
<tr>
<td>Recommended Max Enrollment</td>
<td>24</td>
</tr>
<tr>
<td>Grade Level</td>
<td>10, 11, 12</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>Business Finance or Personal Finance</td>
</tr>
</tbody>
</table>

Banking Services is designed to offer a unique approach to understanding the banking services. It provides an introduction to banking services and functions, including business of banking, careers in banking and finance, origins and purpose of banking, money and interest, deposits in banking, negotiable instruments, bank loans, mortgages, commercial lending, specialized bank service, promoting the bank, and security and ethics.
Business Finance
Course Code 5273
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite Accounting I
Business Finance is designed to provide students with a foundation in corporate business finance concepts and applications including fundamentals, financial environment, management planning, maintenance and analysis of financial records, long and short term financial activities, financial business activities, financial institutions and banking services, consumer credit, business insurance, technology and financial management, and international finance.

Financial Literacy
Course Code 5282
Recommended Maximum Enrollment 24
Grade Level 7, 8, 9
Credits .5 (60 hours)
Prerequisite None
Financial Literacy is designed to introduce the student to basic financial literacy skills to help them make responsible financial decisions. Concepts covered include financial planning, bank accounts, credit and loans, wages and taxes, investments, and insurance.

Financial Math
Course Code 5281
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours)
Prerequisite None
Financial Math will empower students to apply fundamentals of financial preparedness and planning. Financial Math is essential to helping students become informed consumers as they become employed, create budgets, make major purchases, initiate savings plans, manage credit, and make strategic investment decisions.

Insurance
Course Code 5275
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite None
Insurance is designed to introduce the student to the basic elements of the insurance industry: auto, renter’s and homeowner’s, health, life, disability and long-term care, and other personal insurances. Career opportunities in the insurance industry will also be discussed. Upon completion of the course, the student will have a background to seek an entry-level position in the insurance industry.
Personal Finance
Course Code 5131
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits .5 (60 hours) or 1 (120 hours)
Prerequisite None
Personal Finance introduces students to the fundamentals of personal finance, which include budgeting, obtaining credit, maintaining deposit accounts, understanding investments, understanding risk management, computing taxes, and analyzing the basic elements of finance.

Securities and Investments
Course Code 5277
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite Business Finance or Personal Finance
Securities and Investments is designed to prepare students to make intelligent investment decisions based on their personal financial needs (or on the needs of a business). Topics include financial planning for various stages; stocks, bonds, mutual funds, real estate, precious metals, gems and collectibles, and futures and options markets.

Finance, Work-Based Credit
Course Code 6190
Recommended Maximum Enrollment NA
Grade Level 11, 12
Credits 1 (120 hours)
Prerequisite Completion of two (2) CATE courses/units within a program
Finance work-based 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.
Biomedical Innovation
Course Code 5583
Recommended Maximum Enrollment 24
Grade Level 12
Credits 1 (120 hours)
Prerequisite Principles of Biomedical Sciences (PBS), Human Body Systems (HBS), Medical Interventions

Biomedical Innovation is the capstone course for the Project Lead the Way Biomedical Sciences program for high school students. Students design innovative solutions for the health challenges of the 21st century. They work through progressively challenging open-ended problems, addressing topics such as clinical medicine, physiology, biomedical engineering and public health. They have the opportunity to work on an independent project with a mentor or advisor from a university, hospital, research institution, or the biomedical industry.

Emergency Medical Services 1
Course Code 5531
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours), 2 (240 hours)
Prerequisite Successful completion of one of the following: Introduction to Emergency Medical Services, Health Science 1, and/or teacher recommendation

Emergency Medical Services 1 is the first in a sequence of courses. This course 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.
Emergency Medical Services 2
Course Code: 5532
Recommended Maximum Enrollment: 24
Grade Level: 11, 12
Credits: 1 (120 hours), 2 (240 hours)
Prerequisite: Successful completion of Emergency Medical Services (EMS) 1

Emergency Medical Services (EMS) 2 is the second in a sequence of courses. This course 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. Students in this course will be certified in FA/CPR/AED if not certified before course attendance. Recertification may take place as needed. *Successful completion of this course may result in First Responder certification available through various national certifying bodies.

Emergency Medical Services 3
Course Code: 5533
Recommended Maximum Enrollment: 20
Grade Level: 12
Credits: 2 (240 hours)
Prerequisite: Completion of Emergency Medical Services 1 and 2 courses with a grade of B or better and successful completion of Health Science 3 (or its substitute) Student must also meet admission requirements of the participating local technical college, if student is dual enrolled.

Emergency Medical Technician-Basic (EMT-B)/EMS 3 serves as an entry-level course in professional health careers. EMT-B is a solid foundation for further study in prehospital care (intermediate and paramedic) nursing, physical and occupational therapy, and premedical studies. EMT-B/EMS 3 provides the student with the knowledge and skills for the emergency medical field, responsibilities, first aid measures, and use of emergency equipment. The course may be offered as a dual-enrollment course with the local technical college or may be offered on a high school campus with a DHEC (Department of Health and Environmental Control) approved EMT-B instructor. After the student’s 18th birthday and successful completion of both the practicum and the theoretical National Registry examination for EMT-B, the student will be nationally registered and state certified in South Carolina. National registry card expires in two years and state certification expires every three years.
Health Science 1
Course Code 5550
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours), 2 (240 hours)
Prerequisite or Co-requisite Biology
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. Students will participate in a Career Project, and will hear from guest speakers in the healthcare field. Students will learn first-aid procedures and learn fire safety. The skills and knowledge that students learn in Health Science 1 serve to prepare them for future clinical experiences such as job shadowing or internships as they advance in the Health Science courses. To advance to Health Science 2, it is recommended that students should have an 80% score or higher in Health Science 1, or teacher recommendation.

Health Science 2
Course Code 5551
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours), 2 (240 hours)
Prerequisite Health Science 1 or Sports Medicine 1
Health Science 2 applies the knowledge and skills that were learned in Health Science 1 while further challenging the students to learn more about the healthcare field. Health Science 2 will continue teaching in more detail, 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 and medical terminology is incorporated throughout the lessons being taught. Basic Pharmacology is introduced and students will have an understanding of pharmacy math computations. Students will be certified in First Aid and CPR in this course. Students in this course should further their knowledge of healthcare careers and future goals by participating in a job shadowing experience. This course provides a foundation for further advancement in Health Science. It is recommended that students should score an 80% or higher in this course to advance to Health Science 3, or Clinical Study.
### Health Science 3

**Course Code:** 5552  
**Recommended Maximum Enrollment:** 24  
**Grade Level:** 10, 11, 12  
**Credits:** 1 (120 hours), 2 (240 hours)  
**Prerequisite:** Health Science 1 or Sports Medicine 1 plus CPR and First Aid (FA) certification

Health Science 3 focuses on the human body. Students will gain knowledge of all human body systems and how they work (Anatomy and Physiology). This course will emphasize the study of disease, prevention and treatment (Pathophysiology). Students will participate in teamwork activities for assigned projects. Medical Terminology is incorporated throughout the course. Skills learned in HS2 will be reinforced as each body system is studied.

### Health Science Clinical Study (formerly Gerontology)

**Course Code:** 5560  
**Recommended Maximum Enrollment:** 16  
**Grade Level:** 12  
**Credits:** 1 (120 hours), 2 (240 hours)  
**Prerequisite:** Health Science 1, 2, and 3* (*Health Science 3 may be substituted with Science Department Anatomy & Physiology, PLTW Human Body Systems, Medical Terminology or AP Biology) and CPR and FA Certification

Health Science Clinical Study is designed to give students a clinical experience. This course can be a Certified Nurse Aide program or an individualized work based clinical experience for the student. Students will have classroom time to review the necessary skills and qualities needed to complete rotating internships that will require travel to worksites. (District specific student travel guidelines should be followed and worksite HIPPA training and required worksite guidelines should be adhered to.) CPR and FA certifications can be renewed during this course if needed. Students should be certified in CPR and FA before being placed at a medical facility. Schools serving as a Certified Nurse Aide program will follow the rules and regulations governed by SCDHHS. This Clinical Study program is meant to be a flexible program that works with district adapted clinical programs and certifications.

### Human Body Systems

**Course Code:** 5581  
**Recommended Maximum Enrollment:** 24  
**Grade Level:** 9, 10, 11, 12  
**Credits:** 1 (120 hours)  
**Prerequisite:** Successful completion of Principles of Biomedical Science or Teacher recommendation

Human Body Systems is a foundation course for the Project Lead the Way Biomedical Sciences program for high school students. Students examine the interactions of body systems as they explore identity, communication, power, movement, protection, and homeostasis. Students design experiments, investigate the structures and functions of the human body, and use data acquisition software to monitor
body functions such as muscle movement, reflex and voluntary action, and respiration. Exploring science in action, students build organs and tissues on a skeletal manikin, work through interesting real-world cases and often play the role of biomedical professionals to solve medical mysteries.

**Medical Billing and Coding**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>5584</th>
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<tbody>
<tr>
<td>Recommended Maximum Enrollment</td>
<td>24</td>
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<tr>
<td>Grade Level</td>
<td>12</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours), 2 (240)</td>
</tr>
</tbody>
</table>

**Required Prerequisite**

1 unit of Medical Terminology- successfully passed. (C or better) **PLUS** Students must have successfully passed (C or better) **PLUS** one or more units from the courses listed below: Health Science 1, Health Science 2, Sports Medicine 1, Sports Medicine 2, EMS 1, EMS 2, PLTW – BMS – Principles of Biomedical Science, PLTW – BMS- Human Body Systems AND a GPA of 3.0 or higher.

Medical Billing and Coding will prepare students to sit for a national certification in insurance coding. Students in this course will further their knowledge of foundational standards in medical law and ethics, professionalism, medical terminology and anatomy and physiology. This course will include an introduction to ICD-10 and ICD/CPT. Students interested in this course should have an interest in healthcare, science and technology. The student will use computer medical software to navigate this course and meet the required objectives. A student in this course may have a desire to be involved with the medical field but may not necessarily want to have “hands – on” patient care. To be a completer through this pathway a student must complete one unit in each of the required courses for the pathway that the student wants to complete in. Example, Health Science 1 (minimum 1 unit), Health Science 2 (minimum 1 unit), Medical Terminology (1 unit) and Medical Billing and Coding (1 or 2 units) = a Health Science completer.

**Medical Interventions**

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<thead>
<tr>
<th>Course Code</th>
<th>5582</th>
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<tbody>
<tr>
<td>Recommended Maximum Enrollment</td>
<td>24</td>
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<tr>
<td>Grade Level</td>
<td>11, 12</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>Human Body Systems and Principles of Biomedical Science</td>
</tr>
</tbody>
</table>

Medical Interventions is a foundation course for the Project Lead the Way Biomedical Sciences program for high school students. In the Medical Interventions course, students will investigate the variety of interventions involved in the prevention, diagnosis and treatment of disease as they follow the lives of a fictitious family. A “How-To” manual for maintaining overall health and homeostasis in the body, the course will explore how to prevent and fight infection, how to screen and evaluate the code in our 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 will be exposed to the wide range of interventions
related to Immunology, Surgery, Genetics, Pharmacology, Medical Devices, and Diagnostics. Each family case scenario will introduce multiple types of interventions and will reinforce concepts learned in the previous two courses, as well as present new content. Interventions may range from simple diagnostic tests to treatment of complex diseases and disorders. These interventions will be showcased across the generations of the family and will 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 role scientific thinking and engineering design play in the development of interventions of the future.

**Medical Terminology**

Course Code 5540  
Recommended Maximum Enrollment 24  
Grade Level 9, 10, 11, 12  
Credits 1 (120 hours), 2 (240 hours)  
Prerequisite None  

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. In addition to traditional classroom instruction, Medical Terminology may be offered as a dual enrollment, virtual, online, or independent study course.

**Pharmacology for Medical Careers**

Course Code 5570  
Recommended Maximum Enrollment 24  
Grade Level 12  
Credits 1 (120 hours), 2 (240 hours)  
Prerequisite Successful completion of one of the following with a C average or higher: Health Science 1, Principles of Biomedical Science, EMS 1, or Sports Medicine 1 PLUS Health Science 3, Medical Terminology or it’s substitute. (anatomy and physiology, human body systems.) AND a 3.0 GPA or higher  

Pharmacology for Medical Careers/Pharmacy Technology is designed to expose students to pharmacy careers and benefit from pharmacology, math, and science standards included in this course. Teachers are encouraged to arrange student work-based learning opportunities in pharmacies for practical experience. At the end of this program a student may sit for the national exam to become a certified pharmacy technician. The American Council for Pharmacy Education accredits the program through the Texas Pharmacy Association. The cost of the program is approximately $250 - $299 per student. Two programs offer the training - Kaduceus and PassAssured.
To be a completer through this pathway a student must complete one unit in each of the required courses for the pathway that the student wants to complete in. Example, Health Science 1 (minimum 1 unit), Health Science 2 (minimum 1 unit), Health Science 3 or its substitute OR Medical Terminology (1 unit) and Pharmacy for Medical Careers (1 unit or 2 units).

Practical Nursing, Phase 1
Course Code 5520
Recommended Maximum Enrollment 20
Grade Level 12
Credits 1 (120 hours), 2 (240 hours)
Prerequisite Passing score on the NET Nurse Entrance Exam
Practical Nursing programs are approved by the South Carolina Department of Labor, Licensing and Regulation, Board of Nursing. The programs are provided support by the South Carolina Department of Education, Office of Career and Technology Education, Health Science Technology Education. These practical nursing programs are an eighteen months course of study, consisting of two nine month segments (Phase I and Phase II) that correspond with the public school calendar. Classes begin annually in August and end in May. Generally Phase I students attend classes all morning each day.

Principles of Biomedical Sciences
Course Code 5580
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours)
Prerequisite Teacher recommendation
Principles of Biomedical Sciences is a foundation course for the Project Lead the Way Biomedical Sciences program for high school students. This course provides an introduction to the biomedical sciences through exciting hands-on projects and problems. Students investigate the human body systems and various health conditions including heart disease, diabetes, sickle-cell disease, hypercholesterolemia, and infectious diseases. They determine the factors that led to the death of a fictional person, and investigate lifestyle choices and medical treatments that might have prolonged the person’s life. The activities and projects introduce students to human physiology, medicine, research processes and bioinformatics. Key biological concepts including homeostasis, metabolism, inheritance of traits, and defense against disease are embedded in the curriculum. Engineering principles including the design process, feedback loops, and the relationship of structure to function are also incorporated. This course is designed to provide an overview of all the courses in the Biomedical Sciences program and lay the scientific foundation for subsequent courses.

Sports Medicine 1
Course Code 5555
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 unit (120 hours), 2 units (240 hours)
Prerequisite or Co-requisite Biology or Health Science 1
Sports Medicine 1 emphasizes sports medicine career exploration and the prevention of athletic injuries,
including the components of exercise science, kinesiology, anatomy, principles of safety, first aid, cardiopulmonary resuscitation (CPR), and vital signs. Subject matter also includes legal issues, members of the sports medicine team, nutrition, protective sports equipment, environmental safety issues, taping and wrapping, mechanisms of injury, and application of other sports medicine concept. Students interested in healthcare careers in athletic training, physical therapy, medicine, exercise physiology, nursing, biomechanics, nutrition, psychology, and radiology will benefit from this course. This course is recommended for students in grades 10-12. Students are encouraged to have previous course work in the biological sciences and/or health science.

**Sports Medicine 2**

**Course Code** 5556  
**Recommended Maximum Enrollment** 24  
**Grade Level** 10, 11, 12  
**Credits** 1 unit (120 hours), 2 units (240 hours)  
**Prerequisite** Required successful completion of Sports Medicine 1, plus CPR and FA certification. Also recommended but not required, Health Science 3 or its substitute. (Medical Terminology, PLTW Human Body Systems, Science department Anatomy and Physiology, AP Biology)

Sports Medicine 2 emphasizes the assessment and rehabilitation of athletic injuries. Subject matter will include discussion of specific conditions and injuries that may be experienced by individuals participating in athletic activities. In addition, the use of appropriate therapeutic modalities and exercise in the care and rehabilitation of injuries will be examined. A review of the body systems will be included with this course. Advanced concepts related to the administrative aspects of the sports medicine program will also be covered in this course. Other career roles in Sports Medicine will be discussed as the athletic trainer takes the injured athlete through the pathway of recovery. This course is recommended for students in grades 10-12.

**Health Science, Work-Based Credit**

**Course Code** 5590  
**Recommended Maximum Enrollment** NA  
**Grade Level** 11, 12  
**Credits** 1 unit (120 hours)  
**Prerequisite** Successful completion of two Health Sciences courses plus CPR and FA certification.

Health Science work-based 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.
Sports Medicine, Work-Based Credit

Course Code: 5591
Recommended Maximum Enrollment: NA
Grade Level: 11, 12
Credits: 1 unit (120 hours)
Prerequisite: Successful completion of two Sports Medicine courses plus CPR and FA certification.

Sports Medicine work-based 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.
HOSPITALITY AND TOURISM

Baking and Pastry
Course Code 5723
Recommended Maximum Enrollment 24
Grade Level 11, 12
Credits 2 (240 hours), 3 (360 hours)
Prerequisite Culinary 1

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 Education foundation assessment, ACF Retail Commercial Baking Certification. Integration of the Family and Consumer Sciences student organization, Family Career and Community Leaders of America (FCCLA) provides leadership and entrepreneurship experiences. Participation in the career & technology organization SkillsUSA provides the students with the opportunity to compete and display professional baking techniques.

Culinary Arts 1
Course Code 5720
Recommended Maximum Enrollment 20
Grade Level 10, 11, 12
Credits 1 (120 hours), 2 (240 hours), 3 (360 hours)
Prerequisite None

Culinary Arts 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. Integration of the Family and Consumer Sciences student organization, Family Career, and Community Leaders of America (FCCLA), greatly enhances this curriculum.

Culinary Arts 2
Course Code 5721
Recommended Maximum Enrollment 20
Grade Level 11, 12
Credits 1 (120 hours), 2 (240 hours), 3 (360 hours)
Prerequisite Culinary Arts 1

Culinary Arts 2 is an advanced level course that prepares the serious culinary student for gainful employment and/or entry into postsecondary education. Content provides students the opportunity to acquire marketable skills by examining both the industry and its career options. Students have
opportunities to develop skills in workplace settings. Integration of the Family and Consumer Sciences
Student organization, Family, Career, and Community Leaders of America (FCCLA), greatly enhances
the curriculum.

**Event and Entertainment Management (new course)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>5475</th>
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<tbody>
<tr>
<td>Recommended Max.</td>
<td>24</td>
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<tr>
<td>Grade Level</td>
<td>10, 11, 12</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>Introduction to Hospitality and Tourism Management</td>
</tr>
</tbody>
</table>

CREATE MAGIC AND MEMORIES…Event and Entertainment Management familiarizes students
with management techniques and strategies for successful planning, promotion, and implementation of
special events that result in extraordinary and memorable experiences. Students will learn the basics about
what it takes to add the “WOW factor” for customers whether the event is a sporting event, corporate event,
family reunion, cruise, wedding, party, etc. Students will engage in project- and problem-based learning
opportunities for event evaluation, direct observation of, and hands-on involvement in the planning and
staging of special events. Students are encouraged to participate in extended learning experiences such as
career and technical student organizations (FCCLA and/or DECA) and other leadership or extracurricular
organizations to enhance their learning.

**Hospitality Management and Operations 1 (phasing out July 2017)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>5476</th>
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</thead>
<tbody>
<tr>
<td>Recommended Max.</td>
<td>24</td>
</tr>
<tr>
<td>Grade Level</td>
<td>9, 10, 11, 12</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours), 2 (240 hours), 3 (360 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>None</td>
</tr>
</tbody>
</table>

Hospitality Management and Operations 1 is designed to provide foundation information and
experiences within the hospitality and tourism industry. The units in this course consist of career
exploration, professionalism, safety, security, and environmental management and an in depth look into
the hospitality and tourism segments. Students will have opportunities to participate in shadowing,
mentoring, and other experiences that expose them to the hospitality industry. Integration of DECA
and/or Family, Career, and Community Leaders of America (FCCLA), greatly enhances the curriculum.

**Hospitality Management and Operations 2 (phasing out July 2018)**

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>Recommended Max.</td>
<td>24</td>
</tr>
<tr>
<td>Grade Level</td>
<td>11, 12</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours), 2 (240 hours), 3 (360 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>Hospitality Management and Operations 1</td>
</tr>
</tbody>
</table>

Hospitality Management and Operations 2 is designed for students who have decided to pursue a career
in the hospitality industry. After completion of this course students will possess the knowledge and
skills to advance rapidly in a career or in an institution of higher learning. This course includes career
exploration, safety, security, and environmental management, leadership, management, marketing and
sales, and an in depth study of the hospitality and tourism segments. Intensive laboratory and field experiences are integral parts of this course. Articulation or dual credit with post-secondary programs is encouraged. Integration of DECA and/or Family, Career, and Community Leaders of America (FCCLA), greatly enhances the curriculum.

**Introduction to Culinary Arts**

Course Code 5722
Recommended Maximum Enrollment 20
Grade Level 9, 10
Credits 1 (120 hours)
Prerequisite None

Introduction to Culinary Arts provides students with an overview of interest, aptitude, and technical skills to provide foundational skills and knowledge for Culinary Arts 1 and/or the food service industry. Integration of the Family and Consumer Sciences co-curricular student organization, Family Career, and Community Leaders of America (FCCLA), greatly enhances this curriculum.

**Introduction to Hospitality and Tourism Management (formerly Introduction to Hospitality Management and Operations)**

Course Code 5478
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11
Credits 1 (120 hours)
Prerequisite None

HOSPITALITY + YOU = UNIMAGINABLE OPPORTUNITIES…Introduction to Hospitality and Tourism Management explores the nature, concepts and impact of the hospitality and tourism industry. This course focuses on foundational information about the hospitality and tourism industry and provides opportunities for students to get a taste of what hospitality and tourism is all about. Course content includes: career exploration, employability and career development skills, guest satisfaction, safety, security and environmental practices, the history of the hospitality industry, and the hospitality and tourism segments. Students are encouraged to participate in extended learning experiences such as career and technical student organizations (FCCLA and/or DECA) and other leadership or extracurricular organizations to enhance their learning.

**Lodging Management (new course)**

Course Code 5473
Recommended Maximum Enrollment NA
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite Introduction to Hospitality and Tourism Management

THERE’S NO DODGING THE LODGING! SO, CHECK-IN FOR A FIVE STAR EXPERIENCE!

Lodging Management is the study of the lodging industry’s history, growth, development and future direction. Students will learn what it takes to provide ideal guest experiences from a management perspective. The course covers front office procedures and interpersonal dynamics from reservations through
night audit. Students are encouraged to participate in extended learning experiences such as career and technical student organizations (FCCLA and/or DECA) and other leadership or extracurricular organizations to enhance their learning experiences.

Travel and Tourism Management (new course)
Course Code 5474
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite Introduction to Hospitality and Tourism Management

DISCOVER THE WORLD ONE ADVENTURE AT A TIME!...Travel and Tourism Management incorporates management principles and procedures of the travel and tourism industry as well as destination geography, airlines, international travel, cruising, travel by rail, lodging, recreation, amusements, attractions, and resorts. Employment qualifications and opportunities are also included in this course. Students are encouraged to participate in extended learning experiences such as career and technical student organizations (FCCLA and/or DECA) and other leadership or extracurricular organizations.

Hospitality and Tourism, Work-Based Credit
Course Code 5190
Recommended Maximum Enrollment NA
Grade Level 11, 12
Credits 1 (120 hours)
Prerequisite Completion of two (2) CATE courses/units within a program

Hospitality and Tourism work-based 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.
Barber/Master Hair Care 1, 2, 3, 4
Course Code 6158, 6159, 6160, 6161
Required Maximum Enrollment 20 students per class period
Grade Level 10, 11, 12
Credits/Hours 8 units/1000 hours plus 540 academic hours required by SCLLR
Prerequisite Module 1 prerequisite for Module 2 prerequisite for Module 3 prerequisite for Module 4; Course codes assigned sequentially

The Barber/Master Hair Care Specialist Program is designed to prepare students to become Registered Barbers or Master Hair Care Specialists. The student receives training following the guidelines and regulations established by the South Carolina Labor, Licensing, and Regulation (SCLLR) Barber Board. Students will perform techniques and arts such as hair cutting and styling, facial treatments, trimming and shaving of facial hair, chemical hair relaxing, tinting, coloring, shampooing, and rinsing. Instruction in chemistry, bacteriology, and 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. Also included in the course of study is barber shop/salon planning and management.

Cosmetology 1, 2, 3, 4
Course Code 6150, 6151, 6152, 6153
Required Maximum Enrollment 20 students per class period
Grade Level 10, 11, 12
Credits/Hours 8 units/1000 hours plus 540 academic hours required by SCLLR
Prerequisite Module 1 prerequisite for Module 2 prerequisite for Module 3 prerequisite for Module 4; Course codes assigned sequentially

The Cosmetology Program is designed to prepare students to qualify and successfully complete all requirements for a South Carolina Cosmetology license. The student receives training following the guidelines and regulations established by the South Carolina Labor, Licensing, and Regulation (SCLLR) Cosmetology Board. The course of study includes Sanitation and Safety, Professionalism and Salon Management, Sciences of Cosmetology, Professional Hair Care Skills, Professional Nail Care Skills, Professional Skin Care Skills, and Unassigned Specific Needs. Instruction in chemistry, bacteriology, and anatomy and physiology of the face, head, arms, and hands is incorporated by means of theory and of practical application on both mannequins and live models.
Esthetics 1, 2, 3, 4
Course Codes 6162, 6163, 6164, 6165
Required Maximum Enrollment 20 students per class period
Grade Level 10, 11, 12
Credits/Hours 5 units/450 hours required by SCLLR plus 150 hours by SCDE or a total of 600 hours
Prerequisite Module 1 prerequisite for Module 2 prerequisite for Module 3 prerequisite for Module 4; Course codes assigned sequentially

Esthetics is designed to train students in the theory and practical skills necessary to prepare them for immediate employment opportunities as a licensed esthetician. The student receives training following the guidelines and regulations established by the South Carolina Labor, Licensing, and Regulation (SCLLR) Cosmetology Board. The course is designed to instill desirable work habits and a positive attitude toward an esthetics career. Technical skills are complimented with training in practical communication and people skills. Emphasis is placed on ethical business practices throughout the Esthetics Course.

Nail Technology 1, 2, 3, 4
Course Code 6154, 6155, 6156, 6157
Required Maximum Enrollment 20 students per class period
Grade Level 10, 11, 12
Credits/Hours 4 units/300 hours required by SCLLR plus 180 hours SCDE or a total of 480 hours
Prerequisite Module 1 prerequisite for Module 2 prerequisite for Module 3 prerequisite for Module 4; Course codes assigned sequentially

The Nail Technology program is designed to prepare students to become licensed nail technicians. Nail Technology students receive training in the art and science of the care and beautification of nails. The student receives training following the guidelines and regulations established by the South Carolina Labor, Licensing, and Regulation (SCLLR) Cosmetology Board. The course of study includes instruction in diseases and disorders, chemistry, biology and anatomy, and physiology of the arms, hands, and feet. Manicures, pedicures, tips, sculptures, and wraps are incorporated by means of theory and practical application on both mannequins and live models. Also included in the course of study is salon planning and management.

Human Services, Work-Based Credit
Course Codes 5790
Required Maximum Enrollment NA
Grade Level 11, 12
Credits 1 (120 hours)
Prerequisite Requirements satisfied by SCLLR statutes and regulations prior to working with the public

Human Services work-based 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.
HUMAN SERVICES/FAMILY AND CONSUMER SCIENCES  
MIDDLE SCHOOL

**Exploratory Family and Consumer Sciences - *6th Grade**

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>Recommended Maximum Enrollment</td>
<td>24</td>
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<tr>
<td>Grade Level</td>
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</tr>
<tr>
<td>Credits</td>
<td>NA</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>NA</td>
</tr>
</tbody>
</table>

Exploratory Family and Consumer Sciences (Introduction to Personal Skills) introduces students to relationships, resources, home safety and security, childcare responsibilities, personal image, basic food preparation techniques, career, and entrepreneurship opportunities. Integration of the Family and Consumer Sciences student organization, Family Careers, and Community Leaders of America (FCCLA), greatly enhances this curriculum. *Perkins funds CANNOT be used below the seventh grade.

**Introduction to Family and Consumer Sciences 1 - 7th Grade**

<table>
<thead>
<tr>
<th>Course Code</th>
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</thead>
<tbody>
<tr>
<td>Recommended Maximum Enrollment</td>
<td>24</td>
</tr>
<tr>
<td>Grade Level</td>
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</tr>
<tr>
<td>Credits</td>
<td>NA</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>NA</td>
</tr>
</tbody>
</table>

Introduction to Family and Consumer Sciences 1 (Personal Skills 1) provides an opportunity for students to explore self-image, consumer issues, and environmental concerns, positive approaches to child development, clothing care, nutritional choices, food preparation, and skills for successful employment.

**Introduction to Family and Consumer Sciences 2 - 8th Grade**

<table>
<thead>
<tr>
<th>Course Code</th>
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</thead>
<tbody>
<tr>
<td>Recommended Maximum Enrollment</td>
<td>24</td>
</tr>
<tr>
<td>Grade Level</td>
<td>8</td>
</tr>
<tr>
<td>Credits</td>
<td>NA</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>NA</td>
</tr>
</tbody>
</table>

Introduction to Family and Consumer Sciences 2 (Personal Skills 2) focuses on the changes and challenges faced by young teens today. Topics include family relationships, goal setting, money management, home repairs, early childhood development, textile products, nutrition-related diseases and illnesses and careers.
Family and Consumer Sciences 1
Course Code 5808
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours)
Prerequisite None
Family and Consumer Sciences 1 is a comprehensive course designed to provide students with the core knowledge and skills needed to manage their lives. Project based instruction provides students with opportunities to utilize higher order thinking, communication, and leadership skills impacting families and communities. Concepts incorporate interpersonal relationships, career, community, and family connections, family, nutrition and wellness, consumer and family resources, fashion and apparel, food production and service, parenting, and housing into a rigorous and relevant curriculum. Integration of the Family and Consumer Sciences student organization, Family Careers, and Community Leaders of America (FCCLA), greatly enhances this curriculum.

Family and Consumer Sciences 2
Course Code 5809
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours)
Prerequisite Family and Consumer Sciences 1
Family and Consumer Sciences 2 is a comprehensive course designed to build upon concepts learned in Family and Consumer Sciences 1. Units covered in this course are career, community, and family connections, consumer services, education and early childhood, facilities management and maintenance, family and community services, food production and services, food science, dietetics, and nutrition, hospitality, tourism, and recreation, interpersonal relationships, interiors and furnishings, and textiles. Students will explore career pathways in Family and Consumer Sciences. Integration of the Family and Consumer Sciences student organization, Family Careers, and Community Leaders of America (FCCLA), greatly enhances this curriculum.

Family Life Education 1
Course Code 5820
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours)
Prerequisite None
Your body is not the only thing that needs to be healthy! What about your relationships? Learn how to make better choices by enrolling in Family Life Education 1! Family Life Education 1 helps students understand and learn to apply various concepts to gain and maintain healthy relationships throughout their lives. Topics such as applying interpersonal skills in relationships,
critiquing financial decisions, and determining risk factors of healthy lifestyles are included in the course content. Successful completion of the standards satisfies the Comprehensive Health Education Act requirements. Integration of the Family and Consumer Sciences student organization, Family Careers, and Community Leaders of America (FCCLA), standards greatly enhance the curriculum.

**Family Life Education 2**
- **Course Code**: 5821
- **Recommended Maximum Enrollment**: 24
- **Grade Level**: 9, 10, 11, 12
- **Credits**: 1 (120 hours)
- **Prerequisite**: Family Life Education 1

Now that you’ve acquired the skills to enhance your relationships, let’s further apply these skills to improve personal and family development. Family Life Education 2 stresses the role individuals must assume to improve family life. Effective personal development and the use of community resources are emphasized. Topics include but are not limited to developing healthy lifestyles, preparing for a family, managing financial resources, dealing with family crises, and developing employability skills. Integration of the Family and Consumer Sciences student organization, Family Careers, and Community Leaders of America (FCCLA), greatly enhances the curriculum.

**Fashion, Fabric, and Design 1**
- **Course Code**: 5804
- **Recommended Maximum Enrollment**: 24
- **Grade Level**: 9, 10, 11, 12
- **Credits**: 1 (120 hours)
- **Prerequisite**: None

Did you know that you can make clothing out of everyday items such as gum wrappers, tires, bamboo, and aluminum foil? Learn how textiles are woven into the fabric of life. Enroll in Fashion, Fabric, and Design 1 to develop skills in the selection, purchase, design, care, and construction of textile products. The course emphasizes critical thinking skills needed for making wise consumer choices and career decisions. Integration of the Family and Consumer Sciences Pre-Professional Assessment Certification (Pre-PAC) competencies and the student organization, Family Careers and Community Leaders of America (FCCLA), greatly enhances this curriculum.

**Fashion, Fabric, and Design 2**
- **Course Code**: 5805
- **Recommended Maximum Enrollment**: 24
- **Grade Level**: 9, 10, 11, 12
- **Credits**: 1 (120 hours)
- **Prerequisite**: Fashion, Fabric, and Design 1

Do you have a flair for creativity and an eye for fashion design? Why not enroll in Fashion, Fabric, and Design 2. This course is designed to advance skills in the selection, purchase, design, care, and construction of textile products. Contextual learning experiences further develop
critical thinking skills needed for success in the professional environment and merchandising. Integration of the Family and Consumer Sciences Pre-Professional Assessment Certification (Pre-PAC) competencies and the student organization, Family Careers and Community Leaders of America (FCCLA), greatly enhances this curriculum.

**Financial Fitness 1**

**Course Code**  
5812

**Recommended Maximum Enrollment**  
24

**Grade Level**  
11, 12

**Credits**  
1 (120 hours)

**Prerequisite**  
None

Want to get more for your money? Want to learn to spend your money wisely? If so, this is the course you should take. Financial Fitness 1 is designed to help students develop financial management skills by evaluating marketplace alternatives, creating a personal budget, understanding consumer rights and responsibilities, understanding the impact of career choices on personal goals and making informed consumer decision. Learning experiences provide real life application concepts such as budgeting money, using credit, and avoiding scams, rip-offs and identity theft. Integration of the Family and Consumer Sciences career and technical education student organization, Family Career, and Community Leaders of America greatly enhances this curriculum.

**Financial Fitness 2**

**Course Code**  
5813

**Recommended Maximum Enrollment**  
24

**Grade Level**  
11, 12

**Credits**  
1 (120 hours)

**Prerequisite**  
Financial Fitness 1

Graduation is near and life after high school is quickly approaching! Are you ready? Take this course to help to put you in control of your future. Financial Fitness 2 is an in depth study of financial management skills. Building on skill mastered in Financial Fitness 1, students will further research and analyze savings and investment options, consumer legislation, local, state, and federal consumer protection agencies, and financial services career paths. Learning experiences incorporate strategies to improve higher order thinking skills, incorporate the use of technology, solve real world problems, and develop characteristics of a responsible consumer. Students will have opportunities to interact with professionals from business and industry. Integration of the Family and Consumer Sciences career and technical education student organization, Family Career, and Community Leaders of America greatly enhances this curriculum.
Foods and Nutrition 1
Course Code: 5824
Recommended Maximum Enrollment: 20
Grade Level: 9, 10, 11, 12
Credits: 1 (120 hours)
Prerequisite: None

Students enrolled in Foods and Nutrition 1 will receive rigorous and relevant learning experiences as they study the principles of nutrition for individual and family health, fitness, and wellness. Students will gain knowledge and experiences in nutrition, food safety and sanitation, kitchen work centers, meal planning, preparation techniques, table service and etiquette, and nutrition-related careers. Critical thinking and practical problem-solving are emphasized in a co-curricular approach that incorporates principles of mathematics, science, writing, communications, and economics. The ServSafe® Foodhandlers certification provides increased marketability for students seeking employment. Foods and Nutrition 1 is a prerequisite for Foods and Nutrition 2. Inclusion of the Family and Consumer Sciences student organization, Family Careers, and Community Leaders of America (FCCLA), greatly enhances this curriculum.

Foods and Nutrition 2
Course Code: 5825
Recommended Maximum Enrollment: 20
Grade Level: 9, 10, 11, 12
Credits: 1 (120 hours)
Prerequisite: Foods and Nutrition 1

Students enrolled in Foods and Nutrition 2 will experience an advanced program designed to provide a more in depth knowledge of USDA guidelines, government involvement in food regulations, factors that affect consumer purchases and exploration of foods and nutrition related careers. Critical thinking and practical problem-solving are emphasized in a co-curricular approach that incorporates principles of mathematics, science, writing, communications, and economics. The ServSafe® Foodhandlers certification provides increased marketability. Skills acquired in Foods and Nutrition 2 provides a foundation for further studies and employability in nutrition and food service. Inclusion of the Family and Consumer Sciences student organization, Family Careers, and Community Leaders of America (FCCLA), greatly enhances this curriculum.

Housing and Interiors 1
Course Code: 5830
Recommended Maximum Enrollment: 20
Grade Level: 9, 10, 11, 12
Credits: 1 (120 hours)
Prerequisite: None

“Home is where the heart is,” and the house shelters that home. Enroll in this course to begin preparations for your future dream home. Housing and Interiors 1 provides opportunities for students to evaluate the housing market; housing needs for individuals, families, and communities; and career pathways in the housing and interiors industries. Identification of the elements and principles of design
is emphasized. Students will develop knowledge and skills that enable them to plan safe and affordable homes for changing families in a world of diverse interests, cultures, and values. Projects are integrated throughout the course. Integration of the Family and Consumer Sciences Pre-Professional Assessment Certification (Pre-PAC) competencies and the student organization, Family Careers and Community Leaders of America (FCCLA), greatly enhances this curriculum.

**Housing and Interiors 2**

<table>
<thead>
<tr>
<th>Course Code</th>
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<tr>
<td>Recommended Maximum Enrollment</td>
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<tr>
<td>Grade Level</td>
<td>9, 10, 11, 12</td>
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<tr>
<td>Credits</td>
<td>1 (120 hours)</td>
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<tr>
<td>Prerequisite</td>
<td>Housing and Interiors 1</td>
</tr>
</tbody>
</table>

Dreams can become reality. Open the doors of your future home! Enroll in this course to get the key to your future home. Housing and Interiors 2 provides opportunities for students to apply the elements and principles of design in residential settings. Comprehensive design projects are integrated throughout the course. Interior backgrounds, furnishings, kitchen design, bath room design, laundry design, traffic patterns, home element enhancements, professional practices, and marketing skills used in the industry are explored. Integration of the Family and Consumer Sciences Pre-Professional Assessment Certification (Pre-PAC) competencies and the student organization, Family Careers and Community Leaders of America (FCCLA), greatly enhances this curriculum.

**Human Development: Responsible Life Choices 1**

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<tr>
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<tr>
<td>Credits</td>
<td>1 (120 hours)</td>
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<tr>
<td>Prerequisite</td>
<td>None</td>
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</tbody>
</table>

Do you really know yourself? Has technology taken over your life to the point where you don’t like to have a face to face conversation with another human being? Learn more about yourself by enrolling in this course. Human Development: Responsible Life Choices 1 addresses development and wellness of individuals and families. Current information is provided about the physical, psychological, and emotional maturation process. Unit topics include interpersonal relationships, family life education, adolescent development, health and wellness, pregnancy and parenthood, and careers. This course includes requirements specified in the Comprehensive Health Education Act. Integration of 21st Century Skills, the Family and Consumer Sciences Pre-Professional Assessment Certification (Pre-PAC) competencies and the student organization, Family, Career and Community Leaders of America (FCCLA) greatly enhances this curriculum.
Human Development: Responsible Life Choices 2
Course Code 5835
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours)
Prerequisite Human Development: Responsible Life Choices 1
Do you want to feel better as a person, but you don’t know where to start? Does the thought of becoming a parent scare you or are you intrigued by the idea? There is a special place waiting for you in this course. Human Development: Responsible Life Choices 2 builds on skills and knowledge from the first level course. Additional unit topics include psychological health, parenthood, and an enhanced career unit. Students investigate careers in health and human services, family and human development. Extended learning opportunities including volunteer activities, service learning, and job shadowing are provided and encouraged throughout this course. Integration of 21st Century Skills, the Family and Consumer Sciences Pre-Professional Assessment Certification (Pre-PAC) competencies and the student organization, Family, Career and Community Leaders of America (FCCLA), greatly enhances this curriculum.

Parenting Education 1
Course Code 5816
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours)
Prerequisite None
Parenting Education 1 emphasizes the importance of planning and preparing for parenthood. Learning experiences will focus on parenting practices that maximize human growth and development, the significance of health and wellness in parenting practices, issues to consider when faced with adolescent parenthood, roles, responsibilities, and rewards of parenting, management of resources across the lifespan, methods of family planning, and personal interests and career opportunities related to parenting education. Integration of concepts from the Family and Consumer Sciences co-curricular student organization – Family, Career and Community Leaders of America (FCCLA) – greatly enhances the curriculum.

Parenting Education 2
Course Code 5817
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours)
Prerequisite Parenting Education 1
Parenting Education 2 provides learning experiences for students to understand the roles, responsibilities, and rewards of parenthood. Students have an opportunity to develop positive assertion skills, identify support systems for adolescent parents and their children, investigate legal and ethical responsibilities of parenthood, conduct personal analysis to determine parenting readiness skills, and
demonstrate professional ethics and employability skills. Integration of concepts from the Family and Consumer Sciences co-curricular student organization – Family, Career and Community Leaders of America (FCCLA) – greatly enhances the curriculum.

Sports Nutrition 1
Course Code 5759
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours)
Prerequisite None

Sports Nutrition 1 is designed for all students. This course examines the relationship between nutrition, physical performance, and overall wellness. Students will learn how to choose nutritious foods for healthy lifestyles and peak performance. Health and disease prevention through nutrition, physical activity, and wellness practices are essential components of the course. Sports Nutrition 1 is a prerequisite for Sports Nutrition 2. Integration of the Family and Consumer Sciences co-curricular student organization, Family, Career and Community Leaders of America (FCCLA), greatly enhances the curriculum.

Sports Nutrition 2
Course Code 5760
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours)
Prerequisite Sports Nutrition 1

Sports Nutrition 2 is an essential course in advancing the knowledge base of nutritional needs. This course emphasizes the metabolic process and management of food choices for optimal health and physical performance. Students are challenged to develop personal fitness and nutrition plans. Sports Nutrition 1 is a prerequisite for Sports Nutrition 2. Integration of the Family and Consumer Sciences co-curricular student organization, Family, Career and Community Leaders of America (FCCLA), greatly enhances the curriculum.
### Family and Consumer Sciences, Work-Based Credit

<table>
<thead>
<tr>
<th>Course Code</th>
<th>5890</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended Maximum Enrollment</td>
<td>NA</td>
</tr>
<tr>
<td>Grade Level</td>
<td>11, 12</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>Completion of two (2) CATE courses/units within a program</td>
</tr>
</tbody>
</table>

Family and Consumer Sciences work-based 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.
Advanced Animation
Course Code 5351
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite Foundations of Animation

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.

Advanced Computer Operating Systems (formerly Computer Service Technology 4)
Course Code 5323
Recommended Maximum Enrollment 24
Grade Level 11, 12
Credits 1 (120 hours), 2 (240 hours)
Prerequisite Computer Operating Systems and/or passing score on applicable industry certification such as MCSA Exam MS 70-680 & 70-687

Advanced Computer Operating Systems is a continuation of the Computer Operating Systems. It is designed to prepare the student to perform advanced, detailed tasks related to computer operating system configuration (Windows). This course is designed for IT students who have experience with Windows devices and who will work as Windows Enterprise Desktop Support Technicians (EDSTs) in Tier 2 support environments with extensive hands-on labs students will learn how key components of the Windows Operating system work in order to aid in troubleshooting system problems. How to identify and resolve issues with networking, Windows Store apps, security, group policy, Internet Explorer, remote access, and support of mobile devices.

Advanced Computer Repair and Service (formerly Computer Service Technology 2)
Course Code 5321
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours), 2 (240 hours)
Prerequisite Computer Repair and Service and/or passing score on applicable industry certification such as CompTIA A+ 220-801

The Advanced Computer Repair and Service course is a continuation of the Computer Repair and Service course. It prepares students to perform advanced, detailed tasks related to computer repair. Students receive instruction in operating systems, security, mobile devices, and troubleshooting. Laboratory activities provide
instruction in installation, configuration, operation, maintenance, security, troubleshooting, and repair of industry-standard operating systems in accordance with industry certification standards.

**Advanced Cyber Security**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>5372</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended Maximum Enrollment</td>
<td>24</td>
</tr>
<tr>
<td>Grade Level</td>
<td>10, 11, 12</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>Cyber Security Fundamentals or Teacher Recommendation</td>
</tr>
</tbody>
</table>

Advanced Cyber Security introduces advanced concepts and terminology of cyber security and information assurance. The course examines how security integrates into user involvement and the importance of having security training, ethics, trust, and best practices management. The advanced skills cover network security, testing, and validation; compliance and operational security; threats and vulnerabilities; application, data, and host security; access control and identity management; cryptography; and a broad range of other topics. This is the second of two sequential courses that prepare the student to take the CompTIA Security+ certification exam.

**Advanced Networking (formerly Networking 2)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>5311</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended Maximum Enrollment</td>
<td>24</td>
</tr>
<tr>
<td>Grade Level</td>
<td>10, 11, 12</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours), 2 (240 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>Networking Fundamentals</td>
</tr>
</tbody>
</table>

Advanced Networking is designed to provide students with classroom, laboratory, and hands-on experience in current and emerging networking technologies. Upon successful completion of the course sequence within the networking major, students will be able to seek employment or further their education and training in the information technology field.

**Advanced Server Administration (formerly Networking 4)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>5313</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended Maximum Enrollment</td>
<td>24</td>
</tr>
<tr>
<td>Grade Level</td>
<td>10, 11, 12</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours), 2 (240 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>Server Administration</td>
</tr>
</tbody>
</table>

Advanced Server Administration provides students with classroom and laboratory experience in current and emerging networking technologies. Upon successful completion of the course sequence, students will be able to seek employment or further their education and training in the information technology field. Students will benefit most from the curriculum if they possess a strong background in reading, math, and problem solving skills. Instruction includes advanced system hardware, advanced software, advanced storage, advanced IT environments, advanced disaster recovery, advanced troubleshooting, and leadership skills. Particular emphasis is placed on critical thinking skills and problem-solving techniques found in math and communication programs.
Advanced Web Page Design and Development (formerly Web Page Design And Development 2)
Course Code 5033
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite Web Page Design and Development 1 (Fundamentals of Web Design and Development)

Web Page Design and Development 2 (Advanced Web Design and Development) is designed to provide students with the knowledge and skills necessary to pursue careers in web design and development. Students will develop skills in advanced HTML and CSS coding, scripting, layout techniques, and other industry-standard practices. In Advanced Web Design and Development, students must be able to edit source code directly rather than using a WYSIWYG editor.

Computer Forensics
Course Code 5374
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite Computer Service Technology 1

Computer Forensics is focused on teaching students how to gather evidence and prevent cybercrime using computer, criminology, law, digital security, and investigative techniques. Students will learn to collect, preserve, present, and prepare computer-based evidence for the purposes of criminal law enforcement or civil litigation. Activities will define the central roles of the computer forensic practitioner involved in investigating computer crime scenes and torts involving computers. Students will be prepared to assist in the formulation and implementation of organizational computer forensics preparedness policies, to determine the necessity for forensic procedures, extend governance processes to allow for proper future forensic investigations, and be contributing members of computer forensics investigation teams.

Computer Operating Systems (formerly Computer Service Technology 3)
Course Code 5322
Recommended Maximum Enrollment 24
Grade Level 11, 12
Credits 1 (120), 2 (240)
Prerequisite Computer Repair and Service and/or passing score on applicable industry certification such as CompTIA A+ 220-801, 220-802

Computer Operating Systems is a continuation of the Advanced Computer Repair and Service. It is designed to prepare the student to perform advanced, detailed tasks related to computer operating system configuration (Windows). Students receive instruction in operating systems, security, mobile devices, and troubleshooting. Laboratory activities provide instruction in installation, configuration, operation, maintenance, security, troubleshooting, and repair of industry-standard operating systems in accordance with industry certification standards.
Computer Programming 1
Course Code 5050
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours)
Prerequisite Any related course, Algebra 1 (or equivalent), and/or teacher recommendation

Computer Programming 1 is designed to emphasize the fundamentals of computer programming. Topics include computer software, program design and development, and practical experience in programming, using modern, object-oriented languages.

Computer Programming 2
Course Code 5051
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite Computer Programming 1 using the same language

Computer Programming 2 is designed to emphasize the fundamentals of computer programming. Topics include computer software, program design and development, and practical experience in programming, using modern, object-oriented languages.

Computer Programming with C++ 1
Course Code 5056
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours)
Prerequisite Any computer related course, Algebra 1 (or equivalent), and/or teacher recommendation

Computer Programming with C++ 1 is designed to emphasize the fundamentals of computer programming. Topics include computer software, program design and development, and practical experience in programming, using modern, object-oriented languages.

Computer Programming with C++ 2
Course Code 5057
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite Computer Programming with C++ 1

Computer Programming with C++ 2 is designed to emphasize the fundamentals of computer programming. Topics include computer software, program design and development, and practical experience in programming, using modern, object-oriented languages.
Computer Programming with Java 1

Course Code 5052
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours)
Prerequisite Any computer related course, Algebra 1 (or equivalent), and/or teacher recommendation.

Computer Programming with Java 1 is designed to emphasize the fundamentals of computer programming. Topics include computer software, program design and development, and practical experience in programming, using modern, object-oriented languages.

Computer Programming with Java 2

Course Code 5053
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite Computer Programming with Java 1

Computer Programming with Java 2 is designed to emphasize the fundamentals of computer programming. Topics include computer software, program design and development, and practical experience in programming, using modern, object-oriented languages.

Computer Programming with Visual Basics 1

Course Code 5054
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours)
Prerequisite Any computer related course, Algebra 1 (or equivalent), and/or teacher recommendation

Computer Programming with Visual Basics 1 is designed to emphasize the fundamentals of computer programming. Topics include computer software, program design and development, and practical experience in programming, using modern, object-oriented languages.

Computer Programming with Visual Basic 2

Course Code 5055
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite Computer Programming with Visual Basic 1

Computer Programming with Visual Basic 2 is designed to emphasize the fundamentals of computer programming. Topics include computer software, program design and development, and practical experience in programming, using modern, object-oriented languages.
Computer Repair Service (formerly Computer Service Technology 1)
Course Code 5320
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours), 2 (240 hours)
Prerequisite Based on individual schools and school districts
The Computer Repair and Service course prepares students to perform tasks related to computer repair. Students receive instruction in the installation, operation, maintenance, and repair of computer-based technology. Instruction may also include mobile devices, peripheral devices, networking, and laptops. Laboratory activities provide instruction in installation, configuration, troubleshooting, component replacement, operating systems, and upgrades in accordance with industry certification standards.

Cyber Security Fundamentals
Course Code 5370
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours), 2 (240 hours)
Prerequisite Networking Fundamentals or Server Administration or Instructor Recommendation
Cyber Security Fundamentals introduces the core concepts and terminology of cyber security and information assurance. The course examines how security integrates into user involvement and the importance of having security training, ethics, trust, and best practices management. The fundamental skills cover network security, testing, and validation; compliance and operational security; threats and vulnerabilities; application, data, and host security; access control and identity management; cryptography; and a broad range of other topics.

Database Design and Programming with SQL
Course Code 5324
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours), 2 (240 hours)
Prerequisite Basic computer skills (word processing, Internet use) and recommended successful completion of Algebra 1
Database Design and Programming with SQL is geared to meet the learning needs of a variety of students, from those interested in gaining broad exposure to business and technical skills to students planning on pursuing a technical education or career. This course utilizes an Oracle hosted, state-of-the-art lab environment to build database design and programming skills. Students analyze case studies to identify data patterns and connections in order to design relational databases. Students create entity relationship diagrams (ERDs) while building collaboration and problem solving skills. Students build and modify databases using structured query language (SQL), the industry-standard database programming language.
**Database Programming with PL/SQL**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>5326</th>
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</thead>
<tbody>
<tr>
<td>Recommended Max Enrollment</td>
<td>24</td>
</tr>
<tr>
<td>Grade Level</td>
<td>10, 11, 12</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours), 2 (240 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>Database Design &amp; Programming with SQL (5324)</td>
</tr>
</tbody>
</table>

Database Programming with PL/SQL covers a procedural language extension to SQL. Through an innovative project-based approach, students learn programming logic constructs such as variables, constants, conditional statements, and iterative controls. The course blends hands-on exercises, industry-type assessments, and project-based learning experiences while leveraging the latest Oracle technologies. Students utilize an Oracle hosted, state-of-the-art lab environment to develop database programming skills using PL/SQL and Oracle Application Express. Students continue to improve skills including problem solving, teamwork, project management, and technical presentations that are used in a variety of industries and job roles.

**Exploring Computer Science**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>5023</th>
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</thead>
<tbody>
<tr>
<td>Recommended Max Enrollment</td>
<td>24</td>
</tr>
<tr>
<td>Grade Level</td>
<td>9, 10, 11, 12</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>IT Cluster Declared on IGP or Algebra I or Teacher Recommendation</td>
</tr>
</tbody>
</table>

Exploring Computer Science introduces students to the field of computer science through an exploration of engaging and accessible topics. Rather than concentrating entirely on learning particular software tools or programming languages, students focus on the conceptual ideas of computing and get an understanding of the tools and languages that might be used to solve particular problems. The goal of Exploring Computer Science is to develop students’ problem solving and critical thinking skills within the context of problems that are relevant to their lives. Students will also be introduced to topics such as interface design, limits of computers, and societal and ethical issues.

**Foundation of Animation**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>5350</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended Max Enrollment</td>
<td>24</td>
</tr>
<tr>
<td>Grade Level</td>
<td>10, 11, 12</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>Imaging Editing1, Digital Multimedia, or Web Page Design and Development</td>
</tr>
</tbody>
</table>

Foundation of Animation 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.
Fundamentals of Web Page Design and Development (formerly Web Page Design and Development 1)
Course Code: 5031
Recommended Maximum Enrollment: 24
Grade Level: 10, 11, 12
Credits: 1 (120 hours)
Prerequisite: Keyboarding 5100 (or SCDE state Keyboarding Proficiency Test)
Fundamentals of Web Page Design 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.

Game Design and Development
Course Code: 5352
Recommended Maximum Enrollment: 24
Grade Level: 11, 12
Credits: 1 (120 hours)
Prerequisite: Teacher-determined based on game development platform
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.

GIS Technology 1
Course Code: 5361
Recommended Maximum Enrollment: 24
Grade Level: 10, 11, 12
Credits: 1 (120 hours)
Prerequisite: Algebra I, Geometry, and Integrated Business Applications I or GIS Technology teacher approval
GIS Technology 1 is designed to include fundamentals of Geographical Information Systems (GIS) and remote sensing concepts, project management strategies, and essential basic computer skills. Students will acquire a basic understanding of geographic terms and concepts necessary for the appropriate use of GIS, including concepts of spatial variables, scale, map projection, and map coordinate systems. Students will also be exposed to the history of GIS, how GIS fits into overall information management systems, and a variety of applications in which GIS can contribute to analysis and decision-making.
GIS Technology 2
Course Code 5362
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite GIS Technology 1
Geographical Information Systems (GIS) 2 is designed to enable/prepare students to use their knowledge of mapping and cataloging to complete numerous geospatial applications. They will learn techniques in displaying, managing, querying, symbolizing, and creating geospatial data. Students will learn the skills required to work on and/or build advanced GIS/RS projects.

Information Technology Foundations
Course Code 5270
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours)
Prerequisite None
Information Technology Foundations prepares students to take the Certiport’s Internet and Computing Core Certification IC3 Certification test. This course introduces basic concepts in computer and information technology, including computer hardware, software, Internet, and network systems. Upon successful completion of this course, a student may qualify for articulation/dual credit. Individuals who currently hold or are pursuing IC certification may apply for college credit through the American Council on Education (ACE) member institutions.

IT Fundamentals
Course Code 5025
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours)
Prerequisite Determined by individual schools and school districts
The IT Fundamentals course is designed to prepare the student to take the CompTIA Strata Fundamentals of Information Technology Certificate of Achievement exam FC0-U41. Students receive instruction in safety, communication skills, leadership skills, human relations and employability skills, the knowledge to identify and explain PC components, set up a basic PC workstation, conduct basic software installation, identify compatibility issues and recognize/prevent basic security risks. Also included is instruction in the areas of Green IT and preventative maintenance of computers.

Java Fundamentals and Java Programming
Course Code 5058
Recommended Maximum Enrollment 24
Grade Level 11, 12
Credits 1 (120 hours)
Prerequisite Algebra 2
Java Fundamentals and Java Programming is Oracle designed curriculum that introduces fundamental
programming concepts and terminology in an engaging manner through the creation of simple animations and interactive games using Object Oriented Programming environments. While mastering basic programming constructs using OPP, students will learn basic Java syntax. Using a popular, industry recognized Java IDE and the Java programming language, students will write, edit, compile, deploy, and debug Java programs. Java classes, arrays, stacks, strings, and the core APIs that are used to design object-oriented applications will be covered. The GridWorld case study is closely examined and used to enhance student knowledge of core Java concepts. The AP Java subset is also addressed. As in other Oracle courses, collaboration and problem solving are emphasized throughout the course.

Networking Fundamentals (formerly Networking 1)
Course Code: 5310
Recommended Maximum Enrollment: 24
Grade Level: 10, 11, 12
Credits: 1 (120 hours), 2 (240 hours)
Prerequisite: Based on individual schools and school districts

Networking Fundamentals provides students with classroom, laboratory, and hands-on experience in current and emerging networking technologies. Upon successful completion of the course sequence in the networking major, students will be able to seek employment or further their education and training in the information technology field. The networking student will benefit most from the curriculum if he or she possesses a strong background in reading, math, and problem-solving skills.

SAS Programming 1
Course Code: 5327
Recommended Maximum Enrollment: 24
Grade Level: 10, 11, 12
Credits: 1 (120 hours)
Prerequisite: Algebra 1 and at least one other programming language (Visual Basic C++ or Java)

SAS Programming 1 is designed to increase student skills in business analytical software and services through the use of SAS for qualitative analysis. SAS knowledge can assist students with careers in technology, marketing, financial services, insurance, and pharmaceutical sectors. This course teaches the SAS programming language concepts and principles required for the SAS Base programming certification exam.

SAS Programming 2
Course Code: 5328
Recommended Maximum Enrollment: 24
Grade Level: 10, 11, 12
Credits: 1 (120 hours)
Prerequisite: SAS Programming 1

SAS Programming 2 is designed to increase student skills in business analytical software and services through the use of SAS for qualitative analysis. SAS knowledge can assist students with careers in
technology, marketing, financial services, insurance, and pharmaceutical sectors. This course teaches
the SAS programming language concepts and principles required for the SAS Base programming
certification exam.

Server Administration (formerly Networking 3)

Course Code 5312
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120), 2 (240)
Prerequisite Advanced Networking

Server Administration provides students with classroom and laboratory experience in current and emerging
technologies related to servers. Upon successful completion of the course sequence, students will be able to
seek employment or further their education and training in the information technology field. The server
administration student will benefit most from the curriculum if he or she possesses a strong background in
reading, math, and problem solving skills. Instruction includes system hardware, software, storage, IT
environments, disaster recovery, troubleshooting, and leadership skills. Particular emphasis is given to the
use of critical thinking skills and problem-solving techniques found in math and communication programs.

Information Technology, Work-Based Credit

Course Code 5390
Recommended Maximum Enrollment NA
Grade Level 11, 12
Credits 1 (120 hours)
Prerequisite Completion of two (2) CATE courses/units within a
program

The Information Technology work-based 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.
LAW, PUBLIC SAFETY, CORRECTIONS AND SECURITY

Emergency and Fire Management Services 1, 2
Course Code 6512, 6513
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours), 2 (240 hours), 3 (360 hours) per course code
Prerequisite Level 1 prerequisite for Level 2
This program prepares individuals to do the work of fire fighters. Includes instruction in fire-fighting equipment operation and maintenance, principles of fire science and combustible substances, methods of controlling different types of fires, hazardous material handling and control, fire rescue procedures, public relations and applicable laws and regulations.

Firefighter 1, 2
Course Code 6514, 6515
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits Level 1 - 2 (240 hours); Level 2 -1 (120 hours)
Prerequisite Level 1 prerequisite for Level 2
This program prepares individuals to do the work of fire fighters. Firefighter I and II courses intended to achieve NFPA certification must be conducted using curriculum that addresses the NFPA standards. Firefighter I, Firefighter II, Hazardous Materials Awareness (HMA), Hazardous Materials Operations (HMO) and Basic Auto Extrication (BAE 3330) curriculum materials can be acquired from the South Carolina Fire Academy (SCFA). For complete descriptions of SCFA’s courses, see the Academy’s online catalog at www.scfa.state.sc.us/education/. Curriculum for First Aid/CPR prerequisite training may be based on any recognized accredited course, such as those offered through the American Heart Association or American Red Cross. Hazardous Materials Awareness and Hazardous Materials Operations prerequisites must comply with NFPA 472, Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents.

Introduction to Law, Public Safety, Corrections and Security and Law Enforcement Services 1, 2
Course Code 6505, 6510, 6511
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours), 2 (240 hours), 3 (360 hours) per course code
Prerequisite Level 1 prerequisite for Level 2
This program prepares individuals to perform the duties of police and public security officers, including patrol and investigative activities, traffic control, crowd control and public relations, witness interviewing, evidence collection and management, basic crime prevention methods, weapon and equipment operations and maintenance, report preparation and other routine law enforcement responsibilities.
Law, Public Safety, Corrections and Security, Work-Based Credit

Course Code 6590
Recommended Maximum Enrollment NA
Grade Level 11, 12
Credits 1 (120 hours)
Prerequisite Completion of two (2) CATE courses/units within a program

Law, Public Safety, Corrections and Security work-based 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.
## MANUFACTURING

### Electronics Technology 1, 2, 3, 4
- **Course Code**: 6133, 6134, 6135, 6136
- **Recommended Maximum Enrollment**: 24
- **Grade Level**: 9, 10, 11, 12
- **Credits**: 1 (120 hours), 2 (240 hours), 3 (360 hours) per course code
- **Prerequisite**: No prerequisite for Level 1; Courses taken sequentially

Core Electronics is a program that prepares individuals to apply technical knowledge and skills to operate, maintain, and repair electrical and electronic equipment. Includes instruction in electrical circuitry, simple gearing, linkages and lubrication of machines and appliances and the use of testing equipment.

### Introduction to Manufacturing Technology
- **Course Code**: 6045
- **Recommended Maximum Enrollment**: 24
- **Grade Level**: 9, 10, 11, 12
- **Credits**: 1 (120 hours)
- **Prerequisite**: None

Introduction to Manufacturing Technology is an entry-level course that provides students an introduction to manufacturing industries and may be used as a prerequisite for any of the manufacturing career majors: Electronics Technology, Machine Technology, Mechatronics Integrated Technologies, Metal Fabrication, and Welding. All standards except those in the careers unit come from the Manufacturing Skill Standards Council’s (MSSC) “worker” standards in two* of its identified four critical work functions of production: Safety*, Quality Practices and Measurement*, Manufacturing Processes and Production, and Maintenance Awareness. Worker standards are the basic knowledge and skills required by a mid-level production technician to perform the work. [www.msscusa.org](http://www.msscusa.org)

### Machine Technology 1, 2, 3, 4
- **Course Codes**: 6230, 6231, 6232, 6233
- **Recommended Maximum Enrollment**: 24
- **Grade Level**: 9, 10, 11, 12
- **Credits**: 1 (120 hours), 2 (240 hours), 3 (360 hours) per course code
- **Prerequisite**: No prerequisite for Level 1; Courses taken sequentially

Machine Technology prepares individuals to apply technical knowledge and skills to fabricate and modify metal parts in support of other manufacturing, repair, or design activities, or as an independent business.
Mechatronics 1-Electrical Components/Industrial Safety,
Mechatronics 2-Mechanical Components Electric Drives/Hand and Power Tool Operations,
Mechatronics 3-Electro Pneumatics and Hydraulics,
Mechatronics 4-Digital Fundamentals and Programmable Controllers

Course Codes 6210, 6211, 6212, 6213
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours), 2 (240 hours), 3 (360 hours) per course code
Prerequisite No prerequisite for Level 1; Courses taken sequentially

Mechatronics is a new interdisciplinary field involving mechanical, instrumentation, electronics, robotics/automation, computer components, and control systems. The program prepares students who like to work with their hands as well as their minds. Mechatronics is a dynamic field that changes daily with the rapid improvements in technology and computer systems. Systems are networked to meet the demands of automated manufacturing processes, and technicians are trained to meet necessary entry-level industrial skills and entry into a postsecondary program at a technical college. Dual credit may be available through some SC technical colleges.

Metal Fabrication 1, 2, 3, 4

Course Codes 6260, 6261, 6262, 6263
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours), 2 (240 hours), 3 (360 hours) per course code
Prerequisite No prerequisite for Level 1; Courses taken sequentially

Metal Fabrication prepares individuals to apply technical knowledge and skills to plan, manufacture, assemble, test, and repair parts, mechanisms, machines, and structures in which materials are cast, formed, shaped, molded, heat treated, cut, twisted, pressed, fused, stamped or worked.

Welding Technology 1, 2, 3, 4

Course Codes 6340, 6341, 6342, 6343
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours), 2 (240 hours), 3 (360 hours) per course code
Prerequisite No prerequisite for Level 1; Courses taken sequentially

Welding Technology prepares individuals to apply technical knowledge and skills to join or cut metal surfaces. Includes instruction in arc welding, resistance welding, brazing and soldering, cutting, high-energy beam welding and cutting, solid state welding, ferrous and non-ferrous materials, oxidation-reduction reactions, welding metallurgy, welding processes and heat treating, structural design, safety, and applicable codes and standards.
<table>
<thead>
<tr>
<th>Manufacturing, Work-Based Credit</th>
<th>Course Codes</th>
<th>6490</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended Maximum Enrollment</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Grade Level</td>
<td>11, 12</td>
<td></td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours)</td>
<td></td>
</tr>
<tr>
<td>Prerequisite</td>
<td>Completion of two (2) CATE courses within a program</td>
<td></td>
</tr>
</tbody>
</table>

Manufacturing work-based 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.
### Advertising

<table>
<thead>
<tr>
<th>Course Code</th>
<th>5470</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended Maximum Enrollment</td>
<td>24</td>
</tr>
<tr>
<td>Grade Level</td>
<td>11, 12</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>Marketing</td>
</tr>
</tbody>
</table>

Advertising is designed to introduce the concepts of advertising, planning strategies, communication skills, and professional development. Course content includes budget development, media selection, design, and the preparation of ads for various media.

### Digital Media Marketing

<table>
<thead>
<tr>
<th>Course Code</th>
<th>5422</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended Maximum Enrollment</td>
<td>24</td>
</tr>
<tr>
<td>Grade Level</td>
<td>11, 12</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>Computer Applications or Integrated Business Application</td>
</tr>
</tbody>
</table>

Digital Media Marketing 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.

### Fashion Marketing (formerly Fashion Merchandising)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>5410</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended Maximum Enrollment</td>
<td>24</td>
</tr>
<tr>
<td>Grade Level</td>
<td>10, 11, 12</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>None</td>
</tr>
</tbody>
</table>

Fashion Merchandising explores concepts and practices of the fashion industry to include an overview of the fashion industry, the nature of fashion, and career development. Selling, advertising, visual merchandising, fashion buying, merchandising, management, and product technology are analyzed.
Marketing
Course Code  5421
Recommended Maximum Enrollment  24
Grade Level  9, 10, 11, 12
Credits  1 (120 hours)
Prerequisite  None
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.

Marketing Management
Course Code  5431
Recommended Maximum Enrollment  24
Grade Level  11, 12
Credits  1 (120 hours)
Prerequisite  Marketing
Marketing Management continues the analysis of the marketing functions by examining human resource foundations, marketing and business fundamentals, distribution, promotion, and selling as applied in merchandising.

Marketing Research
Course Code  5423
Recommended Maximum Enrollment  24
Grade Level  11, 12
Credits  1 (120 hours)
Prerequisite  Marketing
By conducting research, students in Marketing Research will explore trends, needs, and challenges within a given target market. They will use various research methods and technology to analyze findings and present recommendations. Through the exploration of these methods, students will discover different techniques for the implementation of successful marketing research strategies.

Merchandising
Course Code  5430
Recommended Maximum Enrollment  24
Grade Level  10, 11, 12
Credits  1 (120 hours)
Prerequisite  Marketing
Merchandising prepares individuals to understand the process of merchandising as it relates to the resale of products and product lines for stores, chains, and other retail enterprises. Concepts included in the course are merchandising, branding, purchasing, buying, and display.
Professional Sales
Course Code 5471
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite Marketing

Students in Professional Sales will study the concepts needed to respond to customer wants and needs through planned personalized communication that influences purchase decisions, maintains customer relationships, ensures satisfaction, and enhances future business opportunities. Subject matter will include selling strategies, psychological and social factors influencing buying and selling, career opportunities, and technological integration in selling.

Sports and Entertainment Management
Course Code 5426
Recommended Maximum Enrollment 24
Grade Level 11, 12
Credits 1 (120 hours)
Prerequisite Sports and Entertainment Marketing 1 or Marketing

Students will apply concepts learned in Sports and Entertainment Marketing and study the key concepts in management and managerial principles as related to the sports and entertainment industry. Topics that will be addressed include leadership, finance, product management, people management, information management, legal and ethical issues, customer relations, sales management, change management, and career development.

Sports and Entertainment Marketing (formerly Sports Entertainment and Marketing 1)
Course Code 5425
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite None

Sports and Entertainment Marketing is for students who wish to pursue careers in the various areas of the sports and entertainment industry. This includes careers in box office management and sales, group sales, public sales, marketing, operations, development and sports programming.

Marketing, Work-Based Credit
Course Code 5091
Recommended Maximum Enrollment NA
Grade Level 11, 12
Credits 1 (120 hours)
Prerequisite Completion of two (2) CATE courses/units within a program

Marketing work-based 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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>2840(7,8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended Maximum Enrollment</td>
<td>24</td>
</tr>
<tr>
<td>Grade Level</td>
<td>*6, 7, 8</td>
</tr>
<tr>
<td>Credits</td>
<td>NA</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>NA</td>
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</tbody>
</table>

Gateway To Technology (GTT) program features a project-based curriculum designed to challenge and engage the natural curiosity and imagination of middle school students. They envision, design and test their ideas with the same advanced modeling software used by companies like Lockheed Martin, Intel and Sprint. The knowledge that students gain and the skills they build from the GTT program creates a strong foundation for further STEM learning in high school and beyond. *Perkins funds CANNOT be used below the seventh grade.

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**SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS**

**MIDDLE SCHOOL**

**Gateway to Technology**

**Industrial Technology Education**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>2841(7,8)</th>
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<td>Recommended Maximum Enrollment</td>
<td>24</td>
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<tr>
<td>Grade Level</td>
<td>*6, 7, 8</td>
</tr>
<tr>
<td>Credits</td>
<td>NA</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>NA</td>
</tr>
</tbody>
</table>

Industrial Technology Education provides basic technological knowledge and skills to become technology literate citizens. Standards are organized into five categories: The Nature of Technology, Technology and Society, Design, Abilities for a Technological World, and the Designed World and are presented in grade bands. *Perkins funds CANNOT be used below the seventh grade.
Food Science and Dietetics 1

Course Code                      5757
Recommended Maximum Enrollment   20
Grade Level                      11, 12
Credits                          1 (120 hours)
Prerequisite                     None

Discover the science behind your favorite foods! How is root beer made? Are all additives bad? Will you get sick if you eat mold? These questions and more will be answered. Learn biology, chemistry, and physics as you investigate principles of food processing and food science. Topics to be covered include food safety and regulations, processing and preservation, product development, and nutritional content of various foods. The course places emphasis on hands-on lab activities and discussion. Integration of the Family and Consumer Sciences co-curricular student organization, Family, Career and Community Leaders of America (FCCLA), greatly enhances this course.

Food Science and Dietetics 2

Course Code                      5758
Recommended Maximum Enrollment   20
Grade Level                      11, 12
Credits                          1 (120 hours), 2 (240 hours), 3 (360 hours)
Prerequisite                     Food Science and Dietetics 1

Discover different ways to preserve food. Create an original food product, technique, or process to be used in the food industry. Learn biology, chemistry, and physics as you continue to investigate principles of food processing and food science. Topics to be covered include food safety and regulations, processing and preservation, product development, and nutritional content of various foods. The course places emphasis on hands-on lab activities and discussion. Integration of the Family and Consumer Sciences co-curricular student organization, Family, Career and Community Leaders of America (FCCLA), greatly enhances this course.
Clean Energy Applications (Course 2)
Course Code 6381
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours)
Prerequisite Clean Energy Systems

Clean Energy Applications continues to build the foundational knowledge and problem solving skills related to clean energy engineering as well as covering clean energy topics not encountered in the Clean Energy Systems course. Students will use combinations of chemical and thermal energy principles to create, store, and use energy efficiently to power a variety of mechanical and electrical devices. Key concepts introduced in this course include nuclear power, steam generation, fuel cells, geothermal power, water power, AC/DC power generation, heat transfer, and the laws of thermodynamics. Students engage in a variety of hands-on design projects to demonstrate course principles using advanced technology hardware and software.

Clean Energy Innovations (Course 4)
Course Code 6383
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours)
Prerequisite None

Clean Energy Innovations course is the fourth and final course in the Clean Energy Technology Pathway Program. The course will provide students the opportunity to work independently with open-ended, problem-solving scenarios to create an original solution in the area of clean energy entrepreneurship or clean energy research and development. Students will collaborate with a mentor to conduct applied research around a defined research problem, develop solutions, collect and analyze relevant data, evaluate their solutions, and present their findings in public venues and competitions.

Clean Energy Strategies (Course 3)
Course Code 6382
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours)
Prerequisite None

Clean Energy Strategies provides opportunities for students in this course to utilize applicable skills from the foundational courses to tackle challenges associated with the implementation of clean energy technology. The hands-on projects encountered during this course will require students to address specific issues related to providing portable power in any situation, developing new energy storage systems, increasing the efficiency of the modern home, and designing more energy efficient buildings and homes.
Clean Energy Systems (Course 1)
Course Code: 6380
Recommended Maximum Enrollment: 24
Grade Level: 9, 10, 11, 12
Credits: 1 (120 hours)
Prerequisite: None
Clean Energy Systems is an introductory course that exposes students to some of the major sources of renewable energy: wind, solar, and biofuels. Students learn and apply physics, geography, chemistry, biology, geometry, algebra, and engineering fundamentals to understand the relevant relationships between work, power, and energy. The content in the course covers solar, thermal, chemical, and mechanical sources of clean energy production. Students learn the most efficient and appropriate use of energy resources and energy conversion, as well as the effect of weather and geography on energy production. Students engage in a wide variety of hands-on projects and lab activities that both test their knowledge and illustrate the interrelationships between the various forms of clean energy. It is recommended that students have a physical science credit and a strong science and math background for this course.

Computer Science Applications (CSA)
Course Code: 6373
Recommended Maximum Enrollment: 24
Grade Level: 9, 10, 11, 12
Credits: 1 (120 hours)
Prerequisite: None
CSA focuses on integrating technologies across multiple platforms and networks, including the Internet. Students collaborate to produce programs that integrate mobile devices and leverage those devices for distributed collection and data processing. Students analyze, adapt, and improve each other’s programs while working primarily in Java™ and other industry-standard tools. This course prepares students for the AP Computer Science-A course.

Computer Science Principles (CSP)
Course Code: 6377
Recommended Maximum Enrollment: 24
Grade Level: 10, 11, 12
Credits: 1 (120 hours)
Prerequisite: None
CSP introduces students to the foundational concepts of computer science and challenges them to explore how computing and technology can impact the world. With a unique focus on creative problem solving and real-world applications, CSP prepares students for college and career.
Core Engineering 1 (formerly Introduction to Engineering)
Course Code: 6370
Recommended Maximum Enrollment: 24
Grade Level: 9, 10
Credits: 1 (120 hours)
Prerequisite: None
Core Engineering 1 (Introduction to Engineering) is the introductory course in the core engineering program. This course teaches problem-solving skills using a design development process and exposes students to the career field of engineering, as well as engineering design software. Models of product solutions are created, analyzed, and communicated using 3D CAD software.

Core Engineering 2 (formerly 3D Solid Modeling)
Course Code: 6371
Recommended Maximum Enrollment: 24
Grade Level: 10, 11, 12
Credits: 1 (120 hours)
Prerequisite: Core Engineering 1
Learning 3D design is an interactive process. Students learn best when they can explore the practical applications of the concepts that they learn. This STEM course has many activities and exercises that enable students to put design concepts into practice. Students create their ideas such as artificial heart components, extreme sports equipment, hip replacement parts, robotic arm components, musical instruments and their parts as well as many others. Ideas become reality in this course.

Core Engineering 3 (new)
Course Code: 6375
Recommended Maximum Enrollment: 24
Grade Level: 10, 11, 12
Credits: 1 (120 hours)
Prerequisite: Core Engineering 2
Core Engineering 3 is the third course in the core engineering sequence and helps students understand a specialized field of engineering/engineering technology. The course uses project-based activities and technological systems to help students learn about a specific engineering discipline. Students will use Science, Technology, Engineering, and Math (STEM) in engineering and problem solving processes. Existing state-approved course that meet these standards include specialization courses (PLTW or STEM Academy).
Core Engineering 4 (new)
Course Code 6376
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours)
Prerequisite Core Engineering 3
Core Engineering 4 is the fourth course in the core engineering sequence and helps students understand an additional specialized field of engineering/engineering technology. The course uses project-based activities and technological systems to help students gain a deeper understanding of engineering processes. Students will use Science, Technology, Engineering, and Math (STEM) in an engineering and problem solving process. Existing state-approved course that meet these standards include specialization or capstone courses (PLTW or STEM Academy).

Environmental Sustainability (ES)
Course Code 6374
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours)
Prerequisite None
ES develops students' thinking skills and prepares them for emerging careers through topics such as genetic engineering, biofuels, and biomanufacturing. BioE will replace Biotechnical Engineering (BE).

Industrial Technology Education (Exploratory) 1, 2
Course Code 6040, 6041
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours) per course code
Prerequisite None
Industrial Technology Education provides the essential core of technological knowledge and skills to become technology literate citizens. Standards are organized into five categories: The Nature of Technology, Technology and Society, Design, Abilities for a Technological World, and the Designed World and are presented in grade bands.

Introduction to Computer Science
Course Code 6372
Recommended Maximum Enrollment 24
Grade Level 9, 10, 11, 12
Credits 1 (120 hours)
Prerequisite None
Introduction to Computer Sciences (ICS) is designed to be the first computer science course for students who have never programmed before, ICS is an optional starting point for the PLTW Computer Science program. Students work in teams to create simple apps for mobile devices using MIT App Inventor®. Students explore the impact of computing in society and the
application of computing across career paths and build skills and awareness in digital citizenship and cybersecurity. Students model, simulate, and analyze data about themselves and their interests. They also transfer the understanding of programming gained in App Inventor to learn introductory elements of text-based programming in Python® to create strategy games.

**PLTW-Aerospace Engineering (AE)**
- **Course Code**: 6056
- **Recommended Maximum Enrollment**: 24
- **Grade Level**: 10, 11, 12
- **Credits**: 1 (120 hours)
- **Prerequisite**: Introduction to Engineering (IED), Principles of Engineering (POE) or Teacher Recommendation

This PLTW course propels students’ learning in the fundamentals of atmospheric and space flight. As they explore the physics of flight, students bring the concepts to life by designing an airfoil, propulsion system, and rockets. They learn basic orbital mechanics using industry-standard software and explore robot systems through projects such as remotely operated vehicles.

**PLTW-Biotechnical Engineering (BE) (last school year to be offered)**
- **Course Code**: 6057
- **Recommended Maximum Enrollment**: 24
- **Grade Level**: 10, 11, 12
- **Credits**: 1 (120 hours)
- **Prerequisite**: Introduction to Engineering (IED), Principles of Engineering (POE) or Teacher Recommendation

This PLTW course consists of hands-on projects engage students in engineering design problems related to biomechanics, cardiovascular engineering, genetic engineering, tissue engineering, biomedical devices, forensics and bioethics.

**PLTW-Civil Engineering and Architecture (CEA)**
- **Course Code**: 6058
- **Recommended Maximum Enrollment**: 24
- **Grade Level**: 10, 11, 12
- **Credits**: 1 (120 hours)
- **Prerequisite**: Introduction to Engineering (IED), Principles of Engineering (POE) or Teacher Recommendation

Students learn important aspects of building and site design and development, applying math, science, and standard engineering practices to design both residential and commercial projects. They document designs using 3D architecture design software. Some students have seen these designs come to life through partnerships with local housing organizations.
Manufactured items are part of everyday life, yet most students have not been introduced to the high-tech, innovative nature of modern manufacturing. This course illuminates the opportunities related to understanding manufacturing while teaching students about manufacturing processes, product design, robotics, and automation. Students can earn a virtual manufacturing badge recognized by the National Manufacturing Badge system.

Computer Science Software Engineering is project and problem-based, with students working in teams to develop computational thinking and solve open-ended, practical problems that occur in the real world. The course aligns with the College Board’s new CS framework, as well as ABET and National Education Standards. The course is not a programming language course; it aims instead to develop computational thinking, to generate excitement about the field of computing, and to introduce computational tools that foster creativity.

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.
PLTW-Engineering Design and Development (EDD)
Course Code 6054
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours)
Prerequisite Introduction to Engineering (IED), Principles of Engineering (POE) or Teacher Recommendation

The knowledge and skills student acquire on the “Pathway To Engineering” come together in EDD as they identify an issue and then research, design, and test a solution, ultimately presenting their solution to a panel of engineers. Students apply the professional skills they have developed to document a design process to standards. Completing EDD prepares students to be ready to take on any post-secondary program or career.

PLTW-Introduction to Engineering Design (IED)
Course Code 6051
Recommended Maximum Enrollment 24
Grade Level 9, 10
Credits 1 (120 hours)
Prerequisite None

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 3D modeling software and document their work in an engineering notebook.

PLTW-Principles of Engineering (POE)
Course Code 6050
Recommended Maximum Enrollment 24
Grade Level 9, 10
Credits 1 (120 hours)
Prerequisite Introduction to Engineering Design

Through problems that engage and challenge students, they 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.

Pre-Engineering/Engineering and Industrial Technology Education, Work-Based Credit
Course Code 6090
Recommended Maximum Enrollment NA
Grade Level 11, 12
Credits 1 (120 hours)
Prerequisite Completion of two (2) CATE courses/units within a program

Pre-Engineering/Engineering and Industrial Technology Education work-based 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.

Science, Technology, Engineering, and Mathematics, Work-Based Credit

<table>
<thead>
<tr>
<th>Course Code</th>
<th>6890</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended Maximum Enrollment</td>
<td>NA</td>
</tr>
<tr>
<td>Grade Level</td>
<td>11, 12</td>
</tr>
<tr>
<td>Credits</td>
<td>1 (120 hours)</td>
</tr>
<tr>
<td>Prerequisite</td>
<td>Completion of two (2) CATE courses/units within a program</td>
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Science, Technology, Engineering, and Mathematics work-based 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.
**TRANSPORTATION, DISTRIBUTION, AND LOGISTICS**

<table>
<thead>
<tr>
<th><strong>Automotive Collision Repair Technology 1, 2, 3, 4</strong></th>
</tr>
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<tbody>
<tr>
<td><strong>Course Codes</strong></td>
</tr>
<tr>
<td><strong>Recommended Maximum Enrollment</strong></td>
</tr>
<tr>
<td><strong>Grade Level</strong></td>
</tr>
<tr>
<td><strong>Credits</strong></td>
</tr>
<tr>
<td><strong>Prerequisite</strong></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th><strong>Automotive Technology 1, 2, 3, 4</strong></th>
</tr>
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<tr>
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<tr>
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</tr>
<tr>
<td><strong>Credits</strong></td>
</tr>
<tr>
<td><strong>Prerequisite</strong></td>
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</tbody>
</table>

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Transportation, Distribution and Logistics career cluster. The Automotive Technology program provides technical skill proficiency and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills and occupation-specific skills, and knowledge of all aspects of the Transportation, Distribution and Logistics career cluster.
Diesel Engine Technology 1, 2, 3, 4
Course Codes 6310, 6311, 6312, 6313
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours), 2 (240 hours), 3 (360 hours) per course code
Prerequisite No prerequisite for Level 1; Courses taken sequentially

The Diesel Technology program provides a broad foundation in the diesel repair field by preparing students for entry level positions in the field of heavy duty diesel vehicle repair. Students gain skills in engine repair, fuel supply and management, suspension and brakes, hydraulic systems operation, and lighting and instrumentation. Students entering this program should exhibit mechanical aptitude, the ability to read and follow instructions as outlined in service repair manuals, and enjoy precision work and problem solving.

Introduction to Transportation, Distribution, and Logistics
Course Codes 6015
Recommended Maximum Enrollment 24
Grade Level 9, 10
Credits 1 (120 hours)
Prerequisite None

Introduction to Transportation, Distribution, and Logistics is a foundation course that covers a broad industry sector responsible for managing the flow of goods, information, and people between a point of origin and a point of consumption in order to meet the requirements of consumers. Major sub-sectors within the industry include air, rail, water, and truck transportation, urban transit and ground passenger transportation, warehousing and storage, and motor vehicle repair. Logistics involve the integration of these sub sectors, including information, transportation, and inventory, warehousing, material-handling, and packaging.

Power Equipment Technology 1, 2, 3, 4
Course Codes 6300, 6301, 6302, 6303
Recommended Maximum Enrollment 24
Grade Level 10, 11, 12
Credits 1 (120 hours), 2 (240 hours), 3 (360 hours) per course code
Prerequisite No prerequisite for Level 1; Courses taken sequentially

The Small Engine Technology program is designed to prepare students to perform entry-level maintenance and repair tasks under the supervision of an experienced technician. Students receive training on small internal combustion engines used on portable equipment such as lawn mowers, chain saws, rotary tillers, motorcycles, pumps, compressors, and small boats. The training includes locating and solving problems, using specialized test equipment, overhauling the basic engine, and repairing or replacing engine systems.
| **Transportation, Distribution and Logistics, Work-Based Credit** |
| **Course Code** | 6790 |
| **Recommended Maximum Enrollment** | NA |
| **Grade Level** | 11, 12 |
| **Credits** | 1 (120 hours) |
| **Prerequisite** | Completion of two (2) CATE courses/units within a program |

Transportation, Distribution and Logistics work-based 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.