### SCHOOL KEY SYSTEM
Throughout this book, a school key system is used to indicate which programs, classes, and clubs are offered at each school.

- **Fayette County High School**
- **McIntosh High School**
- **Sandy Creek High School**
- **Starr’s High School**
- **Whitewater High School**

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- Early Childhood Education I
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## TEACHING AS A PROFESSION PATHWAY
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- Contemporary Issues in Education
- Teaching as a Profession Practicum

## FINANCE

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- Introduction to Business and Technology
- Financial Literacy
- Principles of Accounting II

### FINANCIAL SERVICES PATHWAY
- Introduction to Business and Technology
- Financial Literacy
- Banking, Investing and Insurance

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- Aerospace Science: Science of Flight and Leadership II
- Aerospace Science: Exploration of Space and Leadership III
- Aerospace Science: Management of the Cadet Corps and/or Leadership IV

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- JROTC Army Leadership Education I
- JROTC Army Leadership Education II
- JROTC Army Leadership Education III
- JROTC Army Leadership Education VII

## HEALTH SCIENCE

### THERAPEUTIC SERVICES - ALLIED HEALTH AND MEDICINE PATHWAY
- Introduction to Healthcare Science
- Essentials of Healthcare
- Allied Health and Medicine

### THERAPEUTIC SERVICES - PATIENT CARE PATHWAY
- Introduction to Healthcare Science
- Essentials of Healthcare
- Patient Care Fundamentals

### THERAPEUTIC SERVICES - EMR PATHWAY
- Introduction to Healthcare Science
- Essentials of Healthcare
- Emergency Medical Responder
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**SCHOOL KEY SYSTEM**

Throughout this book, a school key system is used to indicate which programs, classes, and clubs are offered at each school.

- Fayette County High School
- McIntosh High School
- Sandy Creek High School
- Starr’s High School
- Whitewater High School

**Fayette County High School**

**McIntosh High School**

**Sandy Creek High School**

**Starr’s High School**

**Whitewater High School**
Preparing students for success after high school is an inherent component of the Fayette County School District’s Vision. Whether students plan to enter the workforce immediately or attend college after high school graduation, careful consideration of high school course options can impact their futures. To better prepare students for the demands of the 21st century economy and for post-secondary education, Fayette County School District’s Career & Technical Education Department has provided this planning guide for use by students and their parents.
PUBLIC NOTICE FAYETTE COUNTY SCHOOL DISTRICT

The Fayette County School system offers the following career and technical education programs for all students regardless of race, color, national origin, including those with limited English proficiency, sex or disability in grades 9-12. The following is a list of the career clusters being offered this year.

- Architecture and Construction
- Arts, A/V Technology, and Communications
- Business Management and Administration
- Education and Training
- Finance
- Government and Public Administration
- Health Science
- Hospitality and Tourism
- Human Services
- Information Technology
- Law, Public Safety, Corrections and Security
- Marketing
- Science, Technology, Engineering and Mathematics
- Transportation Distribution and Logistics

Persons seeking further information concerning the career and technical education offerings and specific pre-requisite criteria should contact:

Lisa Collins
Director of Career and Technical Education
440 Hood Avenue, Fayetteville, GA 30214
770.716.1209 ext. 230
collins.lisa@mail.FCBOE.org

NOTICE OF NON-DISCRIMINATION

The Fayette County School District Career and Technical Education department does not discriminate on the basis of race, color, national origin, sex, disability, or age in its programs and activities and provides equal access to other designated youth groups. The following person(s) has been designated to handle inquiries regarding the non-discrimination policies:

504 Coordinator Audrey Toney
Director of Student Services
Fayette County Public Schools
205 LaFayette Avenue
Fayetteville, GA 30214
770.460.3990

Title IX Coordinator Mike Sanders
Assistant Superintendent of Operations
Fayette County Public Schools
440 Hood Avenue
Fayetteville, GA 30214
770.716.1209

DISCLAIMER: The information contained within this book is as accurate as possible at the time of publication. Classes offered at each high school can change due to scheduling and allotment conflicts.
# Georgia’s Hot Careers to 2022

The careers in this chart have it all!

## Skills and Abilities
- Advanced skills required
- Moderate skills required

## Work Activities
- Frequent found
- Occasionally found

Green jobs involve work that produces products or services that protect or restore the environment or conserve natural resources.

## Doctoral or Professional Degree
- Business Teachers, Postsec
- Clinical, Counseling, & School Psychologists
- Dentists, General
- Education Teachers, Postsec
- Health Specialties Teachers, Postsec
- Lawyers
- Pharmacists
- Physical Therapists
- Surgeons

### Median Annual Wage ($)
- $81,600
- $68,400
- $194,500
- $56,000
- $99,000
- $139,500
- $115,000
- $81,200
- $254,400

## Master’s Degree
- Art, Drama, & Music Teachers, Postsec
- Education Administrators, Elem & Sec
- Education Administrators, Postsec
- Educational, Guidance, School, & Voc Counselors
- Healthcare Social Workers
- Instructional Coordinators
- Nurse Practitioners
- Nursing Instructors & Teachers, Postsec
- Physician Assistants
- Speech-Language Pathologists

### Median Annual Wage ($)
- $62,100
- $85,600
- $97,800
- $56,900
- $47,500
- $60,600
- $86,100
- $61,200
- $93,400
- $70,100

## Bachelor’s Degree
- Accountants and Auditors
- Administrative Services Managers
- Architects, Excl Landscape & Naval
- Civil Engineers
- Computer & Information Systems Managers
- Computer Systems Analysts
- Construction Managers
- Database Administrators
- Electrical Engineers
- Elementary School Teachers, Excl Spec Ed
- Financial Analysts
- General & Operations Managers
- Human Resources Specialists

### Median Annual Wage ($)
- $72,100
- $89,500
- $80,400
- $87,000
- $122,800
- $77,100
- $86,400
- $84,600
- $85,400
- $54,000
- $79,900
- $109,900
- $56,100

## Fast job growth
- Above average wages
- At least 100 expected annual job openings


Georgia Department of Labor • Mark Butler, Commissioner
Equal Opportunity Employer/Program • Auxiliary Aids and Services Available Upon Request to Individuals with Disabilities
# Georgia’s HOT Careers to 2022

The careers in this chart have it all!

## Skills and Abilities
- Advanced skills required
- Moderate skills required

## Work Activities
- Frequent
- Occasionally found

Some jobs involve work that produces products or services that protect or restore the environment or conserve natural resources.

## Bachelor’s Degree (Continued)

<table>
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<tr>
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<td>Kindergarten Teachers, Exc Spec Ed</td>
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<td>Logisticians</td>
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<td>Management Analysts</td>
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<td>$91,100 1,500</td>
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<td>Mechanical Engineers</td>
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<td>Public Relations Specialists</td>
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<td>Software Developers, Applications</td>
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<td>Voc Ed Teachers, Postsecondary</td>
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## Associate’s Degree

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<td>Dental Hygienists</td>
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<td>Paralegals &amp; Legal Assistants</td>
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<td>Radiologic Technologists</td>
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<td>Registered Nurses</td>
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<td>Web Developers</td>
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## Some College, No Degree

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<td>$47,900 370</td>
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<td>Telecom Equip Installers &amp; Repairs, Exc Line Installers</td>
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## High School Diploma or Equivalent

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<td>Supers of Office &amp; Admin Support Workers</td>
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<td>$52,400 1,760</td>
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<td>Plumbers, Pipefitters, &amp; Steamfitters</td>
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<td>Sales Rep, Wholesale &amp; Mfg, Exc Tech &amp; Scientific Products</td>
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For more information, please contact Workforce Statistics & Economic Research at (404) 232-3875 • Fax (404) 232-3888
Email: Workforce_Info@gdol.ga.gov
GEORGIA’S STEM Careers to 2022
Science, Technology, Engineering, and Mathematics

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Education</th>
<th>Occupational Characteristics</th>
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</thead>
<tbody>
<tr>
<td>Life and Physical Science, Engineering, Mathematics, and Information Technology Occupations</td>
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<tr>
<td>Actuaries</td>
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<tr>
<td>Aerospace Engineers</td>
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<td>Biomedical Engineers</td>
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<td>Biotechnical Engineers</td>
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<td>Biological Technicians</td>
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<td>Biotechnology Managers</td>
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<td>Civil Engineers</td>
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<tr>
<td>Computer &amp; Information Systems Managers</td>
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<td>Computer Hardware Engineers</td>
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<td>Computer Network Architects</td>
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<td>Computer Network Support Specialists</td>
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<td>Computer Programmers</td>
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<td>Computer Systems Analysts</td>
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<td>Computer User Support Specialists</td>
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<td>Database Administrators</td>
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<td>Electrical Engineers</td>
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<td>Electronic Engineers, Ex Computer</td>
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<tr>
<td>Environmental Engineers</td>
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<td>Industrial Engineers</td>
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<td>Information Security Analysts</td>
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<td>Mathematical Science Teachers, Postsec</td>
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<tr>
<td>Mechanical Engineers</td>
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<tr>
<td>Network &amp; Computer Systems Administrators</td>
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<td>Operations Research Analysts</td>
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<tr>
<td>Purchasing Managers</td>
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<td>Sales Reps, Wholesale &amp; Mfg, Tech &amp; Sci Products</td>
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<td>Software Developers, Applications</td>
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<td>Software Developers, Systems Software</td>
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<td>Statisticians</td>
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<td>Web Developers</td>
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</tbody>
</table>

Health Occupations

| Dental Hygienists |  |  |
| Dentists, General |  |  |
| Diagnostic Medical Sonographers |  |  |
| Emergency Medical Techns & Paramedics |  |  |
| Family & General Practitioners |  |  |
| Health Specialists Teachers, Postsec |  |  |


Georgia Department of Labor • Mark Butler, Commissioner
Equal Opportunity Employer/Program • Auxiliary Aids and Services Available upon Request to Individuals with Disabilities
# GEORGIA'S STEM Careers to 2022

## Science, Technology, Engineering, and Mathematics

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Education</th>
<th>Occupational Characteristics</th>
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<tbody>
<tr>
<td>Administration and Management</td>
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<td>Biology, Anatomy, and Physiology</td>
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<td>Chemistry</td>
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<td>Computer Science and Programming</td>
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<td>Data Management, Analysis, and Statistics</td>
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<td>Designing and Manufacturing</td>
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<td>Digital Audio, Video, &amp; Graphics</td>
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<td>Electrical Engineering</td>
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<td>Engineering Mathematics</td>
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<td>Engineering Physics</td>
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<td>Geology, Soil, and Water Resources</td>
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<td>Mathematics</td>
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<td>Mechanical, Production, and Manufacturing</td>
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<td>Medicine and Dentistry</td>
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<td>Physics</td>
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<td>Psychology, Counseling, and Anthropology</td>
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<td>Speech-Language Pathology</td>
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<td>Speech-Language Pathology</td>
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<tr>
<td>Visual Art</td>
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<tr>
<td>Architecture Occupations</td>
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<tr>
<td>Architects, Exc Landscape &amp; Naval</td>
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<tr>
<td>Architectural &amp; Civil Drafters</td>
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<td>Architectural &amp; Engineering Managers</td>
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<td>Landscape Architects</td>
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<tr>
<td>Social Science Occupations</td>
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<tr>
<td>Clinical, Counseling, &amp; School Psychologists</td>
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<td>Economics Teachers, Postsec</td>
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<td>Economists</td>
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<td>Political Science Teachers, Postsec</td>
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<td>Psychology Teachers, Postsec</td>
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<td>Social Science Research Assistants</td>
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<td>Sociology Teachers, Postsec</td>
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<td>Survey Researchers</td>
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<tr>
<td>Urban &amp; Regional Planners</td>
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</tbody>
</table>

### Health Occupations (Continued)

- Internists, General
- Licensed Practical & Licensed Vocational Nurses
- Med & Clinical Laboratory Technicians
- Med & Clinical Laboratory Technologists
- Med & Health Services Managers
- Med Records & Health Info Techns
- Nurse Practitioners
- Nursing Instructors & Teachers, Postsec
- Occupational Therapists
- Pharmacists
- Pharmacy Technicians
- Physical Therapists
- Physician Assistants
- Radiologic Technologists
- Registered Nurses
- Respiratory Therapists
- Speech-Language Pathologists
- Surgeons
- Surgical Technologists
- Veterinarians

### 2016-2017 Career Planner

For more information, contact Workforce Statistics & Economic Research (WS&ER) at (404) 333-3775 or at workforce_info@gdol.ga.gov

CTE INDUSTRY CERTIFICATION

When a program becomes industry certified, it receives a “Stamp of Excellence”, which represents the apex of program quality. Only those programs that have successfully undergone rigorous reviews by leaders from business and industry are recognized with this distinction.

This formal process strengthens all program components, including:

- Classrooms and labs which are equipped with state-of-the-art equipment and technology;
- CTE and academic performance standards that are aligned to national standards;
- In-depth, project-based instruction in all curriculum areas;
- Appropriate and varied Career Related Education (CRE) instruction, including school-based enterprises and entrepreneurial ventures;
- Career and Technical Student Organizations (CTSOs) which offer co-curricular competitive events on the local, state and national level and provide leadership development skills for personal and professional growth; and,
- Business, industry and community involvement in all aspects of the program.

The following Fayette County CTE Programs are industry certified: SMHS’s Early Childhood Education Program is nationally certified & MHS’s Graphic Arts Program is PrintEd certified. Industry certified programs not only offer outstanding opportunities to students who receive instruction through such programs; but they also offer positive benefits for schools as well as employers.

NON-TRADITIONAL OCCUPATIONS

Nontraditional careers are those occupations or fields of work for which individuals from one gender comprise less than 25% of the individuals employed. Students are encouraged to enroll in courses that fit their career goals regardless of the gender make-up in the classroom. Some examples of nontraditional careers are:

- Nursing for males
- Drafting for females
- Cosmetology for males
- Automotive for females

CAREER PLANNING RESOURCES

www.GeorgiaCRN.org
Georgia Career Resource Network is a web site designed to assist counselors, instructors, and administrators with career-related programs, initiatives, and information.

www.GAfutures.org
GAfutures is an internet site for planning, paying, and applying for college.

www.careervoyages.gov
Career Voyage is a national web-site for emerging industries and high demand occupations.

www.bls.gov/oco/
The Occupational Outlook Handbook is a nationally recognized source of career information. It describes what workers do on the job, working conditions, the training and education needed, earnings, and expected job prospects. The handbook covers a wide range of occupations.

www.Myplan.com
MyPlan.com is a career database which allows visitors to search, browse or query through over 900 different careers, read career profiles, job descriptions, and educational requirements, and explore career outlooks.
The Work-Based Learning (WBL) program is designed to provide student internships and apprenticeships that support a school to career transition. Students are allowed to work off campus in the business community in order to learn more about a chosen career. Once a student has met all application requirements for WBL, the WBL Coordinator will determine the correct WBL placement for the student. The students will earn one unit of elective credit for each completed WBL course.

REQUIREMENTS FOR WBL
- Students who have completed or are completing any Pathway can apply for the Work-Based Learning Program
- Students must be at least 16 years of age
- Students must have good attendance, discipline, and teacher recommendations

EMPLOYABILITY SKILL DEVELOPMENT (ESD)
- Paid entry level work
- Limited to one year
- May or may not be linked to a specific pathway
- Must have completed or be currently enrolled in any related pathway courses

INTERNSHIP
- Can be paid or unpaid work experience
- Must have earned one credit in a CTE pathway or closely related academic course related to the placement

COOPERATIVE EDUCATION (CO-OP)
- Paid work experience
- Directly related to student’s career pathway
- Currently enrolled in a course that is directly related to job placement

YOUTH APPRENTICESHIP (YAP)
- Paid work in a job classified as highly skilled in business and industry
- Work in chosen career area
- Student must have post-secondary education plans in chosen career area (earning a degree, licensing, or certification depending on career requirement)
- For completion of YAP program students must have 720 hours on-the-job training

WBL IS RELATED TO THE FOLLOWING
- Advanced Academic Pathways
- Architecture and Construction
- Arts, A/V Technology, & Communications
- Business Management and Administration
- Education and Training
- Finance
- Fine Arts Pathways
- Government and Public Administration
- Health Science
- Hospitality and Tourism
- Human Services
- Information Technology
- JROTC
- Law, Public Safety, Corrections & Security
- Marketing
- Science, Technology, Engineering & Mathematics
- Transportation Distribution & Logistics
- World Language Pathways
CTSO Core Values

Career and Technical Student Organizations (CTSO) are designed to build character and develop leadership abilities of high school students. CTSO’s promote active community involvement, providing service to others, and participation in competitive events with other high school students across the state. Involvement in CTSO’s provide valuable life lessons and educational experiences to prepare students for success in today’s society.

Commitment To create among members, educators and business and industry an adherence and appreciation for all Career, Technical and Education Programs.

Conviction To develop patriotism through knowledge of our nation’s heritage and practice of democracy.

Education To create enthusiasm and empower students to become lifelong learners.

Integrity To deal honestly and fairly with one another.

Leadership To develop leadership abilities through participation in educational, professional, community and social activities.

Professionalism To promote high standards in career ethics, workmanship, scholarship and safety.

Recognition Appreciation of the value of achievement.

Service To cultivate a desire to contribute to the benefit and welfare of others.

Teamwork To enhance the ability of students to plan together, organize and carry out worthy activities and projects through the use of the democratic process.
FCCLA
Family, Career, and Community Leaders of America
Family and Consumer Science Education

FCCLA is a national family and consumer science education student organization that helps young men and women become leaders and address important personal, family, work, and social issues through family and consumer sciences education. Through cooperative and competitive programs, FCCLA members develop skills for life including character development, creative and critical thinking, interpersonal communication, practical knowledge, and career preparation. Participation in national programs and co-curricular chapter activities enables FCCLA members to learn cooperation, take responsibility, develop leadership, and give service.

HOSA
Health Occupations Students of America

Health Science Technology Education (HSTE) is a national student organization that provides a unique program of leadership development, motivation, and recognition exclusively for secondary, post-secondary, collegiate, and adult students enrolled in health occupations education courses or instructional programs. HOSA is an integral part of approved health occupation programs. Health Science Technology Education (HSTE) students who become active members in a local HOSA chapter are eligible for membership in state and national HOSA.

The mission of HOSA is to enhance the delivery of compassionate, quality health care by providing opportunities for knowledge, skill and leadership development of all health occupations education students, therefore helping the students to meet the needs of the health care industry. For more information, go to www.hosa.org or www.georgiahosa.org.

SkillsUSA
Students Taking Action with Recognition

Georgia SkillsUSA members participate in local, state, and national activities provided through trade and industrial, technical, and health occupations courses and programs. This include drama, communication, broadcasting and graphic arts students. The mission of SkillsUSA is to develop leadership skills and workplace competencies that students will need to success in a constantly changing global workplace. The organization provides many opportunities for leadership development and skills training. Competition in over 70 leadership, health occupations, occupationally related, and trade, industrial, and technical contests is offered at the region and state levels, culminating with the SkillsUSA Championships in Kansas City, Missouri, in June.

TSA
Technology Student Association

Georgia Technology Student Association (GA TSA) is committed to providing students with opportunities to excel and advance as part of their instruction in engineering and 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. The mission of GA TSA is to prepare its members to be successful leaders and responsible citizens in a technological society through co-curricular activities with the technology education program, thereby developing communication, leadership, and competitive skills.
The following courses are typically considered Career, Technical, and Education (CTE) Courses. The State Department of Education along with the University System of Georgia have determined that these courses may also be used to fulfill certain graduation and college admission requirements. If you have any questions, please talk with your student’s high school counselor.

<table>
<thead>
<tr>
<th>COURSE NAME</th>
<th>Counts as 4th Science for Graduation</th>
<th>Counts as 4th Science to a 4 yr. College</th>
<th>Counts as 4th Math for Graduation</th>
<th>World Language Credit for Graduation Electives ONLY</th>
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<tbody>
<tr>
<td>Essentials of Healthcare</td>
<td>X</td>
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<td>X</td>
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<tr>
<td>Food for Life</td>
<td>X</td>
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<td>X</td>
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<tr>
<td>Food Science</td>
<td>X</td>
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<td>X</td>
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<tr>
<td>Food and Nutrition Through the Lifespan</td>
<td>X</td>
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<td>X</td>
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<tr>
<td>* Advanced Placement Computer Science</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>* Advanced Placement Computer Science Principles</td>
<td>X</td>
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<td>X</td>
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<tr>
<td>* Web Development</td>
<td>X</td>
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<td>X</td>
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<tr>
<td>* Computer Science Principles</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>* Programming, Games, Apps and Society</td>
<td>X</td>
<td>X</td>
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</table>

* Two computer science sequenced courses will satisfy the two year world language requirement for graduation electives but may not be accepted for world language credit by the colleges and universities.
Career Pathways are state-approved career enhancement programs defined as a coherent, articulated sequence of rigorous academic and career-related courses starting in the ninth grade and leading to an associate degree, and/or an industry-recognized certificate or licensure, and/or a baccalaureate degree and beyond.

Career, Technical, and Education (CTE) provides students with the opportunity to select at least three sequenced courses in a career pathway.

CTE CONCENTRATOR: A concentrator is defined as a student who takes at least three CTE courses in a specific program area during their high school career.

PATHWAY COMPLETER: A pathway completer is a concentrator who completes the requirements for the Georgia Milestones Assessment System and also completes the requirements for CTE pathway concentrators.

Selection of a pathway is based on self-awareness and the investigation of occupations plus related educational levels aligned with the pathway. Most high-demand, high-skilled, high-wage occupations in all concentrations still require education beyond high school.

Implementation of career pathways is a collaborative effort between the Fayette County School District, the Georgia Department of Education, the Technical College System of Georgia and the University System of Georgia.

OVERVIEW OF CAREER CLUSTERS PATHWAYS

- Georgia’s 17 Career Cluster/Pathways provide a structure for organizing and delivering quality Career, Technical and Education (CTE) programs.

- Modeled after the National Career Clusters configuration utilized by most of the United States, Georgia’s 17 Career Cluster/Pathways Model represents approximately 96 career pathways to help students navigate their way to greater success in college and career.

- As an organizing tool for curriculum design and instruction, the 17 Career Clusters provide essential knowledge and skills for the students’ career pathways.

- This model functions as a:
  - Useful guide in developing programs of study that bridge secondary and postsecondary curriculum.
  - Indicator of a range of career options for students’ graduation plans of study.
  - Method of allowing students to discover their interests and passions, empowering them to choose the educational pathway that may lead to success in high school, college and career.

- The 17 Career Cluster/Pathways encompass both secondary and postsecondary education and will strengthen and improve student transition from secondary to postsecondary education.

- The Fayette County School District offers 14 of the 17 Career Clusters.
ARCHITECTURE AND CONSTRUCTION
Careers with common knowledge and skills related to the designing, planning, managing, and building structures.

ARTS, A/V TECHNOLOGY AND COMMUNICATIONS
Careers with common knowledge and skills related to designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.

BUSINESS MANAGEMENT AND ADMINISTRATION
Careers with common knowledge and skills related to the preparation of students with computer skills for future college and career plans. Cluster skills mastered include planning, organizing, directing, and evaluating as well as owning and operating a successful business.

EDUCATION AND TRAINING
Careers with common knowledge and skills related to planning, managing, and providing education and training services as well as related learning support services.

FINANCE
Careers with common knowledge and skills related to money management, including planning, investing, and spending. Students will gain career development skills for the finance world with opportunities that expand beyond basic business skills into financial literacy, banking, investing, insurance, and risk management.

GOVERNMENT AND PUBLIC ADMINISTRATION
Careers with common knowledge and skills related to planning and performing of government management and administrative functions at local, state, and federal levels. Careers are available in national security, foreign service, revenue, and regulations.

HEALTH SCIENCE
Careers with common knowledge and skills related to planning, managing, and providing services in therapeutics, diagnostics, health informatics, support areas, and biotechnology research and development.

HOSPITALITY AND TOURISM
Careers with common knowledge and skills related to the management, marketing, and operations of restaurants, and other food services, lodging, attractions, recreation events, and travel related services.

HUMAN SERVICES
Careers with common knowledge and skills related to family and human needs such as nutrition and food science, counseling and mental health services, family and community services, personal care, and consumer services.

INFORMATION TECHNOLOGY
Careers with common knowledge and skills related to the preparation for careers that create, use, modify, and engage technology skills. Graphics, multimedia animation, web design, game and application development, networking, and computer repair are all possibilities.

MARKETING
Careers with common knowledge and skills related to the process of anticipating, managing, and satisfying consumers’ demand for products, services, and ideas. The Marketing career cluster generates the strategy that underlies advertising and promotional techniques, business communication, and business development.

SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS (STEM)
Careers with common knowledge and skills related to planning, managing, and providing scientific research and professional and technical services.

TRANSPORTATION DISTRIBUTION AND LOGISTICS
Careers with common knowledge and skills related to planning, managing, and moving people, materials, and goods by road, pipeline, air, rail, and water, and also includes other related professional and technical support services.
People with careers in Architectural, Drawing and Design are people who solve problems and focus on making things work more efficiently and effectively. Engineers apply the theories and principles of science and mathematics to research and develop economical solutions to technical problems. Their work is the link between perceived social needs and commercial applications.

**PATHWAY COURSES**
- Introduction to Drafting and Design
- Architectural Drawing and Design I
- Architectural Drawing and Design II

**RECOMMENDED COURSES**
- Advanced Algebra/Trigonometry
- Calculus
- Computer Applications
- Entrepreneurship
- World Language
- Introduction to Animation and 3D Design
- Physics
- Work-Based Learning

**POST-SECONDARY DEGREES, DIPLOMAS, AND CERTIFICATES**
See www.GAFutures.org for additional information

**TECHNICAL COLLEGES**
- CAD Operator
- Land Development
- Project Management
- Specialty Construction

**COLLEGES/UNIVERSITIES**
- Architecture
- Civil Engineering Technology
- Construction Engineering
- Construction Management
- Surveying and Mapping

**CAREER AND TECHNICAL STUDENT ORGANIZATIONS**
- SkillsUSA

**TOP CAREERS CHOICES**

**Architect**
- Bachelor Degree needed
- $53,000 annual salary
- 110 annual average openings in Georgia

**Architectural and Civil Drafter**
- Post-Secondary Vocational Training needed
- $42,078 annual salary
- 80 annual average openings in Georgia

**Mechanical Drafter**
- Post-Secondary Vocational Training needed
- $42,141 annual salary
- 40 annual average openings in Georgia

**Surveying and Mapping Technician**
- Moderate-Term On-the-Job Training needed
- $29,099 annual salary
- 110 annual average openings in Georgia

**Surveyor**
- Bachelor Degree needed
- $42,349 annual salary
- 110 annual average openings in Georgia

**ADDITIONAL CAREER CHOICES**
- Architectural Detailer
- Architectural Engineer
- Building Inspector
- Civil Engineer
- Designer
- Drafter
- Electrical Engineer
- Environmental Engineer
- Interior Designer
- Landscape Designer
- Structural Detailer
- Structural Engineer Technician
- Urban Planner

Source: GADOE Plans of Study
Audio and Video Technology and Film is a class that teaches all aspects of video production from pre-production, production, and post-production, including theory and practical application. Students will have the opportunity to participate in various types of broadcast/video production from events and commercials to mini-movies and documentaries.

PATHWAY COURSES
- Audio and Video Technology and Film I
- Audio and Video Technology and Film II
- Audio and Video Technology and Film III

RECOMMENDED COURSES
- Computer Applications
- Business Communications
- World Language
- Intro to Animation and 3D Design
- Marketing Principles
- Yearbook/Journalism
- Web Page Design
- Work-Based Learning

POST-SECONDARY DEGREES, DIPLOMAS, AND CERTIFICATES
See www.GAFutures.org for additional information

TECHNICAL COLLEGES
- Technical Studies
- Telecommunications Arts

COLLEGES/UNIVERSITIES
- Broadcast Design
- Journalism and Broadcasting
- Mass Communications
- Mass Media/Arts
- Public Relations
- Video/Digital

CAREER AND TECHNICAL STUDENT ORGANIZATIONS
- SkillsUSA

TOP CAREERS CHOICES
Audio and Video Equipment Technician
Long-Term On-the-Job Training needed
$40,498 annual salary
80 annual average openings in Georgia

Broadcast News Analyst
Bachelor Degree needed
$57,845 annual salary
20 annual average openings in Georgia

Broadcast Technician
Associate Degree needed
$35,443 annual salary
50 annual average openings in Georgia

Radio and Television Announcer
Long-Term On-the-Job Training needed
$34,445 annual salary
50 annual average openings in Georgia

ADDITIONAL CAREER CHOICES
Audio-Video Operator
Broadcast Field Supervisor
Broadcast Technician
Camera Operator
Chief Engineer
Control Room Technician
Editor
Journalist
Radio and TV Announcer
Reporter
Sound Technician
Station Manager
Transmission Engineer
The Animation and Digital Media Pathway is a series of courses that teach all aspects of 2D and 3D animation and digital design. Students will gain knowledge in animation history, basic modeling, and fundamentals of motion while working to incorporate effective sound and lighting techniques, as well as 3-D space morphing into their animated projects. Working independently, as well as on small production teams, students will learn to manage the entire production pipeline for 3-D projects. Students in the Animation and Digital Media Pathway will have the opportunity become effective and efficient multi-skilled animators as they develop a thorough working knowledge of the animation opportunities available in a rapidly growing career field.

PATHWAY COURSES
- Introduction to Graphics and Design
- Principles and Concepts of Animation
- Advanced Animation, Game, and App Design

RECOMMENDED COURSES
- Computer Applications
- Business Communications
- World Language
- Intro to Animation and 3D Design
- Marketing Principles
- Yearbook/Journalism
- Web Page Design
- Work-Based Learning

POST-SECONDARY DEGREES, DIPLOMAS, AND CERTIFICATES
See www.GAFutures.org for additional information

BACHELOR’S DEGREE
- Animation School - Varying Certificates available
- Intern experience

CAREER AND TECHNICAL STUDENT ORGANIZATIONS
- SkillsUSA

TOP CAREERS CHOICES
Camera Operators
(Television, Video, Motion Picture)
2015 Wage: $59,600

Composing Artist
2015 Wage: $65,000

Multimedia Artist and Animators
2014 Wage: $51,800

Forensic Animator
2015 Wage: $20-$100 per hour depending on experience

Mathematical Modeler
2015 Wage: $80,000

Storyboard Artist
2015 Wage: $55,000

3D Medical Animator
2015 Wage: $60,000

3D Modeler
2015 Wage: $75,000

ADDITIONAL CAREER CHOICES
Animation Producers
Artistic Director
Graphic Designer
Film and Video Editors
3D Animator
TV Director
TV Producer
Graphic Communications allows the students to perform a variety of tasks. Students will experience basic introduction to graphic communications. Activities include making notepads, business cards, brochures, postcards, cover designs and promotional materials, invitations, and more. Many students will be a part of the ever increasing need for work used by local schools and businesses.

PATHWAY COURSES
- Introduction to Graphics and Design
- Graphic Design and Production
- Advanced Graphic Output Processes

RECOMMENDED COURSES
- Advanced Web Design
- Computing in the Modern World
- World Language
- Fundamentals of Web Design
- Introduction to Animation and 3D Design
- Legal Environment of Business
- Psychology
- Work-Based Learning
- Yearbook/Journalism

POST-SECONDARY DEGREES, DIPLOMAS, AND CERTIFICATES
See www.GAFutures.org for additional information

CAREER AND TECHNICAL STUDENT ORGANIZATIONS
- SkillsUSA

TOP CAREERS CHOICES
Prepress Technicians and Workers
Post-Secondary Vocational Award needed
$35,443 annual salary
40 annual average openings in Georgia

Printing Machine Operators
Moderate On-the-Job Training needed
$33,509 annual salary
220 annual average openings in Georgia

Public Relations Specialist
Bachelor Degree needed
$48,672 annual salary
120 annual average openings in Georgia

ADDITIONAL CAREER CHOICES
Bindery and Finishing Technician
Customer Service Representative
Graphic Designer
Prepress Imaging Specialist
Press Operator
Screen Printing
Shipping and Distribution Manager
Graphic Design is communication through visual means. This can be achieved either by Artistic or Printing means. The Graphic Design pathway starts with an introduction to the graphic design principals while exploring the techniques of creative problem solving. Graphic Design and Production explores the various printing techniques including screen-printing and offset printing. The third and final class Advance Graphic Design or Production the student will choose a to specialize in either Graphic Design or Graphic Production focusing on the demand and real world techniques of the specialty.

PATHWAY COURSES
- Introduction to Graphics and Design
- Graphic Design and Production
- Advanced Graphic Design

RECOMMENDED COURSES
- Art
- Computer Applications
- Marketing

POST-SECONDARY DEGREES, DIPLOMAS, AND CERTIFICATES
See www.GAFutures.org for additional information

TECHNICAL COLLEGES
- Graphic Design
- Prepress and Production

COLLEGES/UNIVERSITIES
- Graphic Design
- Industrial Design
- Printmaking
- Product Design

CAREER AND TECHNICAL STUDENT ORGANIZATIONS
- SkillsUSA

TOP CAREERS CHOICES
Art Director
College Degree needed, plus
5-7 years experience
$57,000 annual salary

Creative Designer
College Degree needed, plus
10+ years experience
$87,000 annual salary

Junior Designer
College Degree needed
$31,000 annual salary

Senior Designer
College Degree needed, plus
3 years experience
$35,000 annual salary

ADDITIONAL CAREER CHOICES
- Fashion Design
- Illustration
- Photography
- 3D Animation
Pathway of social, ethical, and human issues related to technology. Courses will provide an introduction to computer technology, decision making, productivity, communications, and problem-solving skills. Areas of instruction include integration of word processing, desktop publishing, spreadsheet, database, and presentation software as well as the use of emerging technologies.

PATHWAY COURSES
- Introduction to Business and Technology
- Business and Technology
- Business Communications

RECOMMENDED COURSES
- Any business and computer science course
- World Language
- Marketing Principles
- Work-Based Learning

POST-SECONDARY DEGREES, DIPLOMAS, AND CERTIFICATES
See www.GAFutures.org for additional information

TECHNICAL COLLEGES
- Administrative Support Assistant
- Business Administrative Assistant
- Business Administrative Technology
- Certification in Microsoft Applications (MOAC)
- Data Entry Clerk
- General Office Assistant
- Microsoft Excel Application User
- Microsoft Office Application Professional
- Microsoft Word Application Professional

COLLEGES/UNIVERSITIES
- Business
- Business Administration

CAREER AND TECHNICAL STUDENT ORGANIZATIONS
- FBLA
- SkillsUSA

TOP CAREERS CHOICES

Administrative Services Manager
Bachelor Degree needed
$68,016 annual salary
420 annual average openings in Georgia

Executive Secretary and Administrative Assistant
Moderate On-the-Job Training needed
$37,378 annual salary
1,620 annual average openings in Georgia

Legal Secretary
Post-Secondary Vocational Award needed
$36,338 annual salary
270 annual average openings in Georgia

Medical Transcriptionist
Post-Secondary Vocational Award needed
$30,514 annual salary
130 annual average openings in Georgia

ADDITIONAL CAREER CHOICES
- Administrative Assistant
- Communications Equipment Operator
- Computer Operator
- Court Reporter
- Customer Service Assistant
- Data Entry Specialist
- Desktop Publisher
- Dispatcher
- Executive Assistant
- Information Assistant
- Office Manager
- Receptionist
- Shipping and Receiving Personnel
- Word Processors
Entrepreneurs, innovators, and small businesses play a key role in Georgia’s economy. Business professionals may be managers, owners, accountants, economists, administrators, or analysts. These individuals must possess excellent communication skills and be able to establish working relationships with many different people.

PATHWAY COURSES
- Introduction to Business and Technology
- Legal Environment of Business
- Entrepreneurship

RECOMMENDED COURSES
- Any Business and Computer Science Course
- World Language
- Marketing Principles
- Work-Based Learning
- Yearbook/Journalism

POST-SECONDARY DEGREES, DIPLOMAS, AND CERTIFICATES
See www.GAFutures.org for additional information

TECHNICAL COLLEGES
- Business Office Technology
- Entrepreneurship
- Management and Supervisory Development
- Office Administration

COLLEGES/UNIVERSITIES
- Business
- Business Administration

CAREER AND TECHNICAL STUDENT ORGANIZATIONS
- FBLA
- SkillsUSA

TOP CAREERS CHOICES

Advertising and Promotion Manager
Bachelor Degree needed
$76,898 annual salary
60 annual average openings in Georgia

Chief Executive
Bachelor Degree plus work experience needed
$155,168 annual salary
850 annual average openings in Georgia

Employment, Recruitment, and Placement Specialist
Bachelor Degree needed
$50,877 annual salary
440 annual average openings in Georgia

Social and Community Service Manager
Bachelor Degree needed
$59,904 annual salary
100 annual average openings in Georgia

Training and Development Manager
Bachelor Degree needed
$79,498 annual salary
60 annual average openings in Georgia

ADDITIONAL CAREER CHOICES
- Appraiser and Assessor of Real Estate
- Accountant and Auditor
- Administrator
- Bank Teller
- Business Educator
- Chief Executive Officer
- Claims Adjuster and Examiner
- Computer Support Specialist
- Computer Systems Analyst
- Cost Estimator
- Database Administrator
- Entrepreneur
- Financial Analyst and Manager
- Investigator
- Network and Computer System Paralegal and Legal Assistant
- Personal Financial Advisor
- Sales Manager
- Tax Prepare
Preschool, kindergarten and elementary school teachers play a vital role in the development of children. They introduce children to math, language, science and social studies. They use games, music, artwork, films, books, computers and other tools to teach basic skills. Teachers design classroom presentations to meet students’ needs and abilities. They also work with students individually. They are responsible for planning, evaluating, and creating lesson plans.

PATHWAY COURSES
• Early Childhood Education I
• Early Childhood Education II
• Early Childhood Education Practicum

RECOMMENDED COURSES
• Any Education Course
• World Language
• Psychology
• Work-Based Learning

POST-SECONDARY DEGREES, DIPLOMAS, AND CERTIFICATES
See www.GAFutures.org for additional information

TECHNICAL COLLEGES
• Child Care Assistant
• Child Care Manager
• Child Development Associate I and II
• Child Development Specialist
• Early Childhood Care and Education (Associate Degree)
• Early Childhood Care and Education Assistant
• Early Childhood Program Administration
• Infant-Toddler Childcare Specialist

COLLEGES/UNIVERSITIES
• Art Teacher
• Elementary Teacher
• Music Teacher
• Physical Education Teacher

CAREER AND TECHNICAL STUDENT ORGANIZATIONS
• FCCLA
Educational services is the second largest industry which includes a variety of institutions that offer academic education or career and technical instruction. This includes elementary, middle and secondary schools, universities, colleges, professional schools, community or junior colleges and career and technical institutes. The overall demand for educational services will increase as growing emphasis on improving education along with retirements will create large numbers of job openings.

**PATHWAY COURSES**
- Examining the Teaching Profession
- Contemporary Issues in Education
- Teaching as a Profession Practicum

**RECOMMENDED COURSES**
- Any Education Course
- World Language
- Human Growth and Development
- Psychology
- Work-Based Learning

**POST-SECONDARY DEGREES, DIPLOMAS, AND CERTIFICATES**
See www.GAFutures.org for additional information

**TECHNICAL COLLEGES**
- Child Care Assistant and/or Child Care Manager
- Child Development Associate I and/or II
- Child Development Specialist
- Early Childhood Care and Education (Associate Degree)
- Early Childhood Care and Education Assistant
- Early Childhood Program Administration
- Early Childhood Education or Exceptionalities
- Education of the Gifted
- Infant-Toddler Childcare Specialist

**COLLEGES/UNIVERSITIES**
- Adult, Art, Music or Special Education
- Career and Technical Education
- Early Childhood Education
- English, Math, Science or Social Studies Education
- Education of the Gifted
- Family and Consumer Sciences Education
- World Language Education
- Health and Physical Education
- Human Resource and Organizational Development
- Middle School Education
- Professional School Counseling
- School Psychology
- Speech Communication

**CAREER AND TECHNICAL STUDENT ORGANIZATIONS**
- FCCLA

**TOP CAREERS CHOICES**
- Middle School Special Education Teacher
  - Bachelor Degree needed
  - $46,891 annual salary
  - 230 annual average openings in Georgia
- Post-Secondary Education Administrator
  - Bachelor Degree plus work experience needed
  - $81,328 annual salary
  - 160 annual average openings in Georgia
- Post-Secondary Vocational Education Teacher
  - Bachelor Degree plus work experience needed
  - $45,386 annual salary
  - 370 annual average openings in Georgia

**ADDITIONAL CAREER CHOICES**
- Administration
- Adult Educator
- After-School Program Supervisor
- Associate Teacher
- Coach
- County Extension Agent
- Education Evaluator
- Educational and Teacher Aide
- Elementary School Teacher
- High School Teacher
- Media Specialist
- Middle School Teacher
- Post-Secondary Vocational Education
- Recreation Attendant
- School Administration
- Social Services Aide
- Special Education Teacher
- Teacher
**BUSINESS ACCOUNTING PATHWAY**

**TOP CAREERS CHOICES**

**Accountants and Auditors**  
Bachelor Degree needed  
$54,330 annual salary  
1,090 annual average openings in Georgia

**Bookkeeping/Accounting/Auditing Clerks**  
Moderate-Term On-the-Job Training needed  
$29,619 annual salary  
1,490 annual average openings in Georgia

**Budget Analysts**  
Bachelor Degree needed  
$58,698 annual salary  
30 annual average openings in Georgia

**Tax Examiner, Collector and Revenue Agent**  
Bachelor Degree needed  
$43,909 annual salary  
70 annual average openings in Georgia

**ADDITIONAL CAREER CHOICES**

- Auditing Clerk
- Auditor
- Bookkeeper
- Budget Analyst
- Certified Public Accountant
- Corporate Accountant
- Entrepreneur
- FBI Agent
- Financial Advisor
- Financial Analyst
- Forensic Accountant
- Government Accountant
- Income Tax Professional
- Managerial Accountant
- Non-Profit Accountant
- Teacher

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**PATHWAY COURSES**
- Introduction to Business and Technology
- Financial Literacy
- Principles of Accounting II

**RECOMMENDED COURSES**
- Any business and computer science course
- World Language
- Marketing Principles
- Work-Based Learning

**POST-SECONDARY DEGREES, DIPLOMAS, AND CERTIFICATES**

See www.GAFutures.org for additional information

**TECHNICAL COLLEGES**
- Accounting
- Medical Administrative Assistant
- Office Accounting Specialist

**COLLEGES/UNIVERSITIES**
- Accounting
- Business Education
- Business Management
- Economics
- Finance
- Marketing and Real Estate

**CAREER AND TECHNICAL STUDENT ORGANIZATIONS**
- FBLA

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**Strong growth in accounting jobs throughout the next decade is expected to occur due to the increased growth in the number of new businesses and stricter accounting and auditing regulations.**
The Financial Service Pathway uses project based instruction to introduce students to the basics of the banking system, bank operating procedures, negotiable instruments, and the deposit and credit functions of banks. Methods used for measuring the financial performance of banks are analyzed. Current issues and future trends in banking are examined. Students explore the major functions of bank employees by completing a flow-of-work simulation. Students formulate business and individual investment decisions by comparing and contrasting a variety of investment options.

PATHWAY COURSES
- Introduction to Business and Technology
- Financial Literacy
- Banking, Investing and Insurance

RECOMMENDED COURSES
- Business Foundation and Business Management
- Desktop Publishing
- Financial Management
- Accounting 1 and 2
- Personal Financial Literacy
- Personal and Business Law 1 and 2
- Marketing 1 and 2
- Web Design

POST-SECONDARY DEGREES, DIPLOMAS, AND CERTIFICATES
See www.GAFutures.org for additional information
TECHNICAL COLLEGES, COLLEGES/UNIVERSITIES
- Financial Planning
- Business Administration-Financial Analysis
- Accounting
- Consumer and Family Financial Services
- Disaster Relief Insurance Claim Adjuster

CAREER AND TECHNICAL STUDENT ORGANIZATIONS
- FBLA
The AFJROTC program provides citizenship training and an aerospace science program for high school youth. Enrollment in the AFJROTC program is open to all young people who are in grades 9-12, physically fit, and are United States citizens. The curriculum includes Aerospace Science (AS), Leadership Education (LE) and Wellness. All students will be given academic credit towards graduation for successful completion of the AFJROTC courses provided by the Air Force.

PATHWAY COURSES
- Aerospace Science: A Journey Into Aviation History Leadership I
- Aerospace Science: Science of Flight and Leadership II
- Aerospace Science: Exploration of Space and Leadership III
- Aerospace Science: Management of the Cadet Corps and/or Leadership IV

RECOMMENDED COURSES
- Any World Language Elective
- Any Math Elective
- Any Science Elective
- Computer Applications

POST-SECONDARY DEGREES, DIPLOMAS, AND CERTIFICATES
See www.GAFutures.org for additional information
- Academy Appointments
- Active Reserve and National Guard options available
- Armed Forces (Advanced Placement Enlistment Opportunities) Army, Air Force, Marines, Navy, Coast Guard
- ROTC (Scholarships Available)

CAREER AND TECHNICAL STUDENT ORGANIZATIONS
- Air Force JROTC Drill Team (Armed)
- Air Force JROTC Drill Team (Unarmed)
- Field Trips to Aviation Museums, National Drill Competitions, Quiz Bowl, etc.

TOP CAREERS CHOICES
Students enrolled in JROTC programs may find high-demand, high-wage, and high-skilled occupations in the public sector at www.occsupplydemand.org or if they plan on a career in the military they will find “Military Occupations” listed on GAfutures under the Career Planning Tab.

ADDITIONAL CAREER CHOICES
- Air Traffic Controller
- Aircraft Repairer
- Animal Care Specialist
- Broadcast Specialist
- Calvary Scout
- Chaplain
- Computer and Detection Repairer
- Construction Equipment Repairer
- Criminal Investigation Special Agent
- Dental Specialist
- Equipment Repairer
- Finance Officer
- Health Care Specialist
- Human Resource Specialist
- Information Technology Specialist
- Intelligence Analyst
- Interpreter and Translator
- Medical Laboratory Specialist
- Military Police Officer
- Missile Fire Control Operator
- Missile Fire Control Maintainer
- Multi Media Illustrator
- Signal Intelligence Analyst
- Special Force
- Technical Engineer
- Transportation Management Coordinator
- Visual Information Equipment Operator

Source: GADOE Plans of Study
The program’s focus is reflected in its mission statement, “To Motivate Young People to be Better Citizens.” It prepares high school students for responsible leadership roles while making them aware of their rights, responsibilities, and privileges as American citizens. Army JROTC is a stimulus for promoting graduation from high school, and it provides instruction and rewarding opportunities that will benefit the student, community, and nation.

PATHWAY COURSES
- JROTC Army Leadership Education I
- JROTC Army Leadership Education II
- JROTC Army Leadership Education III
- JROTC Army Leadership Education IV

RECOMMENDED COURSES
- Any CTE Course
- World Language
- Modern US Military History

POST-SECONDARY DEGREES, DIPLOMAS, AND CERTIFICATES
See www.GAFutures.org for additional information
- ROTC (Scholarships Available)
- Academy Appointments
- Armed Forces (Advanced Placement Enlistment Opportunities) Army, Air Force, Marines, Navy, Coast Guard
- Active Reserve and National Guard options available

CAREER AND TECHNICAL STUDENT ORGANIZATIONS
- Academic Team
- Color Guard
- Drill Team
- Raiders
- Rifle Team

TOP CAREERS CHOICES
Students enrolled in JROTC programs may find high-demand, high-wage, and high-skilled occupations in the public sector at www.occsupplydemand.org or if they plan on a career in the military they will find “Military Occupations” listed on GAfutures under the Career Planning Tab.

ADDITIONAL CAREER CHOICES
Air Traffic Controller
Aircraft Repairer
Animal Care Specialist
Broadcast Specialist
Calvary Scout
Chaplain
Computer and Detection Repairer
Construction Equipment Repairer
Criminal Investigation Special Agent
Dental Specialist
Equipment Repairer
Finance Officer
Health Care Specialist
Human Resource Specialist
Information Technology Specialist
Intelligence Analyst
Interpreter and Translator
Medical Laboratory Specialist
Military Police Officer
Missile Fire Control Operator
Missile Fire Control Maintainer
Multi Media Illustrator
Signal Intelligence Analyst
Special Force
Technical Engineer
Transportation Management Coordinator
Visual Information Equipment Operator
Employment is projected to increase 27% through 2014 - more than in any other industry. The healthcare industry offers jobs in a variety of establishments: hospitals, nursing and residential care facilities, physicians, dental, and other health practitioners offices, home health care services, outpatient care centers, ambulatory health care services and medical and diagnostic laboratories.

PATHWAY COURSES
- Introduction to Healthcare Science
- Essentials of Healthcare
- Allied Health and Medicine

RECOMMENDED COURSES
- World Language
- Human Anatomy/Physiology
- Psychology
- Work-Based Learning

POST-SECONDARY DEGREES, DIPLOMAS, AND CERTIFICATES
See www.GAFutures.org for additional information

TECHNICAL COLLEGES
- Clinical Lab Technology
- Dental Assisting or Hygiene
- Medical Assisting
- Nurse Aid
- Pharmacy Technology
- Practical Nursing
- Radiologic Technology
- Registered Nursing
- Surgical Technology

COLLEGES/UNIVERSITIES
- Doctor
- Dentist
- Nurse Practitioner
- Physical Therapist
- Registered Nurse
- Surgeon

CAREER AND TECHNICAL STUDENT ORGANIZATIONS
- HOSA

TOP CAREERS CHOICES

**Dental Hygienist**
- Associate Degree needed
- $55,390 annual salary
- 280 annual average openings in Georgia

**Medical and Clinical Laboratory Technician**
- Associate Degree needed
- $30,846 annual salary
- 250 annual average openings in Georgia

**Pediatrician**
- First Professional needed
- $139,298 annual salary
- 70 annual average openings in Georgia

**Physical Therapist**
- Master Degree needed
- $65,042 annual salary
- 120 annual average openings in Georgia

**Surgical Technologist**
- Post-Secondary Vocational Training needed
- $32,157 annual salary
- 140 annual average openings in Georgia

ADDITIONAL CAREER CHOICES
- Clinical Laboratory Technician
- Dental Hygienist
- EMT
- Medical Doctor
- Medical Laboratory Technician
- Orthopedic Technologist
- Paramedic
- Pharmacist
- Physical Therapist
- Radiologic Technologist
- Surgical Technologist
- Veterinarian
The Patient Care pathway is appropriate for students wishing to pursue a career in the Healthcare Industry. The course will enable students to receive initial exposure to Healthcare Science skills and attitudes applicable to the healthcare industry. The concepts of health, wellness, and preventative care are evaluated, as well as, ethical and legal responsibilities of today’s healthcare provider. Fundamental healthcare skills development is initiated including medical terminology, microbiology, and basic life support.

PATHWAY COURSES
- Introduction to Healthcare Science
- Essentials of Healthcare
- Patient Care Fundamentals

RECOMMENDED COURSES
- World Language
- Human Anatomy/Physiology
- Physics
- Psychology
- Work-Based Learning

POST-SECONDARY DEGREES, DIPLOMAS, AND CERTIFICATES
See www.GAFutures.org for additional information

TECHNICAL COLLEGES
- Dental Hygiene
- Orthopedic Technology
- Physical Therapist Assistant
- Radiologic Technology
- Surgical Technology

COLLEGES/UNIVERSITIES
- Dentist
- Doctor
- Nurse Practitioner
- Physical Therapist
- Registered Nurse
- Surgeon

CAREER AND TECHNICAL STUDENT ORGANIZATIONS
- HOSA

TOP CAREERS CHOICES
Health Educator
Master Degree needed
$53,290 annual salary
90 annual average openings in Georgia

Medical and Health Services Manager
Bachelor Degree needed
$74,486 annual salary
330 annual average openings in Georgia

Occupational Therapist
Master Degree needed
$58,427 annual salary
100 annual average openings in Georgia

Registered Nurse
Associate/ Bachelor Degree needed
$53,893 annual salary
3,340 annual average openings in Georgia

ADDITIONAL CAREER CHOICES
Certified Nursing Assistant
Dental Assisting
Licensed Practical Nurse
Medical Assisting
Occupational Therapy Assistant
Physical Therapy Assistant
Respiratory Therapist
Surgical Technologist
Employment of EMTs and paramedics is expected to grow much faster than average through 2014. Demand for emergency services will increase as a large segment of the population ages and becomes more likely to have medical emergencies. Those certified in EMT-Intermediate and EMT-Paramedic fields will have favorable job prospects. There will also be a demand for part-time, volunteer EMTs and paramedics in rural areas.

PATHWAY COURSES
- Introduction to Healthcare Science
- Essentials of Healthcare Science
- Emergency Medical Responder

RECOMMENDED COURSES
- World Language
- Human Anatomy/Physiology
- Physics
- Psychology
- Work-Based Learning

POST-SECONDARY DEGREES, DIPLOMAS, AND CERTIFICATES
See [www.GAFutures.org](http://www.GAFutures.org) for additional information

TECHNICAL COLLEGES
- Fire Science
- Firefighter EMT

CAREER AND TECHNICAL STUDENT ORGANIZATIONS
- HOSA

TOP CAREERS CHOICES
EMT/Paramedic
- Post-Secondary Vocational Training needed
- $29,328 annual salary
- 290 annual average openings in Georgia

Fire Fighter
- Long-Term On-the-Job Training needed
- $33,030 annual salary
- 500 annual average openings in Georgia

Licensed Practical Nurse
- Post-Secondary Vocational Training needed
- $33,030 annual salary
- 960 annual average openings in Georgia

Registered Nurse
- Associate Degree needed
- $54,787 annual salary
- 3,340 annual average openings in Georgia

ADDITIONAL CAREER CHOICES
- Emergency Nurse
- EMT and Paramedic
- Firefighter
- Paramedic Technologist
The Culinary Arts pathway introduces students to fundamental food preparation terms, concepts, and methods in culinary arts where laboratory practice will parallel class work. Fundamental techniques, skills, and terminology are covered and mastered with an emphasis on basic kitchen and dining room safety, sanitation, equipment maintenance and operation procedures. Courses also provide an overview of the professionalism in the culinary industry and career opportunities leading into a career pathway in culinary arts.

PATHWAY COURSES
- Introduction to Culinary Arts
- Culinary Arts I
- Culinary Arts II

RECOMMENDED COURSES
- Algebra
- Any Science Elective
- Business Essentials
- Computer Applications
- Entrepreneurship
- World Language (Spanish and French)

POST-SECONDARY DEGREES, DIPLOMAS, AND CERTIFICATES
See www.GAFutures.org for additional information

TECHNICAL COLLEGES
- Culinary Arts (Standard Pathway or Baking and Pastry Pathway)
- Food and Beverage Management
- Hospitality Management

COLLEGES/UNIVERSITIES
- Culinary Arts (Standard Pathway or Baking and Pastry Pathway)
- Food and Beverage Management
- Food Science
- Hospitality Management

CAREER AND TECHNICAL STUDENT ORGANIZATIONS
- FCCLA

TOP CAREERS CHOICES
Chef and Head Cook
Work experience needed
$31,304 annual salary
110 annual average openings in Georgia

Food Services Manager
Work experience needed
$49,860 annual salary
400 annual average openings in Georgia

Pastry Chef
Work experience needed
$34,890 annual salary
130 annual average openings in Georgia

ADDITIONAL CAREER CHOICES
Baker
Cake Designer
Caterer
Chocolatier
Culinary Arts Instructor
Dining Room Management
Dining Room Service
Food and Beverage Director
Food Stylist and Photographer
Food Writer and Critic
Hotel Manager
Kitchen Manager
Personal Chef
Research and Development Chef
Restaurant Entrepreneur
Employment in this field is expected to grow faster than average through 2014 as a result of the increasing emphasis on disease prevention through improved dietary habits. A growing and aging population will increase the demand for meals and nutritional counseling agencies in hospitals, residential care facilities, schools, prisons, community health programs, and home health care.

**PATHWAY COURSES**
- Food, Nutrition, and Wellness
- Food for Life
- Food Science

**RECOMMENDED COURSES**
- Any Business and Computer Science Course
- Any Science Elective
- World Language
- Human Growth and Development for Early Childhood
- Work-Based Learning

**POST-SECONDARY DEGREES, DIPLOMAS, AND CERTIFICATES**
See [www.GAFutures.org](http://www.GAFutures.org) for additional information

**TECHNICAL COLLEGES**
- Culinary Arts
- Food and Beverage Management
- Food Production Assistant, Worker, or Apprentice
- Hotel/Restaurant/Tourism Management

**COLLEGES/UNIVERSITIES**
- Dietetics/Dietician
- FACS Education
- Food, Nutrition and Wellness Studies
- Food Science and Technology

**CAREER AND TECHNICAL STUDENT ORGANIZATIONS**
- FCCLA

**TOP CAREERS CHOICES**

**Chef and Head Cook**
- Work experience needed
- $31,304 annual salary
- 110 annual average openings in Georgia

**Dietician/Nutritionist**
- Bachelor Degree needed
- $42,619 annual salary
- 80 annual average openings in Georgia

**Food Scientist and Technologist**
- Bachelor Degree needed
- $55,869 annual salary
- 10 annual average openings in Georgia

**Food Services Manager**
- Work experience needed
- $46,384 annual salary
- 400 annual average openings in Georgia

**Health Education**
- Master Degree needed
- $53,290 annual salary
- 90 annual average openings in Georgia

**ADDITIONAL CAREER CHOICES**
- Agricultural Engineer
- Biochemist
- Chemical Technician
- Consumer Representative
- Dietetic Technician
- Family and Consumer Science Teacher
- Flavorist
- Food Inspector and Service Manager
- Geriatric Food Designer
- Health Educator and Inspector
- Microbiologist
- Product Evaluation Scientist
- Research and Development Specialist
- Sensory Scientist
- Teacher Educator
- Technical Writer
- Toxicologist
Careers in Computer Science lead individuals to create, modify, and test codes - all while inventing and designing new approaches to computing technology and finding innovative uses for existing technology. Career area focus requires solving complex problems in computing for business, medicine, science, and other fields.

**PATHWAY COURSES**
- Introduction to Digital Technology
- Computer Science Principles or AP Computer Science Principles
- AP Computer Science

**RECOMMENDED COURSES**
- Any Business and Computer Science Course
- Any Advanced Math Course
- Any World Language
- Entrepreneurship

**POST-SECONDARY DEGREES, DIPLOMAS, AND CERTIFICATES**
See www.GAFutures.org for additional information

**TECHNICAL COLLEGES**
- Computer Engineering Technology
- Electromechanical Engineering Technology
- Telecommunications Engineering Technology
- Industrial Engineering Technology
- Electrical and Computer Engineering Technology
- Computer Engineering Technology
- Computer System Design Specialist
- Network Design Technology Specialist
- Network Specialist

**COLLEGES/UNIVERSITIES**
- Computer Systems Engineering
- Bachelor of Arts with a Major in Applied Computer Science
- Bachelor of Science with a Major in Computer Science
- Bachelor of Science with a Major in Computer Game Design and Development

**SOURCE:**
GADOE Plans of Study

**TOP CAREERS CHOICES**
Employment of computer programmers is expected to increase 12 percent from 2010 to 2020, about as fast as the average for all occupations.

**Computer Programmers**
Bachelor Degree needed
$75,400 annual salary
230 annual average openings in Georgia

**Computer System Analysts**
Bachelor Degree needed
$73,800 annual salary
810 annual average openings in Georgia

**Software Developers, Application**
Bachelor Degree needed
$86,300 annual salary
340 annual average openings in Georgia

**ADDITIONAL CAREER CHOICES**
- Computer Programmers
- Computer and Information Systems Managers
- Computer Hardware Engineers
- Computer Network Architects
- Computer System Analysts
- Database Administrators
- Information Security Analysts
- Network and Computer Systems Administrators
- Software Engineers
- Video Game Designers
The Programming pathway gives many opportunities to strengthen problem solving skills, and provides needed skills in all disciplines.

PATHWAY COURSES

- Introduction to Digital Technology
- Computer Science Principles
- Programming, Apps, Games and Society

RECOMMENDED COURSES

- Any Business and Computer Science Course
- Broadcast/Video Production
- World Language
- Introduction to Engineering Drawing and Design
- Introduction to Graphics and Design
- Work-Based Learning

POST-SECONDARY DEGREES, DIPLOMAS, AND CERTIFICATES

See www.GAFutures.org for additional information

- Business Information Systems
- Computer Forensics
- Computer Information Systems
- Computer Programming
- Computer Software Engineering
- Computer Science
- Information Science
- Information Technology
- Mathematics

CAREER AND TECHNICAL STUDENT ORGANIZATIONS

- FBLA
- SkillsUSA

TOP CAREERS CHOICES

Computer Programmers
Bachelor Degree needed
$73,674 annual salary
330 annual average openings in Georgia

Computer Software Engineers
Bachelor Degree needed
$77,022 annual salary
730 annual average openings in Georgia

Computer System Analysts
Bachelor Degree needed
$74,443 annual salary
890 annual average openings in Georgia

Computing and Information Systems Managers
Bachelor Degree plus experience needed
$101,400 annual salary
530 annual average openings in Georgia

ADDITIONAL CAREER CHOICES

- Actuaries
- Computer Scientist
- Computer Software Engineer
- Computer Systems Analyst
- Database Administrator
- Mathematician
The Web and Digital Design pathway instructs students on the basics of designing a web page and leads to advanced web design and 3D animation. Web design can be found in every area of business and industry, as well as in individuals’ personal life. Students will have the opportunity to learn skills that will help them create web pages, gaming and other digital media features.

PATHWAY COURSES
• Introduction to Digital Technology
• Digital Design
• Web Design

RECOMMENDED COURSES
• Any Business and Computer Science Course
• Art
• Broadcast/Video Production
• World Language
• Introduction to Graphics and Design
• Marketing Principles
• Work-Based Learning
• Yearbook/Journalism

POST-SECONDARY DEGREES, DIPLOMAS, AND CERTIFICATES
See www.GAFutures.org for additional information

TECHNICAL COLLEGES
• Computer Animation and Multimedia
• Computer Simulation
• Digital Media
• Internet Specialist - Web Site Design
• Printing and Graphics Technology
• Web Site Designer

COLLEGES/UNIVERSITIES
• Animation
• Computational Media
• Computer Science
• Graphic Designer

CAREER AND TECHNICAL STUDENT ORGANIZATIONS
• FBLA

TOP CAREERS CHOICES

Computer Specialist
Associate Degree needed
$55,640 annual salary
80 annual average openings in Georgia

Desktop Publisher
Post-Secondary Vocational Training needed
$30,680 annual salary
30 annual average openings in Georgia

Graphic Designer
Bachelor Degree needed
$44,034 annual salary
160 annual average openings in Georgia

Multi-Media Artist and Animator
Bachelor Degree needed
$44,554 annual salary
40 annual average openings in Georgia

ADDITIONAL CAREER CHOICES

Computer Service Technician
Database Developer
Graphic Designer
Help Desk Support
Illustrator
Internet Specialist
Multimedia Developer
Network Analyst
Network Engineer
Programmer
Project Manager
Video Game Developer
Web Developer
Webmaster
Website Designer
Software Trainer
Law, Public Safety, Corrections and Security workers plan, manage, and provide legal, public safety, and security and protective services. Occupations are numerous and represent multiple levels of education and skills. The Forensic Science Pathway is designed to provide students the opportunity to study the forensic application of principles of chemistry, biology, physics and other disciplines. Students will utilize chromatography, electrophoresis, microscopic observation, and other scientific techniques in their studies. Students will also learn some investigative techniques and crime scene investigation skills through the lens of the scientific method.

PATHWAY COURSES
- Introduction to Law, Public Safety, Corrections and Security
- Criminal Justice Essentials
- Forensic Science and Criminal Investigations

RECOMMENDED COURSES
- Accounting
- Anatomy
- Any Health Care Science Course
- Computer Applications
- Foreign Language
- Forensics Science Elective
- Legal Environment of Business
- Spanish
- Wildlife Management
- Work-Based Learning

POST-SECONDARY DEGREES, DIPLOMAS, AND CERTIFICATES
See www.GAFutures.org for additional information

TECHNICAL COLLEGES
- Criminal Justice Technology
- Law Enforcement Technician

COLLEGES/UNIVERSITIES
- Criminal Justice
- Criminology
- Pre-law

CAREER AND TECHNICAL STUDENT ORGANIZATIONS
- SkillsUSA

TOP CAREERS CHOICES

Detectives and Criminal Investigators
Bachelor’s Degree
$45,600 annual salary
160 annual average openings in Georgia

Police and Sheriff’s Patrol Officers
Some college, no degree required
$37,400 annual salary
710 annual average openings in Georgia

Forensic Science Technicians
Bachelor Degree needed
$28,400 annual salary
10 annual average openings in Georgia

ADDITIONAL CAREER CHOICES
- Agents
- Animal Controllers
- Bloodstain Pattern Analyst
- Criminal Investigators and Special Agents
- Detectives and Criminal Investigators
- First-Line Supervisors
- Forensics Ballistics Expert
- Forensic Science Technicians
- Immigration and Customs Inspectors
- Police and Sheriff’s Patrol Officers
- Polygraph Examiner
- Sheriffs and Deputy Sheriffs
Students 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), as well as international marketing, management and entrepreneurship.

**PATHWAY CONCENTRATION COURSES**
- Marketing Principles
- Marketing and Entrepreneurship
- Marketing Management

**RECOMMENDED COURSES**
- Any Business and Computer Science Course
- World Language
- Sports and Entertainment Marketing
- Work-Based Learning

**POST-SECONDARY DEGREES, DIPLOMAS, AND CERTIFICATES**
See www.GAFutures.org for additional information

**TECHNICAL COLLEGES**
- Business Administration
- Entrepreneurship
- Expert Sales Management
- Fashion Design and Marketing
- Retail and Merchandising

**COLLEGES/UNIVERSITIES**
- Accounting
- Advertising
- Business Economics
- Communication
- Graphic Arts
- Hospitality Administration
- International Business
- Management
- Marketing
- Professional Sales
- Real Estate
- Risk Management and Insurance

**CAREER AND TECHNICAL STUDENT ORGANIZATIONS**
- DECA

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**MARKETING AND MANAGEMENT PATHWAY**

**TOP CAREERS CHOICES**

- **Chief Executive**
  - Bachelor Degree plus experience needed
  - $155,168 annual salary
  - 850 annual average openings in Georgia

- **Human Resources, Training and Labor Relations Specialist**
  - Bachelor Degree needed
  - $53,061 annual salary
  - 150 annual average openings in Georgia

- **Marketing Manager**
  - Bachelor Degree plus experience needed
  - $61,464 annual salary
  - 210 annual average openings in Georgia

- **Marketing Research Analyst**
  - Bachelor Degree needed
  - $75,754 annual salary
  - 470 annual average openings in Georgia

**ADDITIONAL CAREER CHOICES**
- Advertising Account Executive
- Airline Customer Service Agent
- Art Dealer and Director
- Barber and Salon Owner
- Brand Manager
- Cashier
- Communications Specialist
- Creative Director
- Customer Service Representative
- Demonstrator and Product Promoter
- Desktop Publisher
- Entrepreneur
- Fashion Retailer
- Floral Designer
- Funeral Director
- Interior Designer
- Landscape Architect
- Logistics Specialist
- Market Research Analyst
- Media Buyer
- Mortgage Broker
- Product Development Management
- Public Relations Specialist
- Purchaser
- Real Estate Agent
- Retail Buyer and Salesperson
- Sales Representative
- Sports Marketer
- Travel Agent
Introduction to Engineering Design (IED) is a high school level course that is appropriate for 9th or 10th grade students who are interested in design and engineering. The major focus of the IED course is to expose students to design process, research and analysis, teamwork, communication methods, global and human impacts, engineering standards, and technical documentation. IED gives students the opportunity to develop skills and understanding of course concepts through activity-, project-, and problem-based (APPB) learning. Used in combination with a teaming approach, APPB-learning challenges students to continually hone their interpersonal skills, creative abilities and understanding of the design process. It also allows students to develop strategies to enable and direct their own learning, which is the ultimate goal of education.

PATHWAY COURSES
- Foundations of Engineering and Technology
- Engineering Concepts
- Engineering Applications

RECOMMENDED COURSES
- Algebra/Geometry
- Trigonometry/Physics

POST-SECONDARY DEGREES, DIPLOMAS, AND CERTIFICATES
See www.GAFutures.org for additional information

TECHNICAL COLLEGES
- State Registered Apprenticeships
- Special Purpose Schools
- On-the-Job Training
- Military

CAREER AND TECHNICAL STUDENT ORGANIZATIONS
- TSA

TOP CAREERS CHOICES

Civil Engineer
Bachelor Degree needed
$56,259 annual salary

Electrical Engineer
Bachelor Degree needed
$52,990 annual salary

Industrial Engineer
Bachelor Degree needed
$47,720 annual salary

Materials Engineer
Bachelor Degree needed
$51,420 annual salary

Mechanical Engineer
Bachelor Degree needed
$47,900 annual salary

ADDITIONAL CAREER CHOICES

Civil Engineer
Designer
Drafter
Machinist
Manufacturing
Mechanical Engineer
Quality Control Inspector
The auto mechanics of the past were self-taught, learning from local auto shops or dealerships. Employers are now hiring employees with good people skills and backgrounds in electronics, computers and communications, along with math and problem-solving skills. This program will teach “head skills” and “hand skills” to prepare the student for the world of automotive technology careers and to meet the needs of prospective employers.

PATHWAY COURSES
- Basic Maintenance and Light Repair
- Maintenance and Light Repair 2
- Maintenance and Light Repair 3

RECOMMENDED COURSES
- Advanced Algebra/Trigonometry
- Business Essentials
- Computer Applications
- Engine Performance Concepts
- Entrepreneurship
- World Language
- Heating Ventilation and Air Conditioning Concepts
- Money Management
- Physics
- Preventative Maintenance Inspection
- Work-Based Learning

POST-SECONDARY DEGREES, DIPLOMAS, AND CERTIFICATES
See www.GAFutures.org for additional information

TECHNICAL COLLEGES
- ASE
- Automotive Technology/Technician
- Welding

COLLEGES/UNIVERSITIES
- Education
- Business Management
- Automotive Engineering

CAREER AND TECHNICAL STUDENT ORGANIZATIONS
- SkillsUSA

TOP CAREERS CHOICES
Automotive Service Technician and Mechanics
Post-Secondary Vocational Award needed
$34,549 annual salary
1,000 annual average openings in Georgia

Bus and Truck Mechanic/Diesel Engine Specialist
Post-Secondary Vocational Award needed
$36,504 annual salary
380 annual average openings in Georgia

Electrical and Electronics Repairers, Commercial and Industrial Equipment
Post-Secondary Vocational Award needed
$47,611 annual salary
130 annual average openings in Georgia

Vocational Teacher, Post-Secondary School
Bachelor Degree or higher plus work experience
$44,637 annual salary
250 annual average openings in Georgia

ADDITIONAL CAREER CHOICES
Auto Manufacturer Sales
Auto Manufacturer Service
Auto and Body Technician
Automotive Engineer and Mechanist
Automotive Parts Sales and Sales
Body Shop Manager
Dealership and Shop Owner
DOT Salvage Inspector
Insurance Adjuster
Parts Professional
Quality Control Technician
Retail
Service Advisor and Director Dealership
Specialized Technician Teacher
Technician (ASE Certified)
Warranty Clerk
Waste Management (EPA)