

CAREER Concentrations

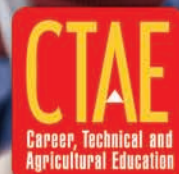
An education- and career pathway-planning guide for Georgia students



**Get on the
Fast Track
to the
Future**

**Introducing Georgia Career,
Technical and Agricultural
Education (CTAE)**

- ▶ **Choose from eight great Georgia Career Concentrations**
- ▶ **Learn about 200 career choices**
- ▶ **Get inside information from recent graduates**
- ▶ **And more!**



CTAE
Career, Technical and
Agricultural Education

Dear Georgia Student,

I'm so proud of you. By picking up and reading this edition of *Career Concentrations*, you are taking charge of your future.

You've decided that you want information and insight that will help you make smart decisions about your education and career options. You are showing that you don't want to just drift through school without direction, and instead that you are determined to focus on your goals and follow the right path to achieve them.

As you think about the future, I encourage you to dream big. Imagine what you want to do when you grow up and aim as high as possible. Think about what you love to do with your time, and then work with your parents/guardians, teachers, and counselors to find possible professions that match your goals and talents.

As you look toward the future, consider the Career, Technical and Agricultural Education (CTAE) options featured in this booklet. Look at the eight Program Concentrations (see "Contents") on the following pages and pick out the one that best matches your interests and abilities. Look at the pathways available within that concentration; then document your choices by creating a Peach State Pathway Career Plan (see page 2). This plan will help you navigate through high school, college, or other postsecondary education options or career-related training. Make sure to update your plan each year as you learn more about the pathway and about yourself.

My philosophy of education is summed up by the new three Rs of learning: rigor, relevance, and relationships. Georgia owes it to you to provide an education that is academically rigorous and challenging, yet relevant to the real world. And we must foster supportive relationships between you and the adults in your life—your parents/guardians, your teachers, your counselors, your coaches, and your mentors. As State Superintendent of Schools, I pledge that Georgia schools will follow these three Rs to give you the best preparation for the future possible.

Your future is what you make it. Go ahead. Dream big and get started on your future today.

Sincerely,



Kathy Cox

State Superintendent of Schools



**Georgia Career, Technical and
Agricultural Education**

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CTAE Vision Statement:
*To create a secondary profile of
career readiness for Georgia.*

Introduction

5 Steps to Success

What Do You Want to Be When You Grow Up?

You've probably been asked that question dozens of times. If you're like most teenagers, you're still not really sure how to answer.

That's okay. It's tough to figure out what you want to be when you don't know all the possible career options; what skills, education, and experience are needed for each career; and what kinds of careers might interest you and suit your strengths and talents.

The reason Georgia Career, Technical and Agricultural Education (CTAE) is so exciting for students, parents, and teachers is that its eight Program Concentrations (see "Contents") can help you decide not only what you *want* to do, but also what you *need* to do to reach your goals. Project-based classes provide a firsthand look at what it's actually like to do real jobs. The challenging academic curriculum ensures that every Georgia student is prepared for a rewarding life, work, and educational opportunities beyond high school.

This booklet is your introduction to opportunities offered by CTAE. Add CTAE courses to your high school schedule and increase your chances for a bright future.

Develop Your Peach State Pathway Career Plan

Knowing what you want to do when you grow up starts by creating your own Peach State Pathway Career Plan to guide you through high school and beyond (see "What Is a Peach State Pathway Career Plan?" on next page). This plan is an easy-to-use tool designed to help you, your parents or guardian, and your teacher-as-advisor or guidance counselor sit down together to discuss and map out an individualized education and career path.

The plan outlines the grade-nine-through-12 core academic and elective courses you should take to reach your goals, plus possible out-of-class learning opportunities, such as participation in career and technical student organizations (CTSOs), internships, co-op education, and Youth Apprenticeship. Choosing a career that requires a two- or four-year postsecondary degree as part of your plan ensures that you will meet both the entrance requirements and the academic demands of any college.

Producing a Peach State Pathway Career Plan makes your courses and homework a lot more interesting, because you'll be studying subjects that engage you and that help you reach your personal goals. Your plan can guide you to whatever you dream of being—from an architect to a zoologist and every career option in between.

Step 1: Do Your Homework

Before you can develop your Peach State Pathway Career Plan, you have to think about your goals and ambitions, your values and talents, and your career options. Be honest with yourself. This is your chance to map your own course for the future based on your personal goals and abilities.

Chances are you've already taken some career assessments in school that are part of your school record. You also have your report cards, which are a good indicator of your academic strengths and weaknesses. Use both of these tools to start identifying what you're good at and what you might like to do after high school. Your school's career or guidance office can offer other assessment tools for you to try, such as Holland's Self-Directed Search and ASVAB (Armed Services Vocational Aptitude Battery). (*Continued on page 3*)



Contents

CTAE Program Concentrations

CTAE is organized into the following eight Program Concentrations you can choose to specialize in through high school and into postsecondary education or training.

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What Is a Peach State Pathway Career Plan?

Your Peach State Pathway Career Plan outlines the steps you need to take to reach your goals and build a successful life and career after high school graduation. Courses listed within the plan are only recommendations. Your actual plan will be individualized to match your specific educational and career goals. All plans will meet high school graduation requirements that include a dual seal as well as Georgia Board of Regents college entrance requirements.

The Georgia Department of Education developed the Peach State Pathway Career Plan to help you and your parents/guardians understand:

- that high school should begin with a career goal in mind.
- that education doesn't end with high school graduation.
- the connection between school and work.
- the exact number of units and classes required to reach the chosen career goal.

- the recommended classes for a specific instructional area.
- that CTAE allows students to pursue postsecondary education at any level.
- that CTAE requires students to perform at the highest level of achievement.

Here's a sample plan based on the requirements for the Engineering & Technology Program Concentration:

Peach State Pathway Career Plan

Program Concentration: Engineering & Technology

Learner Name: _____ Date: _____

Learner Signature: _____ Advisor/Counselor Signature: _____

Parent/Guardian Signature: _____

NETWORK SYSTEMS	HIGH SCHOOL	9th Grade	10th Grade	11th Grade	12th Grade
		English/Language Arts	English/Language Arts	English/Language Arts	English/Language Arts
		Math I OR Core Math I	Math II OR Core Math II	Math III OR Core Math III	Math IV (AP Calculus) OR Core Math IV
		Physical Science/Biology	Biology/Physical Science	Chemistry	Physics
		Citizenship	World History	American History	Economics (1/2 unit)
		Required Courses/Electives PE, Health, Fine Arts, Foreign Language	Required Courses/Electives PE, Health, Fine Arts, Foreign Language	Recommended sequence of courses: *11.42000 Operating Systems and Management *11.42200 Networking	
Career Electives *07.44110 Computer Applications	Career Electives *11.41200 Information Technology Foundations				
POSTSECONDARY	Technical College	College/University	Other Options:		
	Network Administrator Telecommunications and Networking Cable Tech Networking Administrator Networking Specialist Information Security Specialist Computer Operations	Computer Engineering Computer Information Systems Computer Science Computer Engineering Technology Information Technology Business & Information Technology	<ul style="list-style-type: none"> ■ State Registered Apprenticeship ■ Industry-Sponsored Training ■ Military ■ On-the-Job Training ■ Special Purpose Schools 		
CAREER-ENHANCEMENT OPTIONS	Work-Based Learning Options	**Possible Local Articulated Credit with Technical Colleges: <i>(check with your counselor for other college credit opportunities)</i>			
	Job-Shadowing Internship/Practicum Related Worksite Experience Youth Apprenticeship School-Based Enterprise Field Trips Entrepreneurial Ventures Clinicals	07.44110 Computer Applications SCT 100 Introduction to Computers AND CIS 107 Microcomputer Essentials 11.41200 Information Technology Foundations CIS 106 Computer Concepts 11.42200 Networking CIS 2321 Introduction to LAN and WAN AND CIS 2322 Introduction to WANs and Routing <i>* course is aligned with postsecondary course and carries articulated credit</i> <i>** credit is awarded by the postsecondary institution</i>			

(Continued from page 1)

Step 2: Match Your Interests to Real Careers

Once you've done your homework, you can start exploring the careers that might fit you best. Doing something you love makes your profession more enjoyable and rewarding, which is important when you consider that you'll probably be working 40 years or more.

Use the career information resources available through your school, local library, and the Internet, including the Georgia Labor Market Explorer (*explorer.dol.state.ga.us/*) and the *Occupational Outlook Handbook* (*www.bls.gov/oco*), to start making a list of possible jobs that match your interests. Keep a file or career portfolio detailing the educational requirements, salary, and job description for each occupation. If possible, talk to people in your community who work in these professions to see what the jobs are really like.



Step 3: Schedule Your Planning Meeting

Your first planning meeting typically takes place at the end of 8th or 9th grade. These sessions last about 30 minutes. Everyone who plays a role in your success—you, your parents or guardians, and your teacher-as-advisor or guidance counselor—sit down together in a collaborative effort to create an action plan.

Everyone at the table reviews the results of your career assessments, state tests, past performance in academic and elective classes, and career inventory to get a clearer picture of who you are and what you like to do.

Let the adults know which career options you're considering and why. Ask

for their insight and advice, and be open to their suggestions. Use their input to fine-tune your career search and design the plan that will work best for you. At this stage, you can choose a CTAE Career Concentration and Career Pathway to follow through high school and beyond.

Step 4: Review and Revise Each Spring

Your Peach State Pathway Career Plan isn't written in stone. It's a fluid document that can change as you learn more about yourself and narrow your career choices. Review and update your plan each spring with your parents/guardians and teacher/counselor and revise it as needed.

While minor changes to the plan can be made through senior year, it does make sense to choose a final Program Concentration and stick with it by sophomore year. This may sound scary, but it really isn't. By doing your career homework, planning with your parents/guardians and teacher/counselor, and following the rigorous and relevant CTAE curriculum, you'll be well prepared to choose a Concentration you love. Of course, you can still change Pathways within that Program Concentration, but totally switching Concentrations in the junior or senior year may make it difficult to meet all graduation requirements.

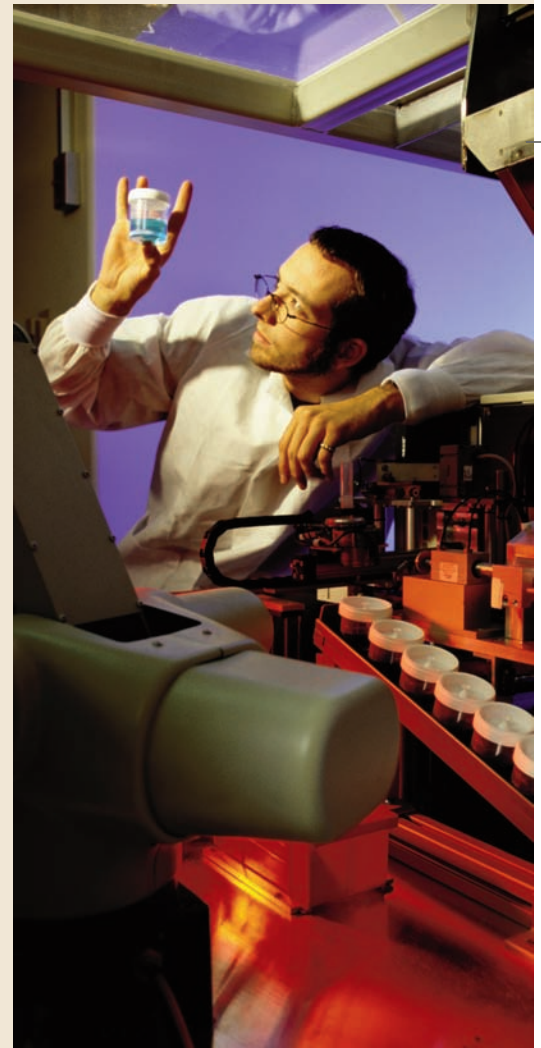
Step 5: Embark on the Future of Your Dreams

Your Peach State Pathway Career Plan opens the door to your future and offers guidance for those first few years after graduation. Whether your plan leads you to the military, college, apprenticeship, or immediate employment, your steps to success don't end there. Use the knowledge you gained while creating your plan—assessing your skills and goals, exploring career options, seeking advice from mentors and teachers, reviewing and revising your plans regularly—to continue improving and growing so you can live the future of your dreams.

Georgia Hot Jobs

On the following pages are lists of 25 possible careers for each Program Concentration. These are samplings of jobs available, not a comprehensive list of every career you might choose.

Some jobs are marked with the symbol at right to indicate that they are Georgia Hot Jobs. These are in-state careers with projected fast job growth and above-average wages through 2014. Not all Program Concentrations feature Hot Jobs, but don't rule them out. The ideal Concentration choice should be based on solid research and serious thinking about your personal ambitions and abilities.



Agriculture

Grow Your Career

- **Would you like to build leadership skills and learn what it takes to succeed in the working world?**
- **Do you enjoy science, nature, or working with plants and animals?**
- **Would you like to explore the career opportunities in a dynamic industry with an exciting future?**

in Georgia is declining, the opportunities for students with solid Ag Ed skills are booming in fields such as agriscience, biotechnology, turf management, landscaping, food science, forestry, environmental science, agricultural engineering, and agribusiness management.

Agriculture Education (Ag Ed) nurtures leaders in every field imaginable. While some Ag Ed students come from farm families, the majority of them do not, and most graduates go on to work or study in a nonfarm, agriculture-related career. So even though the number of family farms

CTAE's Ag Ed program combines agricultural technical skills with rigorous coursework, leadership training, and an exploration of the ethical and philosophical issues related to genetic engineering and other current agricultural topics. There are three interrelated components to the program: classroom and laboratory experiences, the Supervised



Agriculture File

PATHWAYS:

- Agricultural Mechanics
- Agribusiness Management
- Agriscience
- Animal Sciences
- Forestry/Natural Resources
- Plant Science/Horticulture

CTSO:

Georgia FFA Association,
aged.ces.uga.edu/georgiaffa

25 Agriculture Careers

Occupation	Educational Requirement*	Average Wage**
Grounds Maintenance Worker	.W	\$.9.04
Refuse and Recyclable Material Collector	.O	\$.10.46
Outdoor Power Equipment and Other Small-Engine Mechanic	.O	\$.12.17
Animal Breeder	.W	\$.12.21
Logging Equipment Operator	.W	\$.12.50
Forest and Conservation Worker	.W	\$.12.88
Agricultural Inspector	.W	\$.13.27
Fish and Game Warden	.O	\$.13.51
Agricultural and Food Science Technician	.B	\$.14.33
Environmental Science and Protection Technician	.B	\$.16.63
Petroleum Technician	.B	\$.17.79
Farming or Fishing Manager or Supervisor	.W	\$.18.08
Geological Data Technician	.A	\$.19.16
Farmer/Rancher	.O	\$.21.03
Environmental Compliance Inspector	.O	\$.21.48
Zoologist and Wildlife Biologist	.B	\$.25.37
Forester	.B	\$.26.15
Environmental Scientist and Specialist	.M	\$.26.26
Geoscientist	.B	\$.26.83
Biological Scientist	.M	\$.27.14
Food Scientist and Technologist	.B	\$.27.19
Soil and Plant Scientist	.B	\$.27.61
Conservation Scientist	.M	\$.29.04
Range Manager	.B	\$.29.32
Hydrologist	.M	\$.36.94

***Educational Requirement:**

M = More than a Bachelor's Degree
 B = At least a four-year Bachelor's Degree
 A = At least a two-year Associate's Degree

V = Postsecondary vocational education

O = On-the-job training

W = Work experience in a related occupation

🔥 = Georgia Hot Job (see page 3)

**Average hourly wages ranked from lowest to highest. Some annual salaries have been converted to hourly wages based on a 2,080-hour work year.

Source: Georgia Department of Labor, Georgia Career Explorer (explorer.dol.state.ga.us/).

“The young adults in Ag Ed are fully prepared to enter the workforce. They have the social skills to present themselves professionally to customers, plus they have a tremendous work ethic. What they learn through this program gives them a leg up when they are starting their careers.”

— Skip Chandler
Meat and Seafood Retail Coordinator
Publix Supermarkets, Atlanta

Agricultural Experience Program (SAEP), and FFA, the agriculture CTSO (see back cover).

In the classroom and laboratory, you will cover a broad spectrum of agricultural and agribusiness topics and develop practical skills by working on relevant hands-on projects. This experience prepares you for the SAEP, through which you will have the opportunity to practice what you’ve learned in a real-world situation and develop valuable job skills. SAEP options can range from traditional home projects to a cooperative work experience in production or agribusiness.

Everything you learn through the classroom, laboratory, and SAEP is reinforced through FFA, which promotes leadership, personal growth, and career success through agricultural education. FFA is an integral, cocurricular component of the agricultural education program and provides you with public speaking and leadership opportunities at the local, regional, state, and national levels.

Ag Ed graduates possess both the technical skills necessary for immediate employment in agriculture and the relevant coursework needed to pursue a postsecondary degree at a two- or four-year college or university.

The leadership and job skills developed through Ag Ed will prepare you for a successful future in any profession, including more than 200 agriculture careers that employ over 20 percent of our nation’s workforce. And since Georgia’s economic future depends on agriculture to provide an affordable, safe, and abundant food supply as well as natural resources for recreation, economic development, and quality of life, the educational and career opportunities for Ag Ed students will only continue to expand in the months and years ahead.

If you want to take a leadership role in growing Georgia’s future, this Program Concentration can show you how.



**TAKING IT
TO THE
NEXT LEVEL**

Four years after she graduated from Jackson County High School,

Abby Tippens returned to the classroom as an Agricultural Education teacher at Oconee County High School in Watkinsville. Although she entered high school knowing that she would like to pursue a career in education, it was her Georgia CTAE experience that helped Tippens to focus on Agricultural Education.

“I originally thought of becoming a science teacher,” explains Tippens, who earned a B.S. in Agricultural Education at the University of Georgia. “But once I became involved with Ag Ed and started going to FFA events, I realized that this was where I wanted to teach because I could work with students both inside and outside of the classroom.”

Tippens says she “fell in love” with Ag Ed when taking the classes offered at her high school. She expanded her knowledge, contacts, and confidence by exploring all of the opportunities available through FFA, the Ag Ed career and technical student organization (see back cover). As an FFA member, Tippens participated in leadership events at the local, state, and national levels. And for two summers during high school, she also worked for the FFA Leadership Conference in Washington, D.C.

Adds Tippens, “There’s really a place for everyone in FFA. I have seen all types of people fit in and find a place. I’m a firm believer that everyone benefits from FFA in some way, regardless of whether he or she ends up going into a field related to agriculture. The FFA leadership skills will help him or her in any career.”

Today, as a teacher and FFA advisor, Tippens enjoys being able to share her love for Ag Ed and FFA with her high school students.

“I chose to become a teacher because I enjoy making a difference and being able to affect lives,” Tippens says. “Through FFA I am better able to influence students in a positive way because I spend more time with them. It feels great to be able to give back the wonderful experiences that were given to me through Ag Ed.”

Architecture, Construction & Transportation



Build a Future

- **Do you want to grow your own company from the ground up?**
- **Would you like to help shape Georgia's future by building bridges, buildings, roads, and new neighborhoods?**
- **Is your goal to turn your love for cars or planes into a high-flying career?**

CTAE's Architecture, Construction & Transportation program offers you all these opportunities and more. Through hands-on projects, on-the-job training, and a challenging classroom curriculum that includes relevant math, communications, and computer courses,

you will develop the skills and gain the experience you will need to land a high-paying job and build long-term success.

The program's classroom and laboratory experiences enable you to gain technical and academic skills in laboratories that simulate the business or industrial work environment for your area of interest, such as plumbing, carpentry, masonry, flight operations, or automotive technology. The leading-edge curriculum meets industry-recognized standards and aligns with the requirements of industry certification.

You can also choose to incorporate work-based learning experiences into

FILE

Architecture, Construction & Transportation File

PATHWAYS:

- Construction (carpentry, electrical, plumbing, and masonry)
- Engineering, Drawing & Design
- Flight Operations and Aircraft Support (mechanics, piloting, air traffic control)
- HVACR (heating, ventilation, air conditioning, and refrigeration)
- Metals (sheet metal and welding)
- Transportation Operations and Support (automotive service technologies and diesel programs)

CTSO:

Georgia SkillsUSA,
www.skillsusa.org

25 Architecture, Construction & Transportation Careers

Occupation	Educational Requirement*	Average Wage**
Furniture Finisher	.V	\$.98
Floor Sander	.0	\$12.55
Painter, Construction, and Maintenance	.0	\$13.20
Surveying Technician	.0	\$13.42
Glazier	.0	\$13.77
Patternmaker, Wood	.0	\$14.01
Solderer	.V	\$14.45
Taper	.0	\$15.77
Appraiser, Real Estate	.V	\$16.83
🔥 Telecommunications Line Installer and Repairer	.0	\$17.11
🔥 Automotive Body and Related Repairer	.0	\$17.46
🔥 Electrician	.0	\$17.68
🔥 Heating, Air Conditioning, and Refrigeration Mechanic	.0	\$19.14
Architectural Drafter	.V	\$19.16
Surveyor	.B	\$19.28
🔥 Vocational Education Teacher, Postsecondary	.W	\$19.94
🔥 Plumber, Pipefitter, and Steamfitter	.0	\$21.03
🔥 Supervisor of Construction Trades and Extraction Worker	.W	\$22.70
🔥 Cost Estimator	.W	\$27.24
🔥 Architect, Except Naval and Landscape	.B	\$31.34
🔥 Construction Manager	.B	\$32.25
Transportation, Storage, and Distribution Manager	.W	\$33.17
Landscape Architect	.B	\$43.82
Marine Architect	.B	.Not available
Architecture Teacher, Postsecondary	.M	.Not available

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**Average hourly wages ranked from lowest to highest. Some annual salaries have been converted to hourly wages based on a 2,080-hour work year.

Source: Georgia Department of Labor, Georgia Career Explorer (explorer.dol.state.ga.us/).

“The opportunities in construction in Georgia far outstrip the qualified manpower available. People who can handle a variety of different tasks and are knowledgeable about different types of construction issues can always find a place in the construction business.”

— Jeffrey Diamond
President, Goodman Decorating
Atlanta

your schedule to gain more real-world skill development in the workplace. Options include cooperative education, Youth Apprenticeships, internships, and part-time or summer jobs. These work experiences will help you build competency, confidence, and important job contacts.

In addition, Architecture, Construction & Transportation students are encouraged to participate in Georgia SkillsUSA, the program’s CTSO. The organization provides cocurricular activity opportunities for you that help develop academic and technical skills, and encourages you



to become a better citizen. Students participate in competitions requiring high-order analytical skills, such as problem solving, synthesis, and critical and reflective thinking. And through Georgia SkillsUSA service projects, you can put your education into action by helping to build playgrounds, parks, and other structures that benefit your community.

Immediately after graduation, program graduates can enter the workforce as skilled craftspeople and technicians, and work their way up to project or shop manager, or even chief executive officer (CEO). Some go on to launch their own plumbing, heating and cooling, construction, architectural, or other specialty firm. You can also continue your education at a two- or four-year college or in an apprenticeship program to become an architect, project manager, pilot, or air traffic controller, for example.

As Georgia grows, so does the demand for highly skilled Architecture, Construction & Transportation professionals. If you enjoy working with the latest tools and technologies and want to enter a high-growth field with unlimited opportunities, then this may be the Concentration for you.



**TAKING IT
TO THE
NEXT LEVEL**

The next time you see a new hospital being built in Georgia, think of Scott Garrett.

As a project manager for Art Plumbing in Smyrna, Garrett is responsible for putting together all the pieces needed to complete the plumbing portion of new building construction. The projects Garrett, a 2000 graduate of Camden County High School in Kingsland, works on range from \$2 million to \$10 million, he says, and most are medical facilities.

“I manage all of the aspects of doing a plumbing job as far as scheduling, helping get manpower and material to the job, project coordination, and some budgeting and estimating work,” says Garrett, who joined Art Plumbing immediately after graduating from Georgia Tech with a B.S. in Building Construction in May 2004. “The best part of my job is getting to see something I planned take form within the budget we’ve set. With any kind of construction, you get to see the reward of your efforts because you’re helping build something that, in turn, is helping somebody.”

Garrett began preparing for his current career in high school, where he combined a rigorous college prep program with three years of construction technology classes. Having the opportunity to explore different types of construction and use hand and power tools helped Garrett realize that he enjoyed the field and had an aptitude for it.

He explains, “High school definitely helped me decide where to go to college and what to major in. In college, I was able to see the broader view of construction, especially the management side. But without that experience, I don’t know if I would have ended up where I am today. Those high school construction technology classes are what really drew me into this field.”

Garrett also appreciates the hands-on construction opportunities he received in high school through the career and technology student organization VICA (now Georgia SkillsUSA). In addition to participating in statewide VICA competitions, Garrett and his fellow VICA students helped build a local war memorial and an elementary school playground.

“I really enjoy being able to give back to the community,” he adds. “When you work in any kind of construction, that’s what you do every day.”

Business & Computer Science

Get Started in Business and Computer Science



- **Do you dream of owning your own business or of becoming a CEO?**
- **Would you like to work with computers, design Web pages, or explore new technologies?**
- **Do you enjoy earning, saving, managing, investing, and spending money?**

If so, the Business & Computer Science Concentration could help you reach your career and life goals. Students in this Concentration learn about finance, legal operations of business, administrative

support, information management, international business, entrepreneurship, and management.

Business-focused students have the opportunity to start and run a school-based enterprise, such as a school store, as part of their coursework. You will learn firsthand how to create and implement a successful business plan and manage people, products, and budgets. On the computer side of the Concentration, you can work with the latest tools and technologies in an innovative curriculum developed in

25 Business & Computer Science Careers

Occupation	Educational Requirement*	Average Wage**
Teller	W/O	\$10.66
Switchboard Operator, including Answering Service	.0	\$10.86
Team Assembler	.0	\$11.77
Tax Preparer	.0	\$11.93
Office Machine Servicer	.V	\$16.71
Insurance Sales Agent	.B	\$17.13
Legal Secretary	.A	\$18.01
Appraiser and Assessor of Real Estate	.A	\$18.15
Computer Support Specialist	.A	\$19.95
Paralegal and Legal Assistant	.A	\$20.08
Accountant and Auditor	.B	\$24.64
Claims Adjuster, Examiner, and Investigator	.0	\$25.97
Cost Estimator	.W	\$27.24
Network and Computer Systems Administrator	.B	\$28.24
Database Administrator	.B	\$33.21
Personal Financial Advisor	.B	\$33.37
Financial Analyst	.B	\$34.20
Computer Systems Analyst	.B	\$35.00
Management Analyst	.M	\$35.08
Business Teacher, Postsecondary	.M	\$35.82
Computer Software Engineer, Systems Software	.B	\$36.73
General and Operations Manager	.M	\$40.32
Financial Manager	.M	\$42.20
Sales Manager	.B	\$44.15
Chief Executive	.M	\$70.00

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Source: Georgia Department of Labor, Georgia Career Explorer (explorer.dol.state.ga.us/).

Business & Computer Science File

Pathways:

- Administrative/Information Support
- Computing
- Financial Management
- Interactive Media
- Small-Business Development

CTSO:

Future Business Leaders of America (FBLA),
www.georgiafbla.org



“The CTAE Business & Computer Science program is valuable to students because it prepares them to enter the workforce. It gives them communication skills, technological skills, general business knowledge, accounting skills, and an understanding of the value of teamwork—all a requirement in today’s workplace.”

— Lisa Evans
Human Resources Administrator
Southeast Region
Frito-Lay, Atlanta

partnership with Georgia Tech. Hands-on learning projects include building Web pages, managing databases, and writing programming code. You will also explore the ethical and privacy issues related to computers and the Internet.

The Business & Computer Science program consists of three components: classroom/laboratory experiences, which provide instruction that meets industry-validated standards; work-based learning directly related to classroom instruction in the form of internships, cooperative education, school-based enterprises, and Youth Apprenticeships; and the CTSO Future Business Leaders of America (FBLA), which provides cocurricular activities within the program area to build teamwork and leadership skills.

Through FBLA experiences, you will get the opportunity to branch out beyond your own community and learn about the broad career options available across the state. Local, state, and national FBLA competitions will help you develop interview and leadership skills and career contacts. In addition, job shadowing, mentoring, and guest lecture events will give you a first-hand view of what it is like to work in a business- or computer-related career.

Business & Computer Science graduates often continue their educations at two- or four-year colleges to study business administration, management, finance, accounting, or computer science. You can also choose to continue past the undergraduate level to earn master’s and doctoral degrees in your chosen field.

Every current and future Georgia company needs employees, managers, and executives with leading-edge business and computer knowledge, skills, and experience. If you want to be part of the fast-paced, high-rewards world of business and computers, then explore the opportunities available through CTAE.



**TAKING IT
TO THE
NEXT LEVEL**

Shortly after graduating from Bleckley High School in 2006, Wes Lister traveled to Nashville,

Tennessee, to compete in the Future Business Leaders of America (FBLA) competition at its National Leadership Conference. Judges ranked the national competitors based on an objective knowledge test, interview, cover letter and resume, leadership ability, and adherence to dress code. Out of all the FBLA members from across the nation competing in the event, Lister, who is a pre-business major at the University of Georgia, earned second place.

He credits his high school teachers and FBLA advisors for equipping him with the business and leadership skills necessary to compete and succeed on a national stage.

“Business education was the foundation for my success after high school,” Lister explains. “The business education program at Bleckley High and my participation in FBLA taught me about careers in the business world, as well as fundamental leadership skills. I was very successful throughout high school, and I credit what I learned in my business classes as the spark for my achievement.”

Lister says he entered high school unsure of what career direction he wanted to follow after graduation. A freshman computer applications course introduced him to his first FBLA advisor, and his experiences with the organization convinced Lister to pursue a postsecondary degree in business and a future career in finance and banking.

Adds Lister, “I’m from Cochran, a pretty small town, so there really aren’t that many business opportunities there. FBLA took me out of the classroom and showed me what was out there in the world, and what I could do in college and later on in my career. I’m so thankful for that experience and for my business education in high school.”

Engineering & Technology

Let Technology Take You to the Top



- **Are you curious about the way things work?**
- **Would you enjoy using leading-edge tools and techniques to research, design, and build innovative structures, robots, vehicles, and other models and machines?**
- **Would you like to connect the math you learn in the classroom with real-world applications that improve lives and solve problems?**
- **Would you like to leave high school ready to work?**

CTAE's Engineering & Technology Concentration combines hands-on projects with a rigorous curriculum to prepare students for the most challenging postsecondary engineering and technology programs. You will build solid writing, comprehension, calculation, problem-solving, and technical skills. You will be encouraged to take relevant math and science courses, such as advanced algebra, chemistry, calculus, geometry, trigonometry, physics, design, and engineering concepts.

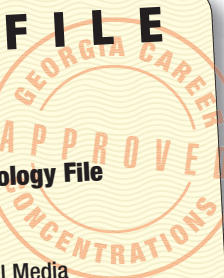
25 Engineering & Technology Careers

Occupation	Educational Requirement*	Average Wage**
Environmental Engineering Technician	A	\$13.98
Civil Engineering Technician	A	\$14.55
Sound Engineering Technician	V	\$15.43
Chemical Technician	A	\$15.78
Mechanical Drafters	V	\$18.83
Mechanical Engineering Technician	A	\$20.36
Industrial Engineering Technician	A	\$20.71
Electrical Engineering Technician	A	\$23.60
Electronics Engineering Technician	A	\$23.60
Engineering Technician, Except Drafter	A	\$23.86
Urban and Regional Planner	M	\$24.58
Technical Writer	B	\$26.42
Aerospace Engineering and Operations Technician	A	\$27.21
Civil Engineer	B	\$28.84
Engineering Teacher	M	\$29.76
Statistician	M	\$30.70
Mechanical Engineer	B	\$31.04
Environmental Engineer	B	\$31.37
Biomedical Engineer	B	\$31.49
Industrial Engineer	B	\$31.52
Chemical Engineer	B	\$35.74
Aerospace Engineer	B	\$36.96
Engineering Manager	B	\$41.29
Nuclear Engineer	B	\$46.31

*Educational Requirement:
 M = More than a Bachelor's Degree
 B = At least a four-year Bachelor's Degree
 A = At least a two-year Associate's Degree

V = Postsecondary vocational education
 O = On-the-job training
 W = Work experience in a related occupation
 🔥 = Georgia Hot Job (see page 3)

**Average hourly wages ranked from lowest to highest. Some annual salaries have been converted to hourly wages based on a 2,080-hour work year.
 Source: Georgia Department of Labor, Georgia Career Explorer (explorer.dol.state.ga.us/).



Engineering & Technology File

PATHWAYS:

- Broadcasting & Digital Media
- Computer Network Systems
- Energy Systems (distribution and control of energy)
- Engineering
- Graphic Communications
- Manufacturing
- Visual Communications

CTSO:

Georgia Technology Student Association
 (GA TSA), www.gatsa.org

“The kinds of projects that Engineering & Technology students do take them through the problem-solving process multiple times. They get to work with their hands and collaborate on fun, interactive projects, all the while gaining insight into what it takes to become an engineer, scientist, or whatever other profession they choose.”

— Shaun McGraw
Quality Control/Engineering/
Information Technology
Phoenix Stamping, Atlanta

Using the latest interactive educational tools, you'll learn about past, present, and future technological systems and their resources, processes, and impact on society. Students also gain valuable teamwork skills by working together on a variety of projects, such as designing and building a hovercraft or robot.

In addition to classroom and laboratory experiences, Engineering & Technology students participate in the Technology Student Association (TSA). Activities in TSA promote leadership skills, high standards of craft quality, scholarship, and safety. Through TSA, you'll have the opportunity to explore your community's industrial and technological resources, practice parliamentary procedures and democratic decision-making, and earn recognition for exemplary performance.

Engineering & Technology graduates typically pursue postsecondary education at two- or four-year colleges to prepare for engineering, engineering technology, and engineering technician-oriented positions. Possible college majors include architectural, biomedical, chemical, civil, computer, computer science, electrical, environmental, industrial, manufacturing, materials, mechanical, and nuclear engineering and engineering technology. Career opportunities in these fields generally involve planning, managing, and providing scientific research and professional and technical services.

The demand for skilled engineers in the United States far outpaces the current supply, so the future looks bright for students who want to follow an engineering-related career. Even if you ultimately decide that engineering isn't the ideal fit for you, meeting the challenge of the Engineering & Technology Concentration will prepare you for any postsecondary education program or employment opportunity.



**TAKING IT
TO THE
NEXT LEVEL**

Matt Helmken's CTAE engineering experience led him to a prestigious internship with

Gulfstream Aerospace Corporation in Savannah following graduation from Johnson High School in Savannah in 2005. After his first year at Embry-Riddle Aeronautical University in Daytona Beach, Florida, Helmken returned to Gulfstream as a summer employee.

“As an intern, I did a lot of basic drawing that helped me understand the difference between what mechanical, electrical, and avionics people do. My first official drawing was a design change to the aircraft's safety exit instructions,” Helmken explains. “By the next summer, I was doing wiring schematics on \$45 million airplanes. That's pretty cool. I was getting paid to learn about engineering, work with engineers, and absorb the engineering mindset at a world-class company.”

While Helmken entered high school with an interest in engineering, he says it was his school's Introduction to Engineering course that helped him gain a better understanding of what engineers actually do. This discovery convinced Helmken that engineering was definitely the career path he wanted to follow.

He says, “The introductory course focused on problem-solving and applications—things you really don't do in other classes. I really liked my technology classes, because it's there that you get to see what math is used for. For example, in calculus we were working with derivatives, which I thought had no use. Then when our school's First Robotics group started working on the drive-gear system for our robot, we did velocity calculations and I realized, ‘Wow, that's calculus.’ Math finally made sense to me because I could use it to solve a real problem.”

Although Helmken's goals include landing an engineering job in the aerospace industry, he believes that the problem-solving skills he developed in his technology classes and First Robotics group activities will benefit him in any occupation.

“Even if you don't intend to go into engineering, the exposure to a technology program will help you,” adds Helmken. “All of the technical courses teach you to think. That is a skill that will apply to any career you choose.”

Family & Consumer Sciences

Learn How to Help Others Lead Richer Lives



- **Would you like to develop the confidence, knowledge, and skills needed to become a leader in your family, community, and career?**
- **Do you want to learn how to manage the challenges of living and working in our diverse, global society?**
- **Are you the kind of person who enjoys helping people and working with others to improve your community?**

If you like interacting with people and want to build a future that enables you to assist others, then Family & Consumer Sciences (FACS) could be the perfect fit for you. FACS offers a unique focus on families, work, and their interrelationships, providing a solid foundation of success for any student.

Through relevant coursework, community projects, student organizations, and internship/mentoring opportunities, students develop the essential leadership, life, and communications skills they need to become responsible citizens and leaders

25 Family & Consumer Sciences Careers

Occupation	Educational Requirement*	Average Wage**
Amusement and Recreation Attendant	.0	\$.6.75
Childcare Worker	.0	\$.7.48
Concierge	.0	\$.10.16
Tour Guide/Escort	.0	\$.11.07
Fabric and Apparel Patternmaker	.A	\$.12.35
Food Science Technician	.A	\$.13.53
Child, Family, and School Social Worker	.B	\$.17.39
Medical and Public Health Social Worker	.B	\$.18.45
Dietitian/Nutritionist	.B	\$.19.65
Food Service Manager	.O	\$.20.02
Kindergarten Teacher, Except Special Ed.	.B	\$.20.73
Middle School Teacher, Except Special Ed. and Voc. Ed.	.B	\$.21.60
Lodging Manager	.A	\$.21.72
Special Education Teacher, Pre-School through Elementary	.B	\$.21.83
Funeral Director	.A	\$.21.92
Secondary School Teacher, Except Special Ed. and Voc. Ed.	.B	\$.22.18
Interior Designer	.B	\$.22.19
Elementary School Teacher, Except Special Ed.	.B	\$.22.35
Instructional Coordinator	.M	\$.22.49
Special Education Teacher, Secondary School	.B	\$.22.83
Director, Religious Activities and Education	.B	\$.23.31
Social and Community Service Manager	.B	\$.25.12
Clinical, Counseling, and School Psychologist	.M	\$.27.33
Business Teacher, Postsecondary	.M	\$.35.82
Education Administrator, Postsecondary	.M	\$.40.18

*Educational Requirement:

M = More than a Bachelor's Degree
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V = Postsecondary vocational education

O = On-the-job training

W = Work experience in a related occupation

🔥 = Georgia Hot Job (see page 3)

**Average hourly wages ranked from lowest to highest. Some annual salaries have been converted to hourly wages based on a 2,080-hour work year.

Source: Georgia Department of Labor, Georgia Career Explorer (explorer.dol.state.ga.us/).

Family & Consumer Sciences File

PATHWAYS:

- Culinary Arts
- Consumer Services
- Early Childhood Education
- Family and Community Services
- Interior and Fashion Design
- Nutrition and Food Science
- Teaching as a Profession

CTSO:

Family, Career and Community Leaders of America (FCCLA), www.gafcccla.com

“Not only did my education in Family & Consumer Sciences prepare me for my success in owning my own business, but it has also prepared me to balance my career and family. I am so grateful to be able to care for children from such a young age, and watch them grow into such wonderful people.”

— *Betsy Leigh Williams Cail, owner/director
Country Loving Day Care
Screven County*

in family, community, and work settings. As a FACS student, you'll learn to manage resources to meet the essential needs of individuals and families; to promote optimal nutrition and wellness across the life span; and to accept responsibility for your actions and success in family and work life.

The career and educational opportunities available in FACS are varied and virtually unlimited, as are the postsecondary educational opportunities. For example, you can go on to become an educator, restaurant owner, interior or fashion designer, social

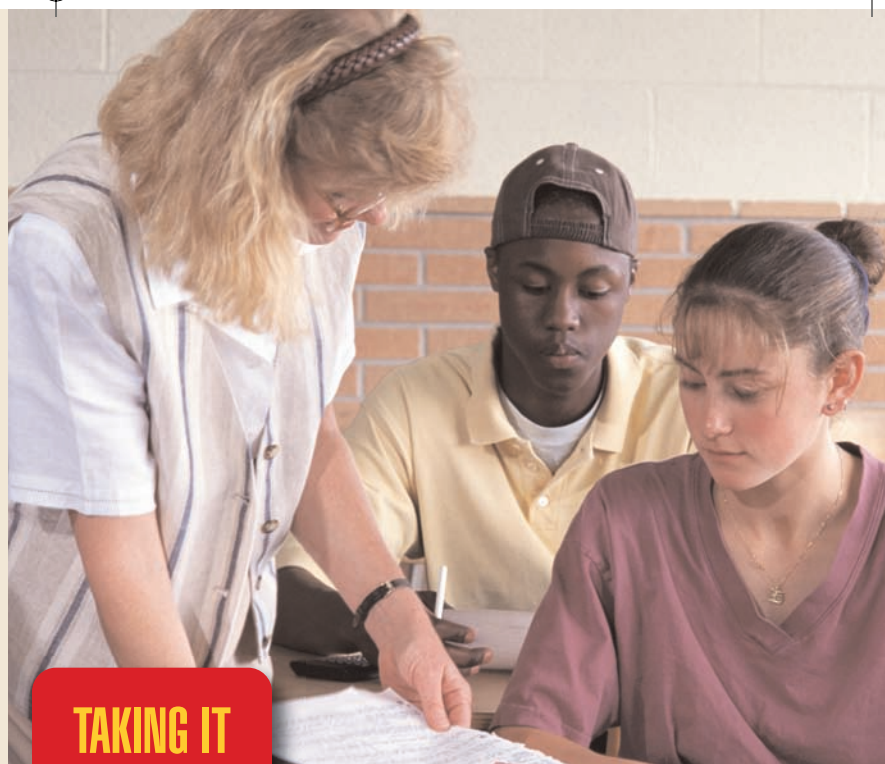


worker, family therapist, retail buyer, dietitian, financial planner, or a host of other occupations related to helping people live better, healthier, and more productive lives.

FACS graduates can either enter the workforce after high school or continue their educations at technical or two- or four-year colleges. Many courses in the Concentration are available with dual enrollment at a local postsecondary institution.

The essential knowledge and skills developed through FACS prepare you for a successful future in any field, as well as in family and community life. And, for students who choose a FACS career, the job opportunities will continue to grow as Georgia's population becomes more diverse and the need for quality housing, education, and social services increases.

If you want to make a difference in your community and in the lives of others, this Program Concentration can lead you there.



**TAKING IT
TO THE
NEXT LEVEL**

As a high school freshman at Houston County High School in Warner Robins, Shannon Miles

got involved with Family, Career, and Community Leaders of America (FCCLA), the Family & Consumer Sciences (FACS) CTSO. That experience, says Miles, who graduated from high school in 1999, changed her life, and eventually led to her current career as educational program director of the Georgia FFA-FCCLA Center in Covington.

“When I first started high school, I was very timid and shy. My Family & Consumer Sciences advisor, Nelda Clay, had me doing speeches and it really got me out of my shell. I gained confidence and found my niche through the program and through FCCLA,” she says.

Miles was planning a career as a dental hygienist when she started high school, but changed her mind when she began taking FACS classes and participating in FCCLA competitions and community service projects. During high school she served as FCCLA chapter president and state officer, and was awarded a FACS scholarship from the University of Georgia, where she earned a B.S. in FACS Education in 2004 and a master's in Workforce Education in 2006.

She adds, “High school definitely opened my eyes to different fields out there. The FACS program offers something for everyone. There are so many professional options from which to choose. It's a great concentration for students who want to help others and really get involved in their communities.”

Miles' positive experience with FCCLA inspired her to work with the organization to help other students build confidence and career and life skills. Today she develops educational programs for the Georgia FFA-FCCLA Center, and works with student organizations from around the state.

Says Miles, “Someday I'll probably head to the classroom to teach, but for now this is the perfect job for me. I fell in love with this camp when I was in high school and college, and now I get to work here.”

Government & Public Safety

Help Keep Georgia Safe and Secure



- **Would you like to become a firefighter, police officer, lawyer, or judge?**
- **Are you interested in issues related to homeland security?**
- **Would you like to work overseas or join the military?**

CTAE's Government & Public Safety Concentration provides students with the basic technical skills and solid academic foundation required to pursue a career in a broad range of fast-growing fields. As a direct result of 9/11, the United

States Department of Homeland Security as well as state and local homeland security organizations have projected shortages of skilled and credentialed workers in Government & Public Safety.

Developing a homegrown corps of talented homeland security professionals will enable the state to meet this demand and help protect Georgia's way of life.

Through classroom, laboratory, and firsthand job experience, you will learn about a variety of agencies and professions in law enforcement, private security, corrections, fire, and emergency

25 Government & Public Safety Careers

Occupation	Educational Requirement*	Average Wage**
Legislator	.B	\$.732
Bailiff	.W/O	\$.818
Security Guard	.O	\$.958
Emergency Medical Technician and Paramedic	.V	\$13.03
Law Clerk	.B	\$13.67
Private Detective/Investigator	.W	\$13.83
Probation Officer	.B	\$16.01
Sketch Artist	.W/O	\$16.60
Forensic Science Technician	.A	\$17.12
Paralegal	.A	\$18.64
Tax Examiner	.B	\$18.66
Transit and Railroad Police	.O	\$19.56
Police Identification and Records Officer	.W	\$21.08
Criminal Investigator	.W/O	\$21.08
Licensing Examiner and Inspector	.O	\$21.48
Supervisor of Fire Fighting/Prevention Workers	.M	\$22.71
Supervisor of Police and Detectives	.M	\$24.61
Postmaster/Mail Superintendent	.W	\$26.39
Political Science Teacher, Postsecondary	.M	\$30.15
Judge	.B	\$30.82
Mediator	.B	\$38.03
Adjudicator	.B	\$39.38
Government Service Executive	.B	\$42.75
Lawyer	.M	\$48.08
Law Teacher, Postsecondary	.M	\$56.48

*Educational Requirement:

M = More than a Bachelor's Degree
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V = Postsecondary vocational education

O = On-the-job training

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**Average hourly wages ranked from lowest to highest. Some annual salaries have been converted to hourly wages based on a 2,080-hour work year.

Source: Georgia Department of Labor, Georgia Career Explorer (explorer.dol.state.ga.us/).

Government & Public Safety File

PATHWAYS:

- JROTC (see page 20)
- Public Safety

CTSOS:

Coordinated Vocational Academic Education VOCA Student Organization, www.gavoca.org; Georgia SkillsUSA, www.skillsusageorgia.org

“I support CTAE because I believe that the greatest gifts we can give to our children are information about how the real world works and the skills and preparation they will require to enter the working world. This is what CTAE is all about—enabling our kids to compete in a global economy and seize the opportunities that the world presents.”

— *Martin Williams*
Public Information Officer
Cartersville Police Department
Cartersville

management services. Initial courses focus on basic concepts of law related to citizens’ rights and officers’ responsibilities to maintain a safe society, as well as officers’ patrol methods and functions.

Coursework advances through the classification and elements of crimes, the major criminal and traffic laws of Georgia, and crime prevention and detection strategies. Junior- and senior-level courses in the program include investigative theory and criminological theory. Students interested in the popular field of forensic science can learn basic technical skills, such as crime scene preservation, and methods of identifying, collecting, preserving, and processing evidence.

Students are prepared for immediate employment after graduation or to enter postsecondary education programs or the military. Examples of career opportunities related to this Concentration are security guard, corrections officer, firefighter, paralegal, police officer, bailiff, lawyer, judge, and military officer or soldier. Jobs in this field are typically found in local, state, and federal government agencies, yet there is an increasing demand for private security personnel in business, industry, and educational and healthcare facilities. And, in Georgia, there is a pressing need for qualified security personnel to protect the state’s international airport and seaport from domestic and foreign terrorist attacks.

Students who are detail-oriented, enjoy protecting the safety of others, and want to develop the leadership and technical skills required to build a successful and rewarding career in any field may find what they are searching for in Government & Public Safety. For the foreseeable future, homeland security and anti-terrorism initiatives will continue to be top priorities in Georgia, across the United States, and around the world. Students who prepare for careers in these focus areas will provide valuable service to their communities and enjoy tremendous job opportunities.



TAKING IT TO THE NEXT LEVEL

Even as a child, David Snively knew that he wanted to pursue a career in law enforcement.

But it wasn’t until he entered McEachern High School in Cobb County (class of 2006) that Snively got firsthand experience in what it was really like to be a police officer. That up-close look at criminal justice, delivered through Snively’s CTAE Government & Public Safety program, turned his childhood dream into an attainable career goal.

“My Public Safety teacher is also a part-time police officer, so she applied what we learned in the classroom to the real world of police work. That was very exciting,” says Snively, who is studying Criminology at the University of West Georgia in Carrollton. “Through school, I also became a Police Explorer, which is similar to interning at a police department. Now I’m captain of the Smyrna Police Department Explorer post and president of the Law Enforcement Explorer Association of Georgia.”

Snively gained additional skills and experience by participating in local and state contests sponsored by the Government & Public Safety CTSO, Georgia SkillsUSA. After graduating from high school with a dual seal—college preparatory and career technology—Snively put his CTAE skills to the test that summer at the SkillsUSA National Leadership and Skills Conference in Kansas City. Representing his school and the state of Georgia in the national Criminal Justice Competition, Snively finished first and was awarded a gold medal.

“They rated us on performance in seven different practical exercises,” explains Snively. “We had to take a criminal law test, interact with a suspicious person, demonstrate proper arrest techniques, lift fingerprints, interview for a job, interview an assault victim and write a report based on that interview, and demonstrate proper radio procedures.”

While Snively has just begun his college career, he’s already had work experience in his chosen field, and has received national recognition for his skills. He credits Georgia CTAE for giving him a valuable jumpstart toward a successful future.

Adds Snively, “Formal education is going to end at some point. CTAE classes give you a head start by letting you know what to expect from the work experience. I’d absolutely recommend CTAE to every student. There is something for everyone—dozens of career paths you can explore.”

Choose a Career in Caring



- Do you dream of becoming a doctor, nurse, physical therapist, or other healthcare professional?
- Would you like to explore careers that use state-of-the-art tools and techniques to help people?
- Would you like to be part of a high-growth, high-paying industry in which job opportunities are available in a wide variety of settings, including hospitals, medical office buildings, colleges, universities, and schools?

Whether you plan to continue your education through medical school or want to graduate from high school

into a career, Healthcare Science provides the challenging academic courses, relevant on-the-job experience, and specialized technical skills you need.

In the classroom and laboratory, students build solid math, science, reading, writing, and communication skills. Special emphasis is placed on developing the problem-solving and decision-making skills required in the fast-paced healthcare industry. And, through the Introduction to Healthcare Science course, students learn basic concepts of health, wellness, and preventative care; medical terminology; microbiology; life-support skills; and the ethical and legal responsibilities of today's healthcare provider.

25 Healthcare Science Careers

Occupation	Educational Requirement*	Average Wage**
Home Health Aide	W/O	\$8.45
Pharmacy Technician	.O	\$11.41
Skincare Specialist	.V	\$12.81
Medical Records and Health Information Technician	.A	\$12.89
Emergency Medical Technician and Paramedic	.V	\$13.03
Billing Clerk	W/O	\$13.50
Surgical Technologist	W/O	\$15.15
Massage Therapist	.V	\$16.68
Medical and Public Health Social Worker	.B	\$18.15
Respiratory Therapist	.A/V	\$19.40
Radiologic Technologist and Technician	.A/V	\$19.60
Medical and Clinical Laboratory Technologist	.B	\$21.06
Dental Hygienist	.A/V	\$22.71
Occupational Therapist	.B	\$23.16
Registered Nurse	.A/V	\$23.50
Speech and Language Pathologist	.M	\$25.37
Radiation Therapist	.A	\$25.61
Clinical, Counseling, and School Psychologist	.M	\$27.33
Physical Therapist	.M	\$29.11
Medical and Health Services Manager	.M	\$34.39
Physician Assistant	.A/V	\$36.90
Pharmacist	.M	\$37.38
Dentist	.M	\$69.13
Family and General Practitioner	.M	\$70.00 and up
Surgeon	.M	\$70.00 and up

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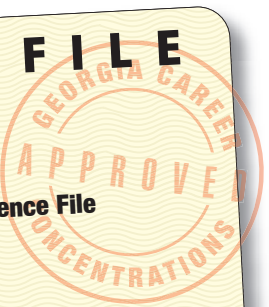
Healthcare Science File

PATHWAYS:

- Bio-Medical
- Cosmetology
- Diagnostic Services
- Health Informatics
- Public Health
- Support Services
- Therapeutic Services

CTSO:

Georgia Health Occupations Students of America (HOSA),
www.georgiahosa.org



“Healthcare is one of the most exciting, rewarding, and complex career fields because it involves all aspects of human life. Many people don’t realize that there are hundreds of different job opportunities within healthcare, not just being a doctor or nurse. It’s a great choice for anyone who loves to serve.”

— *Eric P. Norwood*
President and CEO
DeKalb Medical Center, Decatur

If you choose the Healthcare Science Concentration, you will have plenty of opportunities to put your classroom knowledge and skills into practice through clinical experiences that range from Healthcare Science internships to paid positions through CTAE’s Youth Apprenticeship Program (YAP). By working in a variety



of healthcare settings, including hospitals, daycare centers, nursing homes, elementary school clinics, physician offices, and rehabilitation centers, you will get the chance to explore the wide range of careers available. Community healthcare professionals serve as mentors for many students during the students’ high school careers and beyond.

Additional activities are offered through the Healthcare Science CTSO, Health Occupations Students of America (HOSA). HOSA promotes leadership and provides competitive event opportunities at the local, state, and national levels. HOSA has more than 40 competitive events that include everything from Medical Photography to Sports Medicine.

Graduates can transition into high-demand entry-level healthcare careers and/or continue their education at the postsecondary institution of their choice. Many hospitals and medical centers provide tuition-reimbursement options and professional development opportunities to employees.

According to the Bureau of Labor Statistics, seven of the 10 fastest-growing jobs in the United States (2004–2014) are in healthcare. In Georgia, careers in the healthcare industry account for almost 75 percent of the projected new job growth among professions that require associate’s degrees; almost half of the jobs will be for registered nurses.



**TAKING IT
 TO THE
 NEXT LEVEL**

As Winder-Barrow High School student body president, Ryan Barrett used to show new

students and their parents around the school, located in Winder. When the tour reached the school’s career- and technical-education wing, recalls Barrett, who graduated in 2005, some parents would say that they “didn’t want to see this part of the school” because their student was going to college.

“I told them that I was going to college, too, and that I wanted to go on to medical school one day to become a surgeon,” Barrett says. “I explained to them that high school is when you can find out what it is really like to work in healthcare—for example, whether or not you can deal with patients or blood. Find out now so that you don’t waste your time and money pursuing the wrong major or degree in college.”

To help determine if a career in healthcare was right for him, Barrett started volunteering at Barrow Regional Medical Center in 9th grade. Learning basic medical procedures and terminology in his Healthcare Science classes as a sophomore and serving as president of his school’s HOSA (Health Occupation Students of America) chapter helped him earn a part-time, paid job in the hospital’s emergency room and intensive care unit (ICU).

Now that he’s in college at the University of Georgia, Barrett continues to work at the hospital as an ICU Critical Care Tech and Cardiac Monitor Tech during vacations. Both the hands-on experience and the competitive pay he earns are helping him achieve his dream of becoming a physician and hospital administrator.

Adds Barrett, “Ever since I was four years old, I’ve said that I wanted to be a doctor. But then I played around with the idea of being an English teacher or a high school principal. Taking the healthcare classes and being a part of HOSA gave me the opportunity to work in a real hospital. That experience assured me that I definitely want to go into medicine, and the courses I took in high school prepared me to succeed in college.”

Marketing, Sales & Service

Marketing, an Integral Part of Every Business



- Are you interested in developing the communication, management, and leadership skills employers in every business and industry demand?
- Do you enjoy travel and meeting new people?
- Would you like to build a successful future in law, entertainment, government, hospitality, or business?

Whatever Career Pathway you eventually choose, a solid background in Marketing, Sales & Service will help you reach your goals. Students in this Concentration develop knowledge and

skills in the foundational areas of marketing (economics, human relations, and business basics) and the functional areas of marketing (product and service planning, marketing-information management, purchasing and pricing, selling and promotion, risk management, financing, and distribution/logistics). To help prepare you for leadership positions in our global economy, the program covers international marketing, management, and entrepreneurship.

Experts representing Georgia's six Strategic Industries—Aerospace, Agribusiness, Energy and Environmental,

FILE

GEORGIA CAREER APPROVED CONCENTRATIONS

Marketing, Sales & Service File

PATHWAYS:

- Fashion Marketing
- Lodging Management
- Marketing Communication & Promotion
- Marketing Management
- Sports & Event Marketing
- Travel & Tourism Marketing

CTSO:
 DECA: An Association of Marketing Students, www.deca.org

25 Marketing, Sales & Service Careers

Occupation	Educational Requirement*	Average Wage**
Demonstrator or Product Promoter	W/O	\$9.25
Stock Clerk, Sales Floor	.0	\$10.12
Telemarketer	W/O	\$10.45
Merchandise Displayer	.0	\$10.72
Shipping/Receiving Clerk	.0	\$12.04
Customer Service Representative	W/O	\$13.13
Insurance Sales Agent	.B	\$17.13
Paralegal and Legal Assistant	.A/V	\$20.08
Advertising Sales Agent	.0	\$21.03
Public Relations Specialist	.B	\$22.08
Copy Writer	.B	\$22.99
Training and Development Specialist	.B	\$23.93
Sales Representative, Wholesale and Manufacturing	.0	\$24.29
Market Research Analyst	.B	\$26.13
Sales Agent, Securities and Commodities	.B	\$28.00
Property, Real Estate, and Community Association Manager	.B	\$30.47
Sales Representative, Technical and Scientific Products	.0	\$32.45
Sales Representative, Electrical/Electronic	.0	\$32.53
Real Estate Broker	.W	\$34.93
Sales Engineer	.B	\$35.30
Economics Teacher, Postsecondary	.M	\$37.72
Advertising and Promotions Manager	.M	\$40.35
Marketing Manager	.M	\$43.10
Sales Manager	.M	\$46.92
Chief Executive	.M	\$70.00

*Educational Requirement:
 M = More than a Bachelor's Degree
 B = At least a four-year Bachelor's Degree
 A = At least a two-year Associate's Degree
 V = Postsecondary vocational education
 O = On-the-job training
 W = Work experience in a related occupation
 🔥 = Georgia Hot Job (see page 3)

**Average hourly wages ranked from lowest to highest. Some annual salaries have been converted to hourly wages based on a 2,080-hour work year.
 Source: Georgia Department of Labor, Georgia Career Explorer (explorer.dol.state.ga.us/).

“Marketing, Sales & Service is packed with the practical skills required in today’s business world. DECA challenges students to put into practice what they have learned in the classroom. The self-confidence and self-esteem students develop in these programs put them head-and-shoulders above others with whom they will compete in the business community.”

— James Severnak
Regional Sales Manager
Branson Ultrasonics Corporation, Atlanta

Healthcare and Eldercare, Life Sciences, and Logistics and Transportation—identified marketing, sales, service, and entrepreneurship as “essential,” when asked how best to prepare Georgia’s students for tomorrow’s jobs. So, in Georgia, the possibilities for a student with a Marketing, Sales & Service background are limitless. Retailers, manufacturers, the entertainment and hospitality industries, government agencies, hospitals,

law and medical offices, real estate and insurance companies, schools, and churches are just a sampling of the employers who need your skills and experience.

The dynamic courses you can choose from in this Concentration include Marketing Principles, International

Marketing, Promotional Marketing, Entrepreneurship, Fashion Marketing, Sports and Event Marketing, and Hotel/Lodging & Travel/Tourism.

You will be challenged to apply your knowledge and skills to solve real-world business problems through project-based instruction in the classroom. In addition, you’ll have the opportunity to work with local businesses to produce strategic marketing plans and promotional materials. You can participate in oral and written events offered by DECA (a national association of marketing students), and you will have work-based learning opportunities.

Graduates in Marketing, Sales & Service can enter the workforce after high school or go to a technical or two- or four-year college.

If you want to get the skills and experience needed to succeed in any field and contribute to Georgia’s future success, Marketing, Sales & Service may be the right choice for you.



**TAKING IT
TO THE
NEXT LEVEL**

Rachel Wilson is the chief operating officer of one company, Spectrum 1 Wireless,

and president/chief executive officer of another, Spectrum Global Logistics. Her rapid rise to the top of her field began at Lovejoy High School in Clayton County (class of 2001). Wilson credits her marketing classes and DECA experiences with helping her understand the importance of marketing and its influence on free enterprise.

Says Wilson, “Someone can have access to cutting-edge technology and be the first to market, but without conveying its value to the masses, the technology can quickly become obscure and antiquated. Whether it is a matter of knowing your demographics, building a sales and advertising strategy, designing your 30-second commercial, gaining feedback from your peers and potential customers, or creating a realistic budget to conceptualize your ideas, all of these concepts are learned in marketing education courses.”

By participating in DECA projects and competitions and managing Lovejoy High’s school-based enterprise, Wilson began to develop entrepreneurial and peer-management skills, and financial responsibility, which have helped her launch and operate two successful businesses. She graduated from Agnes Scott College with a B.S. in Economics and Business in 2005.

“Not only did I learn all aspects of communication and entrepreneurial responsibility, I also recognized my own self-worth and learned who I aspired to become,” Wilson adds. “Although I wasn’t the smartest kid in the class, I was confident in my future because I found the secret to achievement. That secret is people—gaining their respect, understanding their economic hardships, learning to help them solve business problems, and striving to help them be successful.”

Wilson attributes her accomplishments to her ability to communicate, create, and add value for her customers. She says, “My marketing education and DECA helped me to develop and foster the knowledge, skills, and attitudes that fuel my career.”

Consider the Junior Reserve Officers Training Corps



Students in any of the CTAE Program Concentrations who want to enhance their leadership skills, improve their physical and mental fitness, and be part of an elite team can choose to participate in Junior Reserve Officers Training Corps (JROTC).

JROTC is an elective course taught by retired military personnel at selected public and private schools. In Georgia, there are approximately 200 JROTC high school units representing the nation's four service branches—Army, Navy, Air Force, and Marine Corps.

To help determine if JROTC might be the right fit for you, check out the answers to these Frequently Asked Questions from students and parents.

Frequently Asked Questions From Students

Why should I enroll in JROTC?

JROTC is all about you. It is devoted to your growth, both as a student and as a person.

Will I have to enlist in the military or the reserves?

No, JROTC cadets are not obligated to perform any military service.

What type of credit is offered for JROTC?

JROTC is offered under the college preparatory, technical, or dual track program as an elective. Students may enroll in JROTC for one to four years of study.

Do I have to wear a uniform?

A uniform is usually worn one day a week or during participation in special ceremonies. The JROTC program supplies the uniform, books, and any equipment the course requires.

What types of extracurricular activities are offered?

Each JROTC program is unique. Many programs have Color Guard and Drill teams, and others offer an Air Rifle team. Air rifle is a Georgia High School Association varsity athletic sport. Some schools sponsor Raider Challenge Teams that build rope bridges, compete with land navigation teams, and improve their physical fitness.

Selected students will be offered the opportunity to attend summer leadership programs designed to improve and enhance their team-building and leadership skills.

Frequently Asked Questions From Parents

JROTC says it does not recruit, but don't many JROTC graduates enter the military?

The JROTC program is not set up to recruit and does not request or expect a military commitment of any kind. Many cadets, however, find that they



enjoy military discipline and structure; it brings out their best and allows them to excel. Some win appointments to one of the military academies, and those who enlist can enter military service at a higher rank and pay grade.

Is JROTC training as difficult as it sounds?

The course is demanding, but most of the students who make the effort really enjoy the challenge and thrive on the hard work and discipline.

Do JROTC students have to be U.S. citizens?

No, they do not. Although JROTC teaches about the rights and responsibilities of citizenship, it also covers many other subjects that are valuable to students regardless of their citizenship.

Can JROTC help my child go to college?

JROTC training improves the ability to study, take tests, set goals, and better focus on academics. These are the tools a student needs to get better grades and to have a better chance to attend college.

FILE

GEORGIA CAREER
APPROVED
CONCENTRATIONS

JROTC File

To explore the JROTC opportunities available in your school, talk to your guidance counselor or the JROTC instructor, or go to www.gadoe.org/ci_cta.aspx and choose "JROTC" from the "Programs" section.

Postsecondary Education

The 411 on College

Georgia CTAE students graduate with the academic skills, hands-on experience in real work environments, and intensive career guidance required to successfully transition to a two-year or four-year college, the military, or other postsecondary education.

GACollege411 (www.gacollege411.org) is a free Website offering a wealth of valuable college-planning information, including a helpful High School Planner that assists students in tracking their progress throughout high school. The Planner Comparison allows students to compare their high school coursework with the admissions requirements of Georgia's colleges and universities. There's also a Planner Timeline that outlines grade-level student responsibilities in the college-planning and application process.

Students can set up a free, secure, and private account on www.gacollege411.org to:

- learn which careers match their interests and personalities.
- keep a record of their high school grades, honors, test scores, and activities.
- track their progress toward meeting specific college-entrance requirements.
- apply online to colleges in Georgia.
- submit financial-aid applications online.

There's also a special GACollege411 parents section with information on saving for college, helping students find the right careers, tax benefits that help you pay for college, and much more.

For more information or to set up your free GACollege411 account, go to www.gacollege411.org.

Extra Help for Parents

Check out the Georgia Career Information Center Website (www.georgiacrn.org) for tools parents can use to help students with career decision-making, high school planning, life after high school, financial aid for postsecondary education, and much more.



Getting a Head Start

CTAE offers Georgia students four Seamless Education Opportunities—Alignment/Articulation, Dual Enrollment,

Advanced Placement (AP), and Joint Enrollment—that allow them to earn either advanced credit or equivalent college credit while still in high school. This approach saves time and money and ensures a seamless and successful transition from high school into postsecondary education.

Here's a quick overview of Georgia's four Seamless Education Opportunities.

1. **Alignment/Articulation:** Students can take secondary courses aligned with a postsecondary courses that have been locally approved for postsecondary credit upon completion of high school and entrance into a two- or four-year college or university.
2. **Dual Enrollment:** While still in high school, students can take postsecondary courses for both high school and postsecondary credit.
3. **Advanced Placement:** The advanced placement program is a cooperative educational endeavor between secondary schools and colleges and universities in which students can earn both high school and college credit.
4. **Joint Enrollment:** Similar to dual enrollment, only in this case credit is attained during high school but applied only at the postsecondary level.

Georgia's Accel Program provides non-need-based grants to high school juniors and seniors at accredited public or private Georgia high schools who want to receive dual high school and college credit for postsecondary study at approved public and private colleges and technical colleges.

Courses are available only in the areas of the core graduation requirements for college preparatory students: English, Mathematics, Social Studies, Science, and Foreign Language. Additional requirements or restrictions for participating in Accel may be imposed by the high school.

At public colleges, Accel pays for tuition and mandatory fees, and provides participating students with a book allowance, in keeping with the benefits provided by Georgia's HOPE (Helping Outstanding Pupils Educationally) Program. At private colleges, the program pays \$125 per semester hour or \$84 per quarter hour.

For Accel application information and regulations, visit the Georgia Student Finance Commission Website at www.gsfc.org and choose "Accel Program Information."

Join a Georgia Career and Technical Student Organization

Thousands of Georgia students in middle schools, high schools, colleges, and universities participate in career and technical student organizations (CTSOs). These groups bring together students with shared career interests and connect them with teachers, community leaders, and local business people who serve as mentors, role models, and, often, employers offering internship and part- and full-time job opportunities. Georgia CTSOs include:



DECA: An Association of Marketing Students

www.deca.org
More than 5,000 Georgia students participate in DECA, a national association of marketing students. DECA is specifically designed to provide activities for students to learn marketing, management, and entrepreneurial skills that will prepare them to pursue careers in the field of marketing. Members participate in a local, state, and national competitive events program that showcases student skills.



Georgia SkillsUSA

www.skillsusageorgia.org
The mission of Georgia SkillsUSA is to develop leadership skills and workplace competencies that students will need to succeed in a constantly changing global workplace. More than 6,300 Georgia members compete in over 70 contests offered at the regional and state levels, culminating with the SkillsUSA Championships.



Future Business Leaders of America (FBLA)

www.georgiafbla.org
Georgia FBLA is the largest FBLA chapter in the nation with more than 17,500 members. This nonprofit student organization prepares today's students for success in business leadership. FBLA is an important partner in the success of school-to-work programs, business education curricula, and student leadership development.

VOCA 2006–2007 State Officers



Georgia Technology Student Association (GA TSA)

www.gatsa.org
Georgia Technology Student Association (GA TSA) provides students with opportunities to excel and advance as part of their instruction in technology education. Georgia TSA promotes technology education as a means of preparing students for a dynamic world, inviting them to become critical thinkers, problem solvers, and technologically literate leaders. Members participate in cocurricular activities with the technology education program to develop communication, leadership, and competitive skills.



Coordinated Vocational Academic Education (VOCA) Student Organization

www.gavoca.org
Georgia VOCA is a state organization with more than 7,500 members. Helping students reach their potential is what VOCA is all about. Through participation in the Coordinated Vocational Academic Education (CVAE) program, and/or Project Success Program, students learn about the world of work and the employment skills they need to be successful. By participating in school and community projects, members learn to plan, organize, and implement—qualities essential in leadership. VOCA has more than 45 competitive events in which students can participate. By taking advantage of these opportunities, students receive recognition for their achievement and feel confident in their abilities.



Georgia Health Occupations Students of America (HOSA)

www.georgiahosa.org
HOSA's mission is to enhance the delivery of compassionate, quality health care by providing opportunities for knowledge, skill, and leadership development of all health occupations students. Members attend leadership conferences featuring competition in nearly 50 healthcare-related skills.



Georgia FFA Association

aged.ces.uga.edu/georgiaffa
Georgia FFA ranks in the top five for membership in the nation. Members develop their potential for premier leadership, personal growth, and career success through agricultural education. Today's FFA encompasses more than 300 careers in everything from agriscience to biotechnology to turf-grass management.



Family, Career and Community Leaders of America (FCCLA)

www.gafccla.com
FCCLA offers more than 19,000 Georgia members the opportunity to expand their leadership potential and develop skills for life—planning, goal setting, problem solving, decision-making, and interpersonal communication—necessary in the home and workplace. Chapter projects focus on a variety of youth concerns, including parenting, family relationships, substance abuse, peer pressure, environment, nutrition and fitness, inter-generational communication, and career education.

Non-Discrimination Statement

Federal law prohibits discrimination on the basis of race, color, or national origin (Title VI of the Civil Rights Act of 1964); sex (Title IX of the Educational Amendments of 1972 and the Carl D. Perkins Vocational and Technical Education Act of 1998); or disability (Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990) in educational programs or activities receiving federal financial assistance.

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Inquiries concerning the application of the Perkins Act, Title VI, Title IX, or Section 504 and ADA to the policies and practices of the

department may be addressed to the Georgia Department of Education, Twin Towers East, Atlanta, GA 30334, 404-656-2800; to the Regional Office for Civil Rights, 61 Forsyth Street, Suite 1970, Atlanta, GA 30303; or to the Director, Office for Civil Rights, Education Department, Washington, D.C. 20201.

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