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CAREER & TECHNICAL EDUCATION



**Charlottesville
High School**

**Charlottesville-Albemarle
Technical Education
Center**

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2011-2012

CAREER AND TECHNICAL EDUCATION

Career and Technical Education provides sequences of career-related courses designed to help students develop skills needed for entry-level employment, advanced technical training programs, and continuing education on the college and university level. Elective courses in program areas of Business and Information Technology, Marketing Education, Technology Education, Consumer and Family Sciences, Trade and Industrial Education, and Health and Medical Sciences focus on helping students develop twenty-first century job skills, such as, proficiency in computer technology, information acquisition and processing, problem solving, teamwork, and effective communication skills. Career and Technical Education courses are designed to enhance and support the academic curriculum - reinforcing the Standards of Learning established for English, mathematics, science, and history & social science.

CAREER PREPARATION AND SELECTION

“If you don’t know where you are going, it doesn’t matter which road you take!” Have you thought about life after high school? Where do you want to be? What’s your passion? The time to learn about your self is now! Explore your options. Decisions that you make right now regarding your education are likely to affect your entire life. Making a career choice without adequate information about yourself and the career can be a frustrating experience. Finding a career that matches your interests (what you like to do), aptitudes (what you are good at doing) and abilities (acquired skills) and values (what’s important to you) can lead to personal satisfaction and financial rewards. Don’t drift into an unfulfilling career. Take charge of your future and plan now. Decide where you want to go and select the path that will take you there!

High school is the place to begin the career planning process that will lead you to postsecondary education and employment. Check out the opportunities that are available to you. Learn about career families and the education and training required for a specific occupation. Learn about options for continuing your education after high school that include technical and skill training, apprenticeship, community college, and a four year college or university. Develop marketable skills such as responsibility, getting along with others, handling money, customer satisfaction through work experience. Gain experience through part-time jobs, cooperative education, and internships. Remember that you are more valuable to an employer if you have practical experience. Get some!

Make college count. Should you decide to apply to college, keep your eye on your career goal. Select a college that can provide you with sources of knowledge, contacts and opportunity leading to your career goals. Select wisely. Remember that employers are seeking individuals who can communicate effectively, think critically and solve problems creatively. Select courses that prepare you to think and problem-solve, promote organizational skills, teamwork, and the ability to set and meet goals.

CAREER PATHWAYS

Students should choose a career path that blends their values, interests and abilities, and which leads to the achievement of personal, educational and career goals. The selection of a career path is a cooperative effort that involves the student, parent, teachers and counselors. Students are not locked into a path or program of study but are encouraged to explore all available opportunities.

A career path outlines the high school courses required for a standard diploma, recommends career and technical studies electives, and shows related community college and college programs leading to successful career entry and advancement.

The selection of a career pathway is a cooperative effort involving the student, parents, teachers and counselors. For more information about the Career Planning, please refer to the following websites:

Virginia Career View and the Kuder Career Planning System – <http://www.vaview.vt.edu/>

RU Ready - <http://www.doe.virginia.gov/VDOE/Instruction/CTE/ruready.html>

Other Resources on the Internet include:

<http://www.doe.virginia.gov/VDOE/Instruction/CTE/careerclusters/>

<http://www.sreb.org/programs/hstw/career/UsingIndustryCertification.asp>

CAREER FAMILIES

Career families are a way of grouping occupations that have a core of common knowledge and skills, which result in an economy-driven industry and occupational framework for organizing careers. Career areas included in these career families are varied and require different levels of preparation and skills, ranging from a high school diploma to a college degree.

Careers representing those of the 21st century have been divided into career families. The Virginia Department of Education Office of Career and Technical Education Services identifies 16 Career Families that have a common core of knowledge and skills. **Virginia’s career families align with career clusters from the United States Department of Education, and are listed as follows:**

16 CAREER FAMILIES

Family	Possible Careers	Relevant Courses
<p>Agriculture and Natural Resources: Growing plants, harvesting crops, raising and training animals, the health of plants and animals, use of natural resources, and management of agricultural businesses and goods.</p>	<p>Farmer, agriculture scientist, veterinarian, veterinarian assistant, forester, landscaper, nursery worker, environmentalist.</p>	<p>Earth Science Ecology Environmental Science Geology Biology, II, AP Algebra, Functions and Data Analysis AP Statistics</p>
<p>Architecture and Construction: Design, planning, managing, building, and maintenance of physical structures: roadways and bridges, industrial, commercial, and residential facilities and buildings.</p>	<p>Architect, carpenter, electrician, roofer, brick mason, surveyor, plumber, heating and air conditioning mechanic.</p>	<p>Algebra III AP Statistics AP Calculus Art I, II Mechanical Drawing/CAD Architectural Drawing/CAD Engineering Drawing/CAD Technology Foundations Technology Transfer Physics, AP Technical Theatre CATEC Building Trades I, II Masonry I, II</p>
<p>Arts, Audio/Video, and Communication Services: Designing, producing, exhibiting, performing, writing, and publishing multimedia content (e.g., visual, performing arts and design, journalism, and entertainment services).</p>	<p>Camera operator, photographer, journalist, dancer, actor, director, musician, producer, painter, newscaster, web page designer, advertiser, public relations, editor.</p>	<p>Art I, II Studio Art AP Portfolio Studio Art Basic Photography Television Production Video and Media Technology Commercial Photography Digital Photography Fashion Design Humanities Creative Writing KTR (Newspaper) Yearbook Publication Shakespeare in Performance Public Speaking Film Study Comparative Religions Internet Marketing/Web Chorus I,II Show Choir Charlottesville Singers Symphonic Band WW Symphonic Band BP Marching Knights Concert Orchestra Jazz, String, Wind Ensembles Class Piano Music Theory Introduction to Piano Introduction to Theater Acting Charlottesville Players Technical Theater Psychology I, AP CATEC Music Industry Technology</p>

Family	Possible Careers	Relevant Courses
Business and Administration: Planning, managing, and providing administrative support, information processing, accounting, and human resource management services and business management support services.	Secretary, legal and medical secretary, general manager, executive, financial manager.	Economics and Personal Finance AP Statistics Algebra, Functions and Data Analysis Computer Mathematics Marketing Education for Employment Digital Input Technologies Fashion Marketing Internet Marketing Sports, Entertainment, and Recreation Marketing Public Speaking Economics, AP Leadership
Education and Training: Planning, administering, managing, providing education, training services; related learning support services (e.g., library, information services, child care, counseling services) including preparatory medical training in educational settings.	Teacher, curriculum developer, child care worker, educational administration & counseling, librarian, college professor.	Early Childhood Development Child Development/Parenting Psychology AP Psychology Public Speaking Leadership Introduction to Theater Acting Charlottesville Players
Finance: Banking, investment, financial planning, economics, and insurance services, including managing and planning for firms and businesses involved in such services.	Banking, insurance services, stockbroker, financial planner, and accountant, insurance adjuster, actuary.	Economics, AP Economics and Personal Finance Leadership Algebra III Algebra, Functions and Data Analysis Computer Mathematics AP Statistics AP Calculus
Public Administration/Government Services: Planning, managing, and providing government, legislative, administrative, and regulatory services, government services at the federal, state, and local levels such as public finance.	Chief executive, legislator, county employee, postal employee.	Office Administration Economics and Personal Finance Algebra, Functions and Data Analysis African-American History Psychology AP Psychology Public Speaking AP European History Economics, AP Leadership
Health Science: Planning, managing, and providing diagnostic, therapeutic, treatment, research, and information services related to the physical and mental health of humans.	Physician, dentist, dental hygienist, dietician, nurse, nurse aide, occupational therapist, radiology technician, registered.	Health & Medical Science I,II Nutrition & Wellness Early Childhood Development Child Development/Parenting Biology, II, AP Chemistry, AP Algebra, Functions and Data Analysis Algebra III AP Calculus Sports Medicine CATEC Nurse's Aide Dental Assistant Pharmacy Technician Emergency Medical Technician /Firefighting
Family	Possible Careers	Relevant Courses
Hospitality and Tourism: Provision of lodging, food, recreation, convention, tourism, travel and related planning and support services.	Tour guide, chef, food service manager, resort employee, coach, and professional athlete.	Nutrition & Wellness Hospitality and Tourism Management Internet Marketing Fashion Marketing Algebra, Functions and Data Analysis Humanities Sports, Entertainment, and Recreation Marketing Public Speaking Leadership CATEC

		Introduction to Culinary Arts Culinary Arts I , II
Human Services: Promoting and providing family and community relations and wellness, including family and work issues, religious services, care for the elderly, and social work.	Social worker, recreation worker, residential counselor, juvenile, marriage & family therapist, substance abuse counselor.	Child Development/Parenting Life Planning Early Childhood Development Nutrition and Wellness Resource Management Psychology AP Psychology African-American History Health & Medical Science I, II Public Speaking Comparative Religions Leadership Sports Medicine CATEC Nursing Assistant Dental Assistant Pharmacy Technician Emergency Medical Technician /Firefighting
Information Technology: Design, development, management, maintenance, and operation of computer, information, communication, and technology networks, including related hardware and software.	Computer programmer, computer engineer, database administrator, network systems and data communication analyst, computer support specialist.	Digital Input Technologies Internet Marketing/Web Computer Mathematics Algebra III AP Calculus Computer Science I AP Computer Science Physics, AP
Law and Public Safety: Police work, the law and legal services, the judicial (court) system, the study and detention of criminals, and fire protection.	Corporate lawyer, criminal investigator, detective, fish and game warden, firefighter, police officer, correctional officer, security guard.	Health & Medical Science I, II Psychology AP Psychology Leadership CATEC Emergency Medical Tech/Firefighter
Manufacturing: Creating intermediate and finished products from raw materials; includes managing, planning, and performing the production of various items by operating machinery and industrial support activities (e.g., as production planning, control and maintenance).	Production worker, nuclear machine operator, cabinet maker, supervisor.	Technology Foundations Technology Transfer Mechanical Drawing/CAD Engineering Drawing/CA Algebra, Functions and Data Analysis Computer Mathematics Algebra III Economics AP Economics Physics, AP CATEC Auto Body I, II
Family	Possible Careers	Relevant Courses
Retail/Wholesale Sales and Service: Marketing, advertising, promoting, selling merchandise; managing retail establishments, making merchandise-specific repair, and providing personal services (e.g., cosmetics, hairstyling, funeral services) to consumers.	Wholesale or retail buyer, cashier, salesperson, manicurist, cosmetologist, travel agent, interior designer.	Economics and Personal Finance Internet Marketing/Web Fashion Design Fashion Marketing Sports, Entertainment, and Recreation Marketing Algebra, Functions and Data Analysis Computer Mathematics Public Speaking Economics, AP Commercial Photography CATEC Barbering I, II Cosmetology I, II Culinary Arts
Scientific Research and Engineering: Engineering, related technologies, scientific	Chemical and civil engineer, geologist, computer hardware	Technology Foundations Technology Transfer Mechanical Drawing/CAD

<p>research and application of scientific principles in all the natural sciences (e.g., biology, chemistry, earth science, and physics) and social sciences (e.g., economics, sociology, geography archeology, anthropology).</p>	<p>engineer, atmospheric and space scientist.</p>	<p>Engineering Drawing/CAD Computer Science I AP Computer Science Algebra III Algebra, Functions, & Data Analysis AP Calculus & BC/Multi. AP Statistics Earth Science Biology, II, AP Chemistry, AP Physics, AP Environmental Science Ecology Geology Commercial Photography</p>
<p>Transportation, Distribution, and Logistics: Planning, managing movement of people, materials and goods by road, pipeline, air, rail, and water; related professional and technical support services (e.g., transportation planning and management, logistics services, and mobile equipment and facility maintenance).</p>	<p>Airline pilot, flight engineer, truck driver, motorcycle mechanic, flight attendant, automotive service technician, farm equipment mechanic.</p>	<p>Technology Foundations Technology Transfer Mechanical Drawing/CAD Algebra, Functions and Data Analysis Computer Mathematics Algebra III Economics AP Economics Physics, AP CATEC Auto Body Technology I, II Automotive Technology I, II</p>

Career and Technical Education Sequential Electives (as identified by the Virginia DOE) and Program Completer Options for Charlottesville High School and the Charlottesville Albemarle Technical Education Center are identified and listed within this program planning guide under Career and Technical Education.

- Skills developed in core **English, mathematics, science,** and **social studies** courses are useful in all professions.
- Knowledge of **Computer Processing & Application** and **Computer Information Systems** is required for most professions.
- Knowledge of a **World Language** is useful for most professions. CHS offers **Spanish, French, Latin, and German.**
- **CATEC Exploratory** is open to tenth graders.
- **Cooperative Work Experience Program (CEWAT)** may be available to students to further explore their career interests.
- The **Senior Internship Program** is available to all seniors who are interested in developing skills related to their long-range career goals in any career family.

BUFORD MIDDLE SCHOOL COURSE OFFERINGS



BUSINESS AND INFORMATION TECHNOLOGY

State Approved Business & Information Technology Sequential Electives & Program Completion Options:

Prerequisite: Completion of Keyboarding or Computer Processing & Applications or demonstration/documentation of keyboarding skills is required for all Business and Information Technology Occupational courses.

8219 INDEPENDENT LIVING (formerly Resource Management)

Credit: 1 Elective Credit

Grade: 8

Prerequisite: None

This course allows students to explore successful strategies for living independently by actively participating in practical problem solving focusing on: relating to others (relationships); applying financial literacy; managing resources in the areas of apparel, nutrition and wellness, and housing; using leadership skills to reach individual goals; planning for careers; making consumer choices in a global environment.

Local school divisions may offer Independent Living (formerly Resource Management) (8219/36 weeks) to students in middle school and award secondary credit to those students who master the secondary state-approved course competencies.

8207 FAMILY AND CONSUMER SCIENCES EXPLORATORY I (12 weeks)

Credit: Middle School Credit

Grade: 7

Prerequisite: None

Family and Consumer Sciences Exploratory I provides a foundation for managing individual, family, career, and community roles and responsibilities. In FACS Exploratory I, students focus on areas of individual growth such as personal goal achievement, responsibilities within the family, and accountability for personal safety and health. They also explore and practice financial management, clothing maintenance, food preparation, positive and caring relationships with others, and self-assessment as related to career exploration. Students apply problem-solving and leadership skills as they progress through the course. Mathematics, science, English, social sciences, fine arts, and technology are integrated throughout the course.

8263 FAMILY AND CONSUMER SCIENCES EXPLORATORYII (18 Weeks)

Credit: Middle School Credit

Grade: 7

Prerequisite: None

Students design, establish, and operate a small group or class business, producing a service or product that meets an identified school or community need. Emphasis is placed on the introduction and application of business terminology, basic entrepreneurship concepts, and fundamental business principles. Basic academic skills (mathematics, science, English, and history/social science) are integrated into this course.

Target Audience: All Buford students in grades 7 & 8 interested in becoming a Career and Technical Education Completer and/or wishing to complete a specialization may take additional courses appropriate to their career pathways.

8245 FAMILY AND CONSUMER SCIENCES EXPLORATORY III (36 Weeks)

Credit: Middle School Credit

Grade: 8

Prerequisite: None

Students focus on their individual roles in the community as well as how the community influences individual development. Students develop change-management and conflict-resolution skills and examine how global concerns affect communities. In addition, students enhance their knowledge of nutrition and wellness practices and learn how to maximize consumer and family resources.

The course helps students apply textile, fashion, and apparel concepts to their daily lives and provides background on the stages of early childhood development as related to childcare. Time is provided for exploring careers in the Family and Consumer Sciences career cluster and developing job-search skills. In addition, students increase their leadership abilities and explore how volunteerism aids communities. Mathematics, science, language, social sciences, and technology are integrated throughout the course.

6111-18 MAKE IT YOUR OWN BUSINESS (18 or 36 wks)

Credit: 0.5 Elective Credit

Grade: 7 or 8

Prerequisite: None

Students design, establish, and operate a small group or class business, producing a service or product that meets an identified school or community need. Emphasis is placed on the introduction and application of business terminology, basic entrepreneurship concepts, and fundamental business principles. Basic academic skills (mathematics, science, English, and history/social science) are integrated into this course.

Target Audience: All Buford students in grades 7 & 8 interested in becoming a Career and Technical Education Completer and/or wishing to complete a specialization may take additional courses appropriate to their career pathways.

6150-18 KEYBOARDING (18 weeks)

Credit: 0.5 Elective Credit

Grade: 7 or 8

Prerequisite: None

This course for middle school students is designed to develop and enhance touch skills for entering alphabetic, numeric, and symbol information on a keyboard. Students compose and produce personal, educational, and professional documents.

Target Audience: All Buford students in grades 7 & 8 interested in becoming a Career and Technical Education Completer and/or wishing to complete a specialization may take additional courses appropriate to their career pathways.

6617 COMPUTER APPLICATIONS (18 weeks)

Credit: 0.5 Elective Credit

Grade: 7 or 8

Prerequisite: Recommended prerequisite(s): Keyboarding course(s) or teacher-approved demonstration and documentation of touch keyboarding skills

Students develop or review correct keyboarding techniques and gain a basic knowledge of word processing, spreadsheet, database, graphics, and telecommunications applications. Students demonstrate an understanding of computer concepts through application of knowledge. Students learn to use software packages and local and worldwide network communications systems. Grade 8 Computer/Technology Standards of Learning are incorporated and reinforced in this course.

*Target Audience: All Buford students in grades 7 & 8. Students interested in becoming a Career and Technical Education Completer and/or wishing to complete a specialization may take additional courses appropriate to their career pathways. Middle school students may be awarded **secondary** credit to those students who master the secondary state-approved course competencies.*

8464 INVENTIONS AND INNOVATIONS (18 weeks)

Credit: 0.5 Elective Credit

Grade: 7 or 8

Prerequisite: None

Students make models of significant inventions that have advanced society. After studying these developments, they explore contemporary technological problems facing them, their community, or the world and apply systematic procedures to invent new products or innovations as solutions.

*Target Audience: All Buford students in grades 7 & 8. Students interested in becoming a Career and Technical Education Completer and/or wishing to complete a specialization may take additional courses appropriate to their career pathways. Middle school students may be awarded **secondary** credit to those students who master the secondary state-approved course competencies.*

8463 TECHNOLOGY SYSTEMS (18 or 36 wks)

Credit: 0.5 Elective Credit

Grade: 7 or 8

Prerequisite: None

Students combine resources and techniques into systems, realizing technology as a system. By simulating systems, assessing their impacts, and relating this experience to the two previous levels, students gain an insight into how to approach the problems and opportunities of a technological world in a broad sense. They also explore occupational areas and educational programs for technology-oriented careers.

*Target Audience: All Buford students in grades 7 & 8 may enroll. Students wishing to complete a specialization may take additional courses appropriate to their career pathways. **Science, Technology, Engineering and Mathematics: Engineering and Technology***

6160 DIGITAL INPUT TECHNOLOGIES (18 weeks)

Credit: 0.5 Elective Credit

Grade: 7 or 8

Prerequisite: Recommended prerequisite(s): Keyboarding course(s) or teacher-approved demonstration and documentation of touch keyboarding skills

Digital Input Technologies introduces new and emerging input devices (e.g., speech- and handwriting-recognition software, headset/microphone, personal digital assistant [PDA], scanner, digital camera, digital video camera, keyboard, and mouse) to prepare students for using tools that are becoming standard in the workplace and in everyday life. The cooperative education method is available for students in grades 10-12 who enroll in this class. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

*Target Audience: All Buford students in grades 7 & 8 interested in becoming a Career and Technical Education Completer and/or wishing to complete a specialization may take additional courses appropriate to their career pathways. Middle school students may be awarded **secondary** credit to those students who master the secondary state-approved course competencies.*

CHARLOTTESVILLE HIGH SCHOOL OFFERINGS



Program Completer/Certificate/Seal Options

All credit(s) for CHS CTE programs meet the requirement as a practical arts elective(s). Students who finish any state approved one or two-year sequence of technical courses and earn a high school diploma will constitute a “program completer.”

Program completers receive a **Career and Technical Education Certificate of Completion** (based upon program requirements). Students earn a **Career and Technical Education Seal** if they: (a) achieve a B average in a sequence of courses; or (b) pass an examination that confers certification from a recognized industry, trade, or professional association; or (c) acquire a professional license in the field from the Commonwealth of Virginia. Students will receive a **Certificate of Participation** upon completion of a one-year program or one year of a two-year program (based upon program/certificate requirements), or complete a two-year program and do not earn a high school diploma.

Verified Credits

Career and technical students may earn two verified credits toward a Standard Diploma by completing a program sequence and passing a recognized certification or licensure examination. One of these may be substituted for a verified credit in either science or history and the other used as a student-selected verified credit.

ARTS, AUDIO/VIDEO TECHNOLOGY

Arts, Audio/Video Technology Program Completer Options

To earn a State Approved Sequential Elective and Program Completion Option, Leadership Development, Life Planning or Economics and Personal Finance may be combined with another 36 week Career and Technical Education Course.

Option 1:

- Commercial Photography I
- Commercial Photography II

Option 2:

- Television Production I
- Television Production II

8610 BASIC PHOTOGRAPHY

Credit: 1 Elective Credit

Grade: 9-12

Prerequisite: None

Students enrolled in this program will learn photographic skills such as using multiple camera formats to set up, shoot, process and present photographic images; creating images using digital technology and preparing a professional portfolio to prepare for a career in the field of photography.

Note: Basic Photography, a Trade and Industrial Education course may be offered as a complement to an existing concentration sequence in any CTE program area. In some instances, where noted, it may be combined with specific courses to create concentration sequences.

Students wishing to complete a specialization may take additional courses appropriate to their career

pathways such as, **Arts, Audio/Video Technology and Communications**: Visual Arts. **Certifications**: Photography Examination ; Virginia Workplace Readiness Assessment and IC3 Certification

8607 COMMERCIAL PHOTOGRAPHY I

Credit: 1 Elective Credit

Grade: 9-12

Prerequisite: None

Students learn to operate digital and film cameras and related equipment, including lenses, filters, and light meters. Instructional topics include composition, exposure calculations, and preparing finished photographs (film and digital). In addition, students evaluate and critique photographic work and investigate the history of photography.

*Students wishing to complete a specialization may take additional courses appropriate to their career pathways such as, **Arts, Audio/Video Technology and Communications**: Visual Arts. **Certifications**: Photography Examination ; Virginia Workplace Readiness Assessment and IC3 Certification .*

8608 COMMERCIAL PHOTOGRAPHY II

Credit: 1 Elective Credit

Grade: 10-12

Prerequisite: Commercial Photography I

Students gain in-depth knowledge of camera operation, including 35mm, medium-format, and view cameras. Instructional topics include photo composition, the Zone System for optimal exposure, color theory, and studio and portrait photography. Students analyze photographic works and offer critiques. Additionally, they explore careers in photography and develop a portfolio. The cooperative education method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

*Students wishing to complete a specialization may take additional courses appropriate to their career pathways such as, **Arts, Audio/Video Technology and Communications**: Visual Arts. **Certifications**: Photography Examination ; Virginia Workplace Readiness Assessment and IC3 Certification*

8688 TELEVISION PRODUCTION I

Credit: 1 Elective Credit

Grade: 9-12

Prerequisite: None

Students learn to operate equipment such as TV cameras, video tape recorders, microphones, audio mixers, and audio/video editing systems. They practice skills related to production, direction, and scripting of programs and set design and construction. Students also study control room procedures and responsibilities

*Students wishing to complete a specialization may take additional courses appropriate to their career pathways such as, **Arts, Audio/Video Technology and Communications**: Audio and Video Technology and Film; Journalism and Broadcasting, and Performing Arts. **Certifications**: Apple Pro Certification Program ; Audio-Visual Communications Assessment ; Television Broadcasting Assessment ; Virginia Workplace Readiness Assessment and IC3 Certification ; Visual Communications Assessment*

8689 TELEVISION PRODUCTION II

Credit: 1 Elective Credit

Grade: 10-12

Prerequisite: Television Production I

Students continue to learn to operate equipment such as TV cameras, video tape recorders, microphones, audio mixers, and audio/video editing systems. They practice skills related to production, direction, and

scripting of programs and set design and construction. Students also study control room procedures and responsibilities. The cooperative education method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

Students wishing to complete a specialization may take additional courses appropriate to their career pathways such as, **Arts, Audio/Video Technology and Communications:** Audio and Video Technology and Film; Journalism and Broadcasting; Performing Arts. **Certifications:** Apple Pro Certification Program; Audio-Visual Communications Assessment; Television Broadcasting Assessment; Virginia Workplace Readiness Assessment and IC3 Certification Visual Communications Assessment .

8497 VIDEO AND MEDIA TECHNOLOGY

Credit: 1 Elective Credit

Grade: 10-12

Prerequisite: None

Students are offered an opportunity to study all aspects of video and media production, from planning and writing for production to operating studio and editing equipment. Students practice various methods of gathering news and information from individuals, research, and online resources. In addition, students are introduced to analog and digital principles of film production.

Students wishing to complete a specialization may take additional courses appropriate to their career pathways such as, **Arts, Audio/Video Technology and Communications:** Audio and Video Technology and Film; Journalism and Broadcasting; Performing Arts.

Certifications: Virginia Workplace Readiness Assessment and IC3 Certification

FAMILY AND CONSUMER SCIENCES

Family and Consumer Sciences enable individuals and families across the life span to manage the challenges of living and working in a diverse, global society. The unique focus is on families and their interrelationships.

The Family and Consumer Sciences Program provides high school students with experiences to meet adolescent needs; to prepare them for adulthood; to become competent in the management of their individual, family and work lives, and to apply these skills to jobs and careers. The Family and Consumer Sciences program is divided into a family, a transition, and a work focus. The family and transition focus offerings are at Charlottesville High School and include: Resource Management (Life Management Skills), Nutrition and Wellness, Child Development-Parenting (family focused), and Introduction to Fashion Design and Merchandising (transition focused). A work focused offering Culinary Arts, is offered at the Charlottesville-Albemarle Education Center (CATEC).

Family, Career and Community Leaders of America, Inc. (FCCLA)

Membership in Family, Career and Community Leaders of America, Inc. is open to all students who are enrolled in or have taken a course in Family and Consumer Sciences. FCCLA chapters offer students the opportunity to expand leadership potential and develop skills for life – planning, goal setting, problem solving and interpersonal communication – necessary in the home and workplace. FCCLA emphasizes preparation for community and family life, while recognizing that family members fill dual roles as wage earners.

Career and Consumer Science Program Completer Options

To earn a State Approved Sequential Elective and Program Completion Option, Leadership Development, Life Planning, Economics and Personal Finance or Independent Living (Grade 8) may be combined with another 36 week Career and Consumer Science Course. Additional options include:

Option 1:

Introduction to Fashion Design and Marketing **Plus**

on of the following:

- Child Development
- Nutrition and Wellness
- Independent Living (Grade 8)

Option 2:

- Nutrition and Wellness
- Independent Living (Grade 8)

Option 3:

- Hospitality, Tourism, and Recreation I
- Nutrition and Wellness

Option 4:

- Hospitality, Tourism, and Recreation I
- Hospitality, Tourism, and Recreation II

8234 INTRODUCTION TO EARLY CHILDHOOD, EDUCATION, AND SERVICES

Credit: 1 Elective Credit

Grade: 9-12

Prerequisite: None

Students focus on the principles of child growth and development; development of self-concepts and building self-esteem; appreciation of diversity; learning experiences for children; principles of guiding children in a positive manner; healthy and safe environments; career development; and careers related to early childhood professionals through hands-on exploration, projects, and group learning. A unit on understanding ourselves including a study of adolescence, maturity, value systems and philosophy of life will initiate this course. Students will explore the preparation needed for a healthy emotional and physical beginning for parent and child; meeting developmental needs of children; building positive parent/child relationships and using positive guidance and discipline methods to promote self.

*Students wishing to complete a specialization may take additional courses appropriate to their career pathways such as, **Human Services:** Family and Community Services; Personal Care Services; Early Childhood Development and Services; Family and Community Services. **Certifications:** Virginia Workplace Readiness Assessment and IC3 Certification.*

8248 INTRODUCTION TO FASHION DESIGN AND MARKETING

Credit: 1 Elective Credit

Grade: 9-12

Prerequisite: None

This course focuses on identifying and exploring the individual careers within the fashion design, manufacturing, and merchandising industry. Units of study include the relationships that exist among all areas of the clothing industry; related global and economic issues; exploration of careers, including entrepreneurial opportunities in related areas; and the skills and personal characteristics necessary for success in those areas. Students are required to complete at least three sewing projects and be responsible for securing all personal sewing supplies.

*Students wishing to complete a specialization may take additional courses appropriate to their career pathways such as, **Arts, Audio/Video Technology and Communications:** Performing Arts and Visual Arts. **Certifications:** Virginia Workplace Readiness Assessment and IC3 Certification.*

8229 NUTRITION AND WELLNESS

Credit: 1 Elective Credit

Grade: 9-12

Prerequisite: None

Students enrolled in Nutrition and Wellness focus on making choices that promote wellness and good health; understanding the relationship between psychological and social needs and food choices; choosing foods that promote wellness; obtaining and storing food for self and family; preparing and serving nutritious meals and snacks; selecting and using equipment for food preparation; and identifying strategies to promote optimal nutrition and wellness of society. Topics include the selection and preparation of meals and snacks based on USDA Dietary Guidelines including the Food Guide Pyramid; safety, sanitation, storage, and recycling processes and issues associated with nutrition and wellness; impacts of science and technology on nutrition and wellness issues; and nutrition and wellness career paths.

*Students wishing to complete a specialization may take additional courses appropriate to their career pathways such as, **Human Services:** Counseling and Mental Health Services; Family and Community Services; Personal Care Services. **Certifications:** Virginia Workplace Readiness Assessment and IC3 Certification*

8227 LIFE PLANNING

Credit: 1 Elective Credit

Grade: 9-12

Prerequisite: None

Life Planning equips students with the skills to face the challenges in today's society. Students will develop a life-management plan which includes Developing Career, Community, and Life Connections; Applying Problem-Solving Processes to Life Situations; Creating and Maintaining Healthy Relationships; Developing Strategies for Lifelong Career Planning; Developing a Financial Plan; Examining Components of Individual and Family Wellness; and Demonstrating Leadership within the Community. Critical thinking and practical problem solving are emphasized through relevant life applications.

*Students wishing to complete a specialization may take additional courses appropriate to their career pathways such as, **Human Services:** Consumer Services; Counseling and Mental Health Services; Early Childhood Development and Services; Family and Community Services. **Certifications:** Personal and Family Finance Certification ; Virginia Workplace Readiness Assessment and IC3 Certification*

8202 HOSPITALITY, TOURISM, AND RECREATION I

Credit: 1 Elective Credit

Grade: 9-12

Prerequisite: None

Students begin preparation for employment in hospitality industries by focusing on principles of operations in food services, recreation, hospitality planning, and business relations. Special attention is paid to the development of culinary skills (food sanitation, food preparation, and serving) and customer service skills. The cooperative education method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

*Students wishing to complete a specialization may take additional courses appropriate to their career pathways such as, **Hospitality and Tourism:** Lodging; Restaurant and Food; and Beverage Services; Travel and Tourism. **Certifications:** Hospitality Management–Food and Beverage Option Assessment; Hospitality Management–Lodging Option Assessment ; Lodging Management Program Certification, Level 1; Lodging Management Program Certification, Level 2 ; START Certification (Hospitality Skills) ; Virginia Workplace Readiness Assessment and IC3 Certification*

8203 HOSPITALITY, TOURISM, AND RECREATION II
Credit: 1 Elective Credit
Grade: 9-12
Prerequisite: Hospitality, Tourism, and Recreation I

Students continue preparation for employment in hospitality industries by focusing on principles of operations in travel and tourism, lodging, food services, hospitality planning, and business relations. Special attention is paid to the development of skills used in the lodging industry (rooms, sales and marketing, front office, and housekeeping divisions) and customer-service skills. The cooperative education method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

*Students wishing to complete a specialization may take additional courses appropriate to their career pathways such as, **Hospitality and Tourism: Lodging; Restaurant and Food; and Beverage Services; Travel and Tourism.***

9097 LEADERSHIP DEVELOPMENT
Credit: 1 Elective Credit
Grade: 9-12
Prerequisite: None

Students develop competencies in identifying individual aptitudes in relation to effective leadership skills, understanding organizational behavior, using effective communication in the workplace, handling human resources and organizational problems, supervising and training employees, resolving conflict, and planning for the future. Continuing education in leadership is emphasized as well as practical leadership experiences in cooperation with school and community leaders.

HEALTH AND MEDICAL SCIENCES

Health and Medical Sciences Program Completer Options

To earn a State Approved Sequential Elective and Program Completion Option, Leadership Development, Life Planning, Economics and Personal Finance or Independent Living (Grade 8) may be combined with another 36 week Health and Medical and Science Course. Additional options include:

Option 1:

- Health & Medical Sciences (CHS)
- Nurse Aide (CATEC)

Option 2:

- Health & Medical sciences I (CHS)
- Health & Medical Sciences II (CHS)

Option 3:

- Sports Medicine I
- Sports Medicine II

Option 4:

- Health & Medical Sciences I(CHS)
- Emergency Medical Technician & Firefighter I (CATEC one year)

Option 5:

- Health & Medical Sciences I(CHS)
- Emergency Medical Technician & Firefighter I (CATEC one year)

8302 INTRODUCTION TO HEALTH AND MEDICAL SCIENCES
Credit: 1 Elective Credit
Grade: 9-12
Prerequisite: None

This course introduces the student to a variety of health care careers and develops basic skills required in all health and medical sciences. It is designed to help students understand the key elements of the U.S. health care system and to learn basic health care terminology, anatomy and physiology for each body system,

pathologies, diagnostic and clinical procedures, therapeutic interventions, and the fundamentals of traumatic and medical emergency care. Throughout the course, instruction emphasizes safety, cleanliness, asepsis, professionalism, accountability, and efficiency within the health care environment. Students also begin gaining job-seeking skills for entry into the health and medical sciences field. In addition, instruction may include the basics of medical laboratory procedures, pharmacology fundamentals, biotechnology concepts, and on skills essential for providing quality patient care.

Students wishing to complete a specialization may take additional courses appropriate to their career pathways such as, **Health Science:** Diagnostics Services; Health Informatics; Therapeutic Services.
Certifications: Virginia Workplace Readiness Assessment and IC3 Certification

8331 HEALTH AND MEDICAL SCIENCES I (Health Assistant I)

Credit: 1 Elective Credit

Grade: 9-12

Prerequisite: None

Health and Medical Sciences introduces students to health care careers and allows for the exploration of each. It is designed to help students develop basic skills common to all health occupations such as; infection control, body mechanics, first aid, vital signs and communication skills. Health and Medical Sciences also provides an introduction to medical terminology and the basic concepts of human growth and development, cultural diversity, problem solving, and nutrition. Students explore careers such as nursing, technicians, administrative support, therapists, physician's assistants, and physicians.

Students wishing to complete a specialization may take additional courses appropriate to their career pathways such as, **Health Science:** Diagnostics Services; Health Informatics; Therapeutic Services.
Certifications: Virginia Workplace Readiness Assessment and IC3 Certification

8332 HEALTH AND MEDICAL SCIENCES II (Health Assistant II)

Credit: 1 Elective Credit

Grade: 10-12

Prerequisite: Health & Medical Sciences I

Students experience classroom instruction and clinical practice in preparation for work in the field. Students achieve necessary skills in assisting with therapeutic procedures and emergency measures, patient rehabilitation, and preparing the patient for examination. In-depth exploration of specific careers and diseases will expose the student to a vast array of health care experiences, including careers such as nursing, technicians, administrative support, therapists, physician's assistants, and physicians. First aid training and CPR training are taught. Students prepare to assist physicians and therapists in hospitals, nursing homes, clinics, and public health facilities.

Students wishing to complete a specialization may take additional courses appropriate to their career pathways such as, **Health Science:** Therapeutic Services. **Certification(s):** Health Assisting Assessment; Home Health Aide Assessment; National Health Care Foundation Skill Standards Assessment; Nurse Aide; Nursing Assisting Assessment; Virginia Workplace Readiness Assessment and IC3 Certification.

7660 SPORTS Medicine I

Credit: 1 Elective Credit

Grade: 10-12

Prerequisite: Introduction to Health and Medical Sciences

This course of studies provides students with the basic concepts and skill set required for an entry-level position as a sports medicine assistant. It introduces students to topics such as injury prevention, nutrition, first aid/CPR/AED, exercise physiology, and biomechanics. Students study basic human anatomy and physiology, medical terminology, legal and ethical issues in sports medicine, and career preparation. Course

competencies have been constructed so as not to go beyond the professional scope of aide/assistant level. Mastery of the material in this course would provide students with a strong background should they wish to pursue certification in areas such as first aid, CPR, AED, and/or personal trainer.

*Students wishing to complete a specialization may take additional courses appropriate to their career pathways such as, **Health Science: Therapeutic Service**. **Certifications:** Virginia Workplace Readiness Assessment and IC3 Certification*

7662 **SPORTS Medicine II**
Credit: 1 Elective Credit
Grade: 11-12
Prerequisite: Sports Medicine I

This course of studies provides students with the basic concepts and skill set required for an entry-level position as a sports medicine assistant. It introduces students to topics such as injury prevention, nutrition, first aid/CPR/AED, exercise physiology, and biomechanics. Students study basic human anatomy and physiology, medical terminology, legal and ethical issues in sports medicine, and career preparation. Course competencies have been constructed so as not to go beyond the professional scope of aide/assistant level. Mastery of the material in this course would provide students with a strong background should they wish to pursue certification in areas such as first aid, CPR, AED, and/or personal trainer.

*Students wishing to complete a specialization may take additional courses appropriate to their career pathways such as, **Health Science: Therapeutic Service**. **Certifications:** Virginia Workplace Readiness Assessment and IC3 Certification .*

MARKETING EDUCATION

Marketing Education is offered for students who have an occupational interest in retail, wholesale, or service occupations. Typical marketing areas include fashion, specialty shops, supermarkets, restaurants, wholesalers, hotels, banks, department stores, and service businesses.

Marketing Education courses include units of study in: advertising, human relations, physical distribution, communications, selling, employment and advancement, display, marketing math, market planning, economics, merchandising, and self-development.

Marketing Education Program Completer Options

To earn a State Approved Sequential Elective and Program Completion Option, Life Planning, or Economics and Personal Finance may be combined with another 36 week Marketing Education Course. Additional options include:

Option 1:

• Intro to Fashion Design and Marketing
& any of the following courses:

- Fashion Marketing
- Principles of Business and Marketing
- Economics and Personal Finance
- Internet Marketing

Option 3:

• Sports, Entertainment & Recreation Marketing
& any of the following courses:

- Principles of Business and Marketing
- Economics and Personal Finance
- Internet Marketing

Option 5:

• Principles of Business and Marketing
& any of the following courses:

- Digital Input Technologies
- Economics and Personal Finance
- Intro to Fashion Design and Marketing
- Fashion Marketing
- Sports, Entertainment & Recreation Marketing
- Internet Marketing

Option 2:

• Fashion Marketing
& any of the following courses:

- Intro to Fashion Design and Marketing
- Principles of Business and Marketing
- Economics and Personal Finance
- Internet Marketing

Option 4:

• Economics and Personal Finance
& any of the following courses:

- Principles of Business and Marketing
- Intro to Fashion Design and Marketing
- Fashion Marketing
- Sports, Entertainment & Recreation Marketing
- Internet Marketing

Option 6:

• Internet Marketing
& any of the following courses:

- Principles of Business and Marketing
- Economics and Personal Finance
- Intro to Fashion Design and Marketing
- Fashion Marketing
- Sports, Entertainment, & Recreation Marketing

Option 7:

• Digital Input Technologies & Principles of Business and Marketing

8125 INTERNET MARKETING

Credit: 1 Elective Credit

Grade: 10-12

Prerequisite: None

Prior computer related course or demonstration of computer proficiency

This is an elective course for students who aspire to work within, or create a business that can operate on the Internet.

Course Description: *Students will have the opportunity to gain skills in emerging technology essential for conducting global business. Students gain knowledge of the tools and techniques used in Internet marketing and learn how to design a functional Web site. In addition, intermediate and advanced marketing concepts will be discussed and used to develop site design strategies. Because of the advanced nature of this course it is recommended that students have good keyboarding skills, working knowledge of general computer concepts and file management, and a sincere interest in business and marketing.*

*Students wishing to complete a specialization may take additional courses appropriate to their career pathways such as, **Marketing:** Marketing Communications, Marketing Management, Marketing Research, Merchandising and Professional Sales. **Certifications:** Fundamental Marketing Concepts ; National Professional Certification in Customer Service; Sales Certification; Virginia Workplace Readiness Assessment and IC3 Certification.*

8140 FASHION MARKETING

Credit: 1 Elective Credit

Grade: 10-12

Prerequisite: None

In this specialized course, students gain basic knowledge of the apparel and accessories industry and skills necessary for successful employment in apparel businesses. Students develop general marketing skills necessary for successful employment in fashion marketing, general marketing skills applicable to the apparel and accessories industry, and specialized skills unique to fashion marketing. Personal selling, sales promotion, purchasing, physical distribution, market planning, and product/service technology as well as academic skills (mathematics, science, English, and history/social science) related to the content are part of this course. Computer/technology applications supporting this course are studied. The cooperative education method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

8248 INTRODUCTION TO FASHION DESIGN AND MARKETING

Credit: 1 Elective Credit

Grade: 9-12

Prerequisite: None

The design and merchandising competencies for this course focus on identifying and exploring the individual careers within the apparel, accessory, and textile design, manufacturing, and merchandising industry. Units of study include the relationships that exist among all areas of the clothing industry; related global and economic issues; apparel, accessory, and textile technology; exploration of careers, including entrepreneurial opportunities in related areas; and the skills and personal characteristics necessary for success in careers in the apparel, accessory, and textile design, manufacturing, and marketing industry.

8115 PRINCIPLES OF BUSINESS AND MARKETING

Credit: 1 Elective Credit

Grade: 9-10

Prerequisite: None

Students discover the roles of business and marketing in the free enterprise system and the global economy. Basic financial concepts of banking, insurance, credit, inheritance, taxation, and investments are investigated to provide a strong background as students prepare to make sound decisions as consumers, wage earners, and citizens. The real-world impact of technology, effective communication, and interpersonal skills is evident throughout the course. This course also supports career development skills and explores career options.

8175 SPORTS, ENTERTAINMENT, AND RECREATION MARKETING

Credit: 1 Elective Credit

Grade: 10-12

Prerequisite: None

This is a specialized marketing course which provides instruction in sponsorship, product planning, promotion, legal contracts, event marketing and communications. Students will investigate the components of "branding," sponsorships and endorsements, as well as promotional plans needed for sports, entertainment and recreation events. The course also supports career development skills and explores career options. Students create projects that allow the application of critical-thinking and decision-making skills through the use of computer technology and academic skills (mathematics, science, English, and history/social science).

*Students wishing to complete a specialization may take additional courses appropriate to their career pathways such as, **Hospitality and Tourism: Recreation, Amusements and Attractions.***

Certifications: *Fundamental Marketing Concepts; National Professional Certification in Customer Service; Sales Certification; Virginia Workplace Readiness Assessment and IC3 Certification.*

6120 ECONOMICS AND PERSONAL FINANCE

Credit: 1 Elective Credit

Grade: 11

Prerequisite: None

Students learn how to navigate the financial decisions they must face and to make informed decisions related to career exploration, budgeting, banking, credit, insurance, spending, taxes, saving, investing, buying/leasing a vehicle, living independently, and inheritance. Development of financial literacy skills and an understanding of economic principles will provide the basis for responsible citizenship and career success. In addition to developing personal finance skills, students will also study basic occupational skills and concepts in preparation for entry-level employment in the field of finance. The course incorporates all economics and financial literacy objectives included in the Code of Virginia §22.1-200-03B.

*Students wishing to complete a specialization may take additional courses appropriate to their career pathways such as, **Business Management and Administration**: Administrative Support; Business Information Management; General Management or **Finance**: Accounting; Banking Services; Business Finance; Insurance or Securities and Investments. **Certifications**: Banking and Related Services Assessment; Business Financial Management Assessment; Concepts of Entrepreneurship and Management Examination; Concepts of Finance Examination; Financial and Investment Planning Assessment; Financial Literacy Certification (WISE); Fundamental Business Concepts; IC3 Certification; National Professional Certification in Customer Service; Virginia Workplace Readiness Assessment and IC3 Certification.*

TECHNOLOGY EDUCATION

The Technology Education program gives students the opportunity to explore the different aspects of current technology trends in which they come in contact, and is designed to make them more aware of the career opportunities in this field. The course offerings are open to all interested students. Completion of any two courses (300 hours) in a prescribed technology sequence constitutes a program completer.

The Technology Education program for the high school provides many experiences for each individual student. Courses in technology highlight a variety of technologies and challenge the student's ability to apply simple scientific principles, engineering concepts and technological systems. Completion of the high school technology program prepares the student for technical or professional programs of higher education.

Technology Students Association: (TSA)

The Technology Student Association is a vocational student organization for all individuals enrolled in technology education courses. Activities of the TSA are included as a part of the instructional program to promote leadership skills and an appreciation for workmanship and safety.

Technology Education Program Completer Options

To earn a State Approved Sequential Elective and Program Completion Option, Leadership Development, Life Planning, or Economics and Personal Finance may be combined with another 36 week Technology Education Course. Additional options include:

Option 1:
Technology Foundations &
Technology Transfer

Option 2:
Mechanical Drawing/CAD &
Engineering Drawing/CAD

Option 3:
Mechanical Drawing/CAD &
Architectural Drawing/CAD

8403 TECHNOLOGY FOUNDATIONS (Full Year)

Credit: 1 Elective Credit

Grade: 9, 10, 11, 12

Prerequisite: None

Students explore the technological systems of: Communication, Construction, Manufacturing, Energy, Power and Transportation. The course introduces students to technical careers through the use of online research. Students obtain knowledge through both lecture and hands-on experiences. They also participate in the Technology Student Association (TSA). Key projects include: Robotics, Bridges, Rockets, Maps, Kites, PowerPoint and Modules. Students work with a variety of computer software and materials to increase their problem solving skills and knowledge of the Design Process. Students should be able to: work in small groups, use problem solving skills, organize notebooks and meet deadlines on time. This course is a prerequisite for the Technology Transfer course.

8405 TECHNOLOGY TRANSFER (Full Year)

Credit: 1 Elective Credit

Grade: 10, 11, 12

Prerequisite: Technology Foundations

Students focus on integrating technology into their core subjects of Math, Science, History and English. The class involves hands-on projects, computer-related work and research, lectures and student presentations. Students work with a variety of computer software and materials to explore the technological systems of production, energy, communication, transportation and other emerging technologies. The class exposes students to technical careers through the use of guest speakers and online research. Students participate in the Technology Student Association (TSA). Key projects include: digital movies, self-propelled airplanes, PowerPoint, miniature single-story wooden shed frame, and a small business. Students should be able to: work in small groups, use critical thinking skills and research independently. Students must earn a satisfactory grade in Technology Foundations to be eligible for this course.

8435 MECHANICAL DRAWING/COMPUTER-AIDED DESIGN (Full Year)

Credit: 1 Elective Credit

Grade: 9, 10, 11, 12

Prerequisite: Completion of or concurrent enrollment in Algebra I-Honors, Geometry-Academic, or Geometry-Honors.

Mechanical Drawing/CAD introduces the student to the world of graphic communication. The purpose of the course is to familiarize the student with fundamental drafting/drawing concepts and techniques, and state-of-the-art CAD programs (Computer Assisted Drawing). Emphasis is placed on the use of drafting equipment, construction of geometric shapes, lettering, orthographic projection, computer assisted drawing (CAD) and visualization of two-dimensional (2-D) and three-dimensional (3-D) objects.

*Students interested in pursuing a career in: **Engineering, Architecture, Construction, Interior Design, Industrial Design, Optometry, Electronics, Robotics or Avionics** will benefit from completing this course.*

**8436 ENGINEERING DRAWING/COMPUTER-AIDED DESIGN
(PVCC Dual Enrollment - optional) (Full Year)**

Credit: 1 Elective Credit, 3 College Credit Hours with a grade of "B" or higher

Grade: 10, 11, 12

Prerequisite: High level of achievement in Mechanical Drawing/CAD or teacher endorsement; passing score on the PVCC "Compass" placement exam if choosing dual enrollment credits.
This is a rigorous course designed for highly motivated students who have a special interest in Engineering. This is also a college-level freshman CAD class (DRF 140) which will use PVCC curriculum.

Engineering Drawing/CAD introduces the student to the world of Engineering. Students are challenged with

in-depth drawing problems & projects. State-of-the-art CAD programs (Computer Assisted Drawing) will be strictly used. Emphasis is placed on creating working drawings, assembly drawings, sectioning, developments, and threads & fasteners.

*Students interested in pursuing a **Mechanical, Electrical, Civil, Aerospace, Structural, Industrial or Production Engineering** career will benefit from completing this course.*

*Students who complete both Mechanical Drawing/CAD and Engineering Drawing/CAD and pass the end of course "Brainbench" AutoCAD 2000 Certification Exam will be allowed to use the course(s) and exam as two (2) student-selected **VERIFIED SOL CREDITS** towards their graduation requirements.*

8437 ARCHITECTURAL DRAWING/COMPUTER-AIDED DESIGN

8437 D (PVCC Dual Enrollment - optional) (Full Year)

Credit: 1 Elective Credit, 3 College Credit Hours with a grade of "B" or higher

Grade: 10, 11, 12

Prerequisite: High level of achievement in Mechanical Drawing/CAD or teacher endorsement; passing score on the PVCC "Compass" placement exam if choosing dual enrollment credits. This is a rigorous course designed for highly motivated students who have a special interest in Architecture. This is also a college-level freshman CAD class (**ARC 121**) which will use PVCC curriculum.

Architectural Drawing/CAD introduces the student to field of Architectural Design and basic methods of construction. The course will encompass techniques of architectural drafting, including dimensioning, and symbols. The course is designed to introduce students to the concepts, practices, standards and techniques needed for development of a limited set of working drawings. The course focuses on students completing a working set of architectural plans for a shed, single story home and multi-level home using the latest AutoCAD software. Students will also build a scaled model of their home.

*Students interested in pursuing a career in: **Architecture, Interior Design, Masonry, Carpentry, Landscaping, Electrician, Contractor or Structural Engineering** will benefit from completing this course.*

*Students who complete both Mechanical Drawing/CAD and Architectural Drawing/CAD and pass the end of course "Brainbench" AutoCAD 2000 Certification Exam will be allowed to use the course(s) and exam as two (2) student-selected **VERIFIED SOL CREDITS** towards their graduation requirements.*

6161 DIGITAL INPUT TECHNOLOGIES

Credit: 1 Elective Credit

Grade: 9-12

Prerequisite: Recommended prerequisite(s): Keyboarding course(s) or teacher-approved demonstration and documentation of touch keyboarding skills

Digital Input Technologies introduces new and emerging input devices (e.g., speech- and handwriting-recognition software, headset/microphone, personal digital assistant [PDA], scanner, digital camera, digital video camera, keyboard, and mouse) to prepare students for using tools that are becoming standard in the workplace and in everyday life. The cooperative education method is available for students in grades 10-12 who enroll in this class. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

Recommended prerequisite(s): Keyboarding course(s) or teacher-approved demonstration and documentation of touch keyboarding skills

*Students wishing to complete a specialization may take additional courses appropriate to their career pathways such as, **Business Management and Administration**: Administrative Support;*

***Information Technology**: Information Support and Services. **Certifications**: [Microsoft Certified Application Specialist \(MCAS\)](#) ; [Microsoft Office Specialist \(MOS\)](#) ; [Virginia Workplace Readiness Assessment and IC3 Certification](#)*

Special Populations

9030 Education for Employment Cooperative Education I (for students with disabilities)

Suggested Grade Levels: 11 or 12 (36 weeks) 1 Elective Credit

Students receive school-based and community-based instruction organized around an approved job that leads toward their career goal. A training plan that identifies learning experiences according to the student's occupational objective is developed. The on-the-job paid training is an extension of the classroom instruction coordinated by the classroom teacher in conjunction with the Competitive Employment Work and Transition Program. **Certifications:** [National Professional Certification in Customer Service](#); [Virginia Workplace Readiness Assessment and IC3 Certification](#)

9031 Education for Employment Cooperative Education II (For students with disabilities)

Suggested Grade Levels: 11 or 12 (36 weeks) 1 Elective Credit

Students receive school-based and community-based instruction organized around an approved job that leads toward their career goal. An individualized training plan is developed that identifies learning experiences according to the student's occupational objective. The on-the-job paid training is an extension of the classroom instruction coordinated by the classroom teacher in conjunction with the Competitive Employment Work and Transition Program. **Certifications:** [National Professional Certification in Customer Service](#); [Virginia Workplace Readiness Assessment and IC3 Certification](#) .

WORK-BASED LEARNING

8000 SENIOR INTERNSHIP

Credit: 0.5 Elective Credit per Semester

Grade: 12

Prerequisite: Accepted application

An internship provides students with defined aptitudes, interests, and abilities, a structured hands-on experience related to career goals. An internship may be developed in careers such as Law, Medicine, Veterinary Medicine, Computer Science, Finance, Accounting, Sales, Music, Journalism, Photography, Art Architecture, Engineering, Technology, Manufacturing, and many more. The Senior Intern must be dependable, responsible, punctual, and demonstrate a desire to work in a professional environment. Program participation requires 135 hours of site experience or related training activities per semester. Interns are required to meet twice a month with the Program Coordinator to discuss relevant topics relating to employment (attitudes, human relationship skills, etc.) as well as issues and concerns relating to their own specific Internship. Additionally, Senior Interns are required to provide their own transportation to and from the internship site.

8040 CEWAT I

Credit: 0.5 Elective Credit per Semester

Grade: 9, 10, 11, 12 (Must be 16 years of age)

Prerequisite: Accepted application

Competitive Employment Work and Transition (CEWAT) is a supervised work experience program which encourages students to become responsible, successful, career-minded individuals. Students receive support from an Employment Specialist to obtain and maintain competitive employment by demonstrating appropriate work behaviors and receiving satisfactory employer performance ratings.

8045 **CEWAT II**
Credit: 1 Elective Credit per Semester
Grade: 9, 10, 11, 12 (Must be 16 years of age)
Prerequisite: Accepted application

Competitive Employment Work and Transition (CEWAT) is a supervised work experience program which encourages students to become responsible, successful, career-minded individuals. Students receive support from an Employment Specialist to obtain and maintain competitive employment by demonstrating appropriate work behaviors and receiving satisfactory employer performance ratings.



A secondary and post-secondary career and technical school

The Charlottesville-Albemarle Technical Education Center (CATEC) operates with a very special purpose in mind: to provide high school students an opportunity to explore career choices and prepare in program areas that provide portable, transferable skills, for post-secondary training and employment.

VISION: We are the school of excellence and choice for students, staff, and businesses.

MISSION: Our mission is to develop workforce skills and careers.

CATEC focuses on providing portable, transferable skills to all of or students in the areas of:

- 1) Technical Skills;
- 2) Workplace (soft) Skills;
- 3) Literacy Development;
- 4) Innovative Technology Training;
- 5) Entrepreneurship Training.

Businesses and community members who are interested in making connections and developing programs should check out our web-site at www.catec.org.

OVERVIEW

CATEC Career Programs

Students may be admitted to the center if they meet the following criteria:

- Attend Albemarle County or Charlottesville City Schools;
- Attend Fluvanna High School or neighboring high schools (admitted on space available basis);
- Have parental permission;
- Make application through their school guidance counselors and meet requirements for admission;
- Pay tuition if they are adults and space is available in the class.

Career Cluster Course Offerings

- Art, AV, Technology & Communications
- Health Sciences
- Hospitality & Tourism
- Human Services
- Law, Public Safety, Corrections & Security
- Architecture & Construction
- Transportation, Distribution & Logistic

Application & Selection Process

Students wanting to enroll in CATEC programs must complete an Application for Enrollment available through their home high school counseling department. Students return completed applications to their school counselors who will forward the applications to CATEC.

Since class sizes at CATEC are limited, CATEC will review the applications and select students based upon the following:

- Applicants will be considered for the programs provided they meet any listed prerequisites.
- CATEC will review the following information on applicants: attendance, disciplinary record, grades, grade level, age and personal interview, if applicable. Final Selection for each program will then be based upon a variety of factors, including the above information, the number of enrollments from each school, total enrollments from each school division, and maximum class sizes.
- Current CATEC students wishing to return to complete their program, or desire to enter a new program, should obtain a grade level of “C” or higher.
- Juniors & Seniors are given priority in all programs, with Sophomores being accepted on a case by case basis in the following: Building Trades, Masonry, Culinary Arts, and Intro to Culinary Arts and Auto Body.

Program Completer/Certificate/Seal Options

All credit(s) for CATEC programs meet the requirement as a practical arts elective(s). Students who finish any state approved one or two-year sequence of technical courses and earn a high school diploma will constitute a “program completer.”

Program completers receive a **Career and Technical Education Certificate of Completion** (based upon program requirements). Students earn a **Career and Technical Education Seal** if they: (a) achieve a B average in a sequence of courses; or (b) pass an examination that confers certification from a recognized industry, trade, or professional association; or (c) acquire a professional license in the field from the Commonwealth of Virginia. Students will receive a **Certificate of Participation** upon completion of an one-year program or one year of a two-year program (based upon program/certificate requirements), or complete a two-year program and do not earn a high school diploma.

Verified Credits

Career and technical students may earn two verified credits toward a Standard Diploma by completing a program sequence and passing a recognized certification or licensure examination. One of these may be substituted for a verified credit in either science or history and the other used as a student-selected verified credit.

Technical Education Organizations for Students

Student participation in SkillsUSA or Health Occupations Student Association (HOSA) is an integral part of instruction in all of CATEC's programs. These organizations provide opportunities for students to develop personal leadership and communication skills and motivates them to excel in their chosen fields of study.

Skill Focus

While there are many technical "hard" skills taught in our programs at CATEC, an increased portion of our instruction is geared towards **workplace readiness skills**, known as "soft" skills. These skills are incorporated into the curriculum for each trade area, and are implemented school-wide in lessons to better prepare students for the workplace environment. In addition to the workplace skills, we incorporate **literacy**, **entrepreneurship** and **technology skills** into the trade areas to better prepare students with portable, transferable skills once they have completed their program of study.

Summer Internship Program

0027 SUMMER INTERNSHIP PROGRAM – A CATEC PARTNERSHIP

Credits: ½

Grades: 11, 12 (must be at least 16 years old by June 15th)

Prerequisite: None

The Summer Internship Program allows students to explore a career interest in the Health and Medical Sciences field or the Information Technology field. Students are paired with a mentor for 3 weeks during this unpaid work experience. Students will also receive several hours of employability skills training at CATEC. Students must go through an application process to be considered for an internship, and not all students are guaranteed a placement. The application process will take place during the month of April.

Core Academics

English Courses:

English 10 (a.m. only)

Credits: 1 English credit **Level:** Academic/Advanced **Prerequisites:** English 9

English 11 (a.m. & p.m.)

Credits: 1 English credit **Level:** Academic/Advanced **Prerequisites:** English 9, English 10

English 12 (a.m. & p.m.)

Credits: 1 English credit **Level:** Academic/Advanced **Prerequisites:** English 9, English 10, English 11

Note: All English courses meet SOL requirements. The classes below can be taken in conjunction with any A.M. or P.M. CATEC program. Students who take English will receive 1 English credit and 2 elective credits in their technical course.

Exploratory:

Students take English 10 Academic/Advanced and explore possible career options by rotating through different labs (nine weeks per lab, 4 labs per year). Class is open to rising 10th graders
10th Grade Exploratory (a.m.)

Credits: English 10 Academic/Advanced 1 English Credit
Trade Exploratory 2 Elective Credits

Career & Technical Education Programs

AUDIO, MEDIA AND COMMUNICATIONS

9295 MUSIC INDUSTRY TECHNOLOGY (PM)

Credits: 1 Credit

Grades: 11, 12

Prerequisite: Open to Juniors & Seniors with priority going to 12th graders.

Working in conjunction with the Music Resource Center, this one-year program is designed to provide in-depth instruction on music industry elements such as composition, recording systems, mixing and processing techniques, and live sound. Students will also be exposed to musical theory, computer use, and instrument understanding and function. Projects will include recording of instruments and arranging recording tracks on an album, including, but not limited to, the arrangement of multiple microphones, use of synthesizers, applying compression and equalization, and amplifying sound. Students will incorporate advertising and marketing aspects into these projects and study the possible careers available in the field.

Future Career Opportunities: Music Producer, Live-Sound Engineer, Audio Engineer, Radio Program Engineer.

HEALTH SCIENCES

8334 EMERGENCY MEDICAL TECHNICIAN (AM)

8706 FIREFIGHTER I (AM)

1 Year Program

Credits: Emergency Medical Technician 1 Elective Credit
Firefighter I 1 Elective Credit*

Grades: 11, 12

Prerequisites: Must be 16 or older by start of school & 11th or 12th grader academically. Cumulative GPA 2.0 recommended. The Virginia Office of Emergency Medical Services has prerequisites for EMS training. For the complete list, contact the instructor.

Certifications: EMT Basic, Firefighter I

Verified Credits: 1-2 (certification, completer)

EMTs are one of the three public safety divisions (EMS, Fire and Law Enforcement). Their job includes the daily routine of dealing with crisis, trauma, hazardous materials, illness, injuries, and the training to handle mass causality situations, disaster management, and terrorism awareness. The work they do often means the difference between life and death. Although the job can be stressful, EMT's and Paramedics enjoy the challenge and excitement of the job and view it as an opportunity to make a real difference.

Firefighters are one of the three public safety divisions (EMS, Fire & Law Enforcement). Firefighter I introduces students to the exciting career field of Firefighting. Students will learn both the theoretical concepts and practical application of fire suppression, fire science management, fire prevention techniques, arson investigation, and the mitigation of hazardous material accidents. Firefighting is a physically demanding profession and students will be introduced to this aspect through a physical training program. Local fire departments will work with the students in this indoctrination program, which will require field trips after school hours.

All activities will be conducted with great care and supervised closely by qualified personnel. These policies are designed to ensure adequate levels of safety while allowing for flexibility to utilize independent judgment based on the level of training. Any student who jeopardizes the safety of others will be removed from the program. Dress must be appropriate for the environment and training requirements.

8328	DENTAL ASSISTANT (PM)	1 Year Program
Credits:	2-3 Elective Credits*	
	*2 elective credits taken in conjunction with a CATEC English class.	
Grades:	11, 12	
Prerequisites:	C or better in standard or advanced Biology	
Certifications:	Students can take certification in Radiation Hygiene and Safety and Infection Control.	
Verified Credits:	1-2 (certification, completer)	

This one-year program prepares students to perform all the tasks of a Dental Assistant. These tasks include exposing, processing, and mounting x-rays, preparing materials for various procedures, including impressions, placing topical anesthetics, and making diagnostic study models for alginate impressions. Dental Assistant students also study maintenance of patient records, sterilization and disinfectant of instruments and equipment, preparation of patients for dental treatment, arrangement of dental instruments, materials, and medications on chair side trays, use of oral evaluation system, and oral hygiene instructions for patients. This program will give students a foundation to pursue an Infection Control and Radiation Health and Safety Certificate or a Dental Hygienist post-secondary degree through a two or four-year college.

8305	PHARMACY TECHNICIAN (PM)	1 Year Program
Credits:	2-3 Elective Credits*	
	*2 elective credits taken in conjunction with a CATEC English class.	
Grades:	11, 12	
Prerequisites:	C or better in standard or advanced Biology	
Certifications:	Virginia Pharmacy Technician – State Licensure	
Verified Credits:	1-2 (certification, completer)	

This one-year program will prepare students to perform all the tasks of a Pharmacy Technician. These tasks include assisting the licensed pharmacist with serving patients, and ordering, stocking, and packaging prescription and over-the-counter medications. Students will study Pharmacology to learn about the top 200 drugs, what they are and how they work. Pharmacy Tech students also study safety procedures, medication and inventory control, maintaining records, preparing labels, and processing insurance claims. This program can prepare you to successfully complete the Certified Pharmacy Technician (CPhT) examination.

8357/8358/8359	NURSES AIDE (AM, PM)	1 Year Program
Credits:	2-3 Elective Credits*	
Grades:	11, 12	
Prerequisites:	Ability to work and socially interact with people in a public environment.	
Certifications:	After successfully completing Level I, and prior to proceeding with Level II Practical Nursing, students may decide to take the National Nurse Aide Assessment Program examination to become a Certified Nurse Aide in Virginia. Upon completion of Level II, students must pass a national written examination to obtain their license, which is required in order to obtain employment as an LPN.	
Verified Credits:	1-2 (certification, completer)	

This program is fast-paced and begins with a discussion of nursing theory and the study of science. Once students have the theory completed they learn to care for others in the lab and clinical setting. In the clinical setting students will learn to care for patients independently and as a part of a team environment. Students will learn how their knowledge base, work ethics, documentation, and critical thinking skills assist in the proper care and management of another person. Students will leave the program prepared to work in nursing homes, hospitals and home environments. Upon successful completion of this one-year program students will sit for the State Board Exam for Nurse Aide. Once students pass this exam, they will be Certified Nurse Aides for the state of Virginia.

8527	COSMETOLOGY I (AM/PM)	2 Year Program
8528	COSMETOLOGY II (AM)	
Credits:	<u>Cosmetology I:</u> 2-3 Elective Credits* <u>Cosmetology II:</u> 2-3 Elective Credits*	
	*2 elective credits taken in conjunction with a CATEC English class	
Grades:	11, 12	
Prerequisites:	C or better in Biology	
Certifications:	State Board of Cosmetology License	
Verified Credits:	1-2 (certification, completer)	
College Credits:	NA	

Students in this two-year program are eligible to take their State Board examination after successfully completing the two-year course. Students will gain theory and practical knowledge through instruction and lab participation. First-year students will participate in a job shadowing program and second-year students during their second semester will participate in an internship two days a week. Cosmetology students study: professional ethics, safety and health, hair analysis, hair and scalp diseases/disorders, hair cutting and shaping, anatomy and physiology, chemical restructuring, coloring and lightening, and nail/skin care procedures.

LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY

8334	EMERGENCY MEDICAL TECHNICIAN (AM)	1 Year Program
8706	FIREFIGHTER I (AM)	
Credits:	<u>Emergency Medical Technician</u> 1 Elective Credit <u>Firefighter I</u> 1 Elective Credit*	
Grades:	11, 12	
Prerequisites:	Must be 16 or older by start of school & 11 th or 12 th grader academically. Cumulative GPA 2.0 recommended. The Virginia Office of Emergency Medical Services has prerequisites for EMS training. For the complete list, contact the instructor.	
Certifications:	EMT Basic, Firefighter I	
Verified Credits:	1-2 (certification, completer)	

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ARCHITECTURE & CONSTRUCTION

8515	BUILDING TRADES I (AM/PM)	2 Year Program
8516	BUILDING TRADES II (AM)	
Credits:	Building Trades I - 2 or 3 Elective Credits Each Year* Building Trades II - 2 or 3 Elective Credits Each Year* *2 elective credits if taken in conjunction with a CATEC English class.	
Grades:	10,11, 12	
Prerequisites:	Students must be 16 years of age or older and must have passed Algebra I (read a ruler in increments of sixteenths)	
Certifications:	Carpentry Assessment (NBRCA)	
Verified Credits:	1-2 (certification, completer)	
College Credits:	One one-year of credit toward the CATEC Apprenticeship Program (upon successful completion of the certification exam)	

This two-year program will teach you all the basic skills of: carpentry, residential wiring, residential plumbing, and masonry. The safe use of hand and power tools will be emphasized with more emphasis on power equipment. Blueprint reading and drawing are introduced at the beginning of the course. The latter part of the course will focus on carpentry, from framing to the finishing trim, and roofing. Plumbing is introduced as it relates to the other trades during the year; for example, drain waste, and vent work are taught as it relates to bathroom and kitchen plumbing. Residential wiring emphasizes the basics of wiring a house and the National Electrical Code. All aspects of residential construction, from project planning, purchasing material, to code compliance are taught. You will also build a house. Emphasis will be placed on proper employability skills and attitude throughout both years of the course.

8512	MASONRY I AM or PM)
8513	MASONRY II (AM)
Credits:	<u>Masonry I</u> : 2-3 Elective Credits* <u>Masonry II</u> : 2-3 Elective Credits* *2 elective credits taken in conjunction with a CATEC English class.
Grades:	10,11, 12
Prerequisites:	Students with allergies (dust etc.) should consult a physician prior to enrollment.
Certifications:	Construction Masonry (NAHBCA)
Verified Credits:	1-2 (certification, completer)
College Credits:	One-year of credit toward the CATEC Apprenticeship Program (upon successful completion of the certification exam)

Students this two-year program will work with brick, concrete, glass block, tiles, terra cotta, and stone. Work can be as simple as laying a wall, or as complex as building a fireplace. The work is very physical, involving the use of hand tools, power tools, and other materials. Brick and block are laid by hand, requiring the skill of a craftsman. Students will learn to read blueprints, understand building codes, and be knowledgeable of industry safety requirements and guidelines for handling hazardous materials.

TRANSPORTATION, DISTRIBUTION & LOGISTICS

8679	AUTO BODY TECHNOLOGY I (AM/PM)	2 Year Program
8680	AUTO BODY TECHNOLOGY II (AM)	
Credits:	<u>Auto Body Technology I</u> 2-3 Elective Credits* <u>Auto Body Technology II</u> 2-3 Elective Credits*	
	* 2 elective credits taken in conjunction with a CATEC English class.	
Grades:	10, 11, 12	
Prerequisites:	Successful completion of Algebra I, good eye-hand coordination, manual dexterity, and physical strength and stamina.	
Certifications:	Auto Body Assessment (NOCTI), (ICAR)	
Verified Credits:	1-2 (certification, completer)	
College Credits:	NA	

Students in this program are prepared for careers in this field through the use of the latest technologies and state of the art equipment. Throughout the program students gain knowledge of classroom and shop experience by working on vehicles. Each student will become familiar with the latest finishes, from single-stage to multi-stage finishes. Areas of study include: structural analysis and damage repair – fixed glass, non-structural analysis and damage repair, plastics and adhesives, painting and refinishing, estimating damage analysis, mechanical and electrical components. Selected students may be eligible for work experiences at local repair facilities.

8506	AUTOMOTIVE SERVICE TECHNOLOGY I (PM)	2 Year Program
8507	AUTOMOTIVE SERVICE TECHNOLOGY II (AM)	
Credits:	<u>Automotive Service Tech I</u> 2-3 Elective Credits* <u>Automotive Service Tech II</u> 2-3 Elective Credits*	
	*2 elective credits if taken in conjunction with a CATEC English class.	
Grades:	11, 12	
Prerequisites:	Successful completion of Algebra I, ability to read and understand highly technical information, use sophisticated equipment, work independently and in groups.	
Certifications:	NATEF, AYES	
Verified Credits:	1-2 (certification, completer)	
College Credits:	Students earning a B average will earn 20 dual enrollment college credits at J. Sergeant Reynolds Community College	

Automotive Service Technology is a two-year program for students who wish to become entry-level automotive technicians. The program is dual enrolled with J. Sargeant Reynolds Community College and articulated with Universal Technical Institute. This program is industry certified through NATEF and AYES. Automotive manufacturers and local dealerships sponsor the Automotive Youth Educational System (AYES) Program at CATEC. This program offers internship opportunities with dealerships for students who qualify and are selected during the spring semester of the first year. It includes the study of engine repair, engine performance, electrical/electronics, HVAC, brakes, Virginia state inspection, steering and suspension. The program is designed to provide an in-depth study of the automobile and its operating systems. In the classroom students will study automotive theory and put the theory into practical use in the auto shop. The program prepares graduates to pursue the Virginia State Inspector's License and gives students the opportunity to participate in the AYES initiative.