

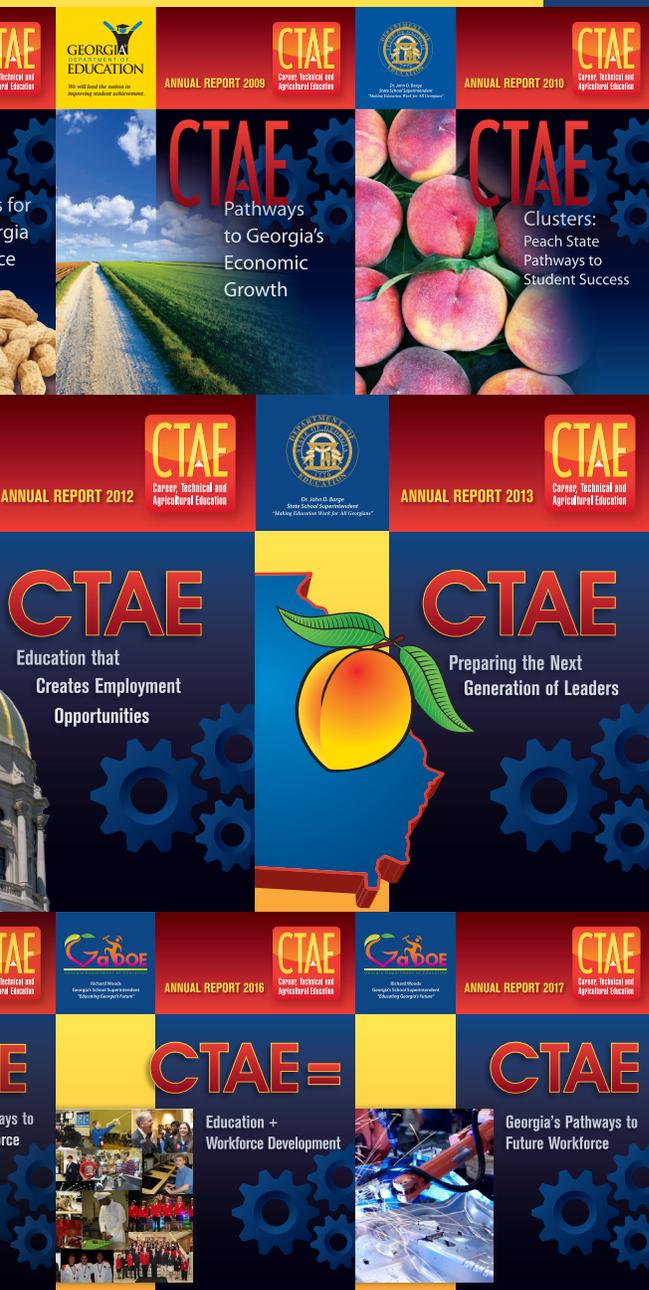


Richard Woods  
Georgia's School Superintendent  
"Educating Georgia's Future"

# CTAE

Career, Technical and  
Agricultural Education

## ANNUAL REPORT 2018



# CTAE

## Partnering with GA's Business & Industry





Richard Woods  
Georgia's School Superintendent  
"Educating Georgia's Future"



Dear Friends and Colleagues,

I am proud to share with you the Career, Technical, and Agricultural Education annual report.

The success and expansion of CTAE continues, and partnerships between industry and education continue to help our students prepare for life. CTAE pathways equip students for success after graduation, whether in industry, higher education or the military.

CTAE boasts a graduation rate of 96.5 percent, and continues to expand across the state. As new technologies and industries develop, new CTAE coursework is created to meet the need. Educators are even expanding opportunities to prepare students for innovative careers that will exist in the future.

Georgia's CTAE programs encompass what Georgia education stands for: expanding opportunities to prepare all students for life.

These are exciting times in Georgia's public schools, and I deeply appreciate your interest and support.

Sincerely,

Richard Woods  
State School Superintendent

**Georgia Department of  
Education Vision:  
*Educating Georgia's Future***

## MESSAGE FROM CTAE DIRECTOR

A summary of the status and accomplishments of the secondary Career, Technical and Agricultural Education (CTAE) programs in the state of Georgia during the 2017-18 school year is contained in this annual report.

This year has been known as the year of the CTAE Strategic Plan. In fall 2017, the Georgia Department of Education launched a strategic planning process to develop a five-year plan to guide the future of CTAE programs in Georgia. The inclusive strategic planning effort was guided by a steering committee made up of leaders from business, education, trade associations, and government. The process was informed by five regional listening sessions, stakeholder interviews, a business partner survey, and labor and education data analysis.



This year has been a time to build upon the key message CTAE educators heard in the previous school year at the regional economic development meetings about the need to create and strengthen partnerships with the business community. The focus of Georgia CTAE for this year has been building deep, meaningful, and sustainable relationships with business and industry.

The steering committee agreed that the **mission** of CTAE is *to educate Georgia's future workforce by providing experiences for Georgia students that will prepare them for workplace success.* The **vision**, as determined by the committee is *Career, Technical, and Agricultural Education will provide educational experiences of superior quality and value for students that drive economic prosperity for all.* **Values** established by the steering committee are:

- Career-focused
- Employer Partnerships
- Experiential
- Innovation
- Integration
- Results-based
- Student-centered
- Quality

Four Priorities including short-term and long-term goals were set by the steering committee. The priorities include:

1. Georgia's Career, Technical, and Agricultural Education will change perceptions of the career-focused programs.
2. We will provide Georgia students access to quality career counseling and development throughout grades K-12.
3. Teachers and counselors are central to student success in CTAE; therefore, we will prioritize increased teacher and counselor recruitment, retention, and professional development efforts.
4. In order for CTAE and students to be successful long term, it is imperative that we expand CTAE opportunities and teach employability skills throughout grades K-12.

The CTAE Five-Year Strategic Plan serves as a vision for Georgia's CTAE program and will be used to guide the work of CTAE in Georgia for the next five years. The complete plan is available at <http://bit.ly/GA-CTAE-Strategic-Plan>. The steering committee from the Strategic Plan was converted into a State CTAE Advisory Committee that has been tasked to provide accountability to the CTAE Division for implementing the four priorities.

As the Strategic Plan is implemented across Georgia, we should continue to see increases in CTAE accomplishments as depicted in the 2017-18 CTAE Annual Report. Some of the increases are in the CTAE graduation rate, number of middle and high school students enrolled in CTAE courses, number of CTAE pathway completers, and the number of industry credentials earned by students.

I encourage you to take time to review all the accomplishments in this report.

Sincerely,

Barbara M. Wall, Ed.D.  
Director of Career, Technical and Agricultural Education

### CTAE Mission

**To educate Georgia's future workforce by providing experiences for Georgia students that will prepare them for workplace success**

## Annual Report 2018

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# Georgia Career, Technical and Agricultural Education

## CTAE: Partnering with GA's Business & Industry

### CTAE At-A-Glance

Georgia Department of Education

#### 2017-2018 Georgia Career, Technical and Agricultural Education

##### Secondary Education—Grades 6-12

#### CTAE Programs

- 180 Local School Systems

#### Total Georgia Student Enrollment

- 567,801 Students in Grades 9-12
- 438,937 Students in Grades 6-8

#### Student Enrollment in CTAE Courses

(Students enrolled in one or more CTAE courses)

- 67.88% of all Students in Grades 9-12 Statewide (385,431 students)
- 61.75% of all Students in Grades 6-8 Statewide (271,064 students)

#### CTAE Enrollment by Gender in Middle and High Schools

- Male 53.14%
- Female 46.86%

#### CTAE Enrollment by Race

- Black 37.83%
- Hispanic 14.28%
- White 40.74%
- Other 7.15%

#### CTAE High School Concentrators

(Students completing 3 or more courses in a Program Area)

- 150,603 Students

#### Graduation Rate for CTAE Completers

- 96.30%

Student Enrollment is the **unduplicated count**: Each student is counted once, although he/she could be enrolled in more than one CTAE program area.

Data Source: Georgia Department of Education Website (2017-2018 CTAE Enrollment), data tables provided by the CTAE division, and Perkins IV Consolidated Annual Report FY 2017-2018.

### CTAE Vision

*Career, Technical, and Agricultural Education will provide educational experiences of superior quality and value for students that drive economic prosperity for all.*

*— Barbara M. Wall, Ed.D.  
Director of Career,  
Technical and Agricultural Education*

Career, Technical and Agricultural Education (CTAE) is preparing Georgia's students for their next step after high school—college, beginning a career, registered apprenticeships, or the military. Georgia CTAE pathway course offerings, and the new Educating Georgia's Future Workforce initiative, leverage partnerships with industry and higher education to ensure students have the skills they need to thrive in the future workforce.

CTAE offers students more than 130 career pathways within the 17 Georgia Career Clusters. The CTAE curriculum includes national standards, CTAE standards, and Georgia Performance Standards, in addition to career development activities which allow students to make the connection between class activities and the workforce. CTAE career pathways enable students to experience the workplace relevance of what they are learning in the classroom. All CTAE pathways focus on the following foundation skills required for employment success: Technical Skills; Academic Foundations; Communications; Problem Solving and Critical Thinking; Information Technology Applications; Organizational Systems; Safety, Health and Environment; Leadership and Teamwork; Ethics and Legal Responsibilities; Career Development; and Entrepreneurship.

During FY 2018 over 271,064 middle school students (61.75% of all Georgia middle school students) and 385,431 high school students (67.88% of all Georgia high school students) participated in Georgia's Department of Education Career, Technical and Agricultural Education (CTAE) Career Cluster programs. CTAE students participate in local, state, regional, and national Career Technical Student Organization (CTSO) activities and events which support classroom instruction and laboratory experiences.

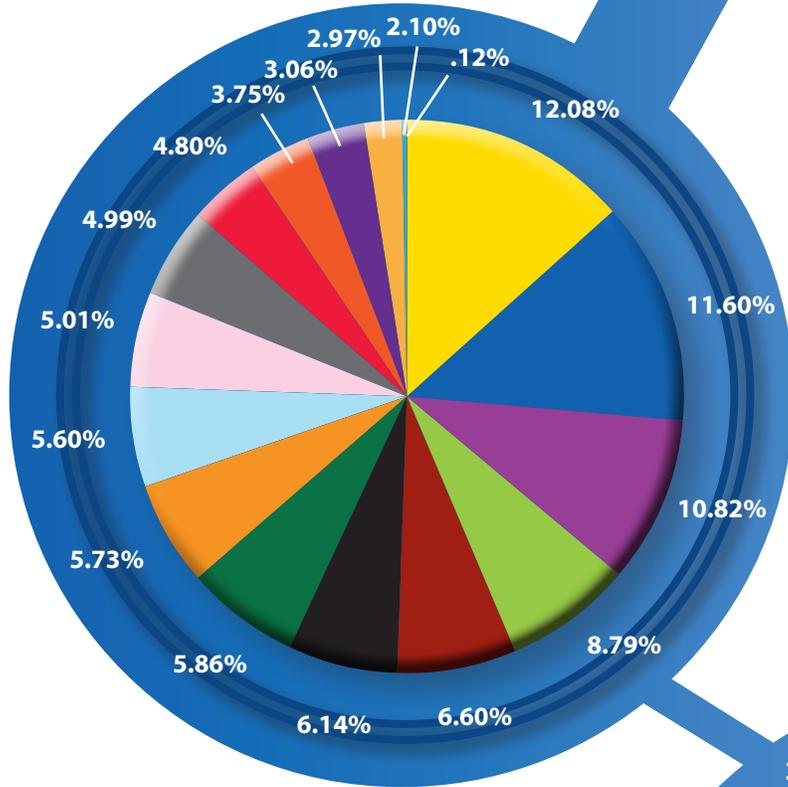
A primary indicator of program success is the graduation rate of students participating in CTAE. In FY 2018, CTAE Concentrators, students who took a sequence of three or more classes in a single program area, graduated at a higher rate than all Georgia students. The graduation rate was 96.3% for CTAE Concentrators as compared to a graduation rate of 81.6% for all students statewide.

The state career and technical education system includes programs offered at the middle and secondary school level by the CTAE Division of the Georgia Department of Education (GaDOE) and at the postsecondary level by the Technical College System of Georgia (TCSG) and Georgia Board of Regents. Guidelines of the Carl D. Perkins Career and Technical Education Improvement Act of 2006 (Perkins IV) align the CTAE program with the academic indicators of the Every Student Succeeds Act.



Georgia CTSO Officers at the Capitol.

**Chart: Percentage of High School Students (Grades 9-12) Enrolled in each CTAE Program Area in 2017-2018**

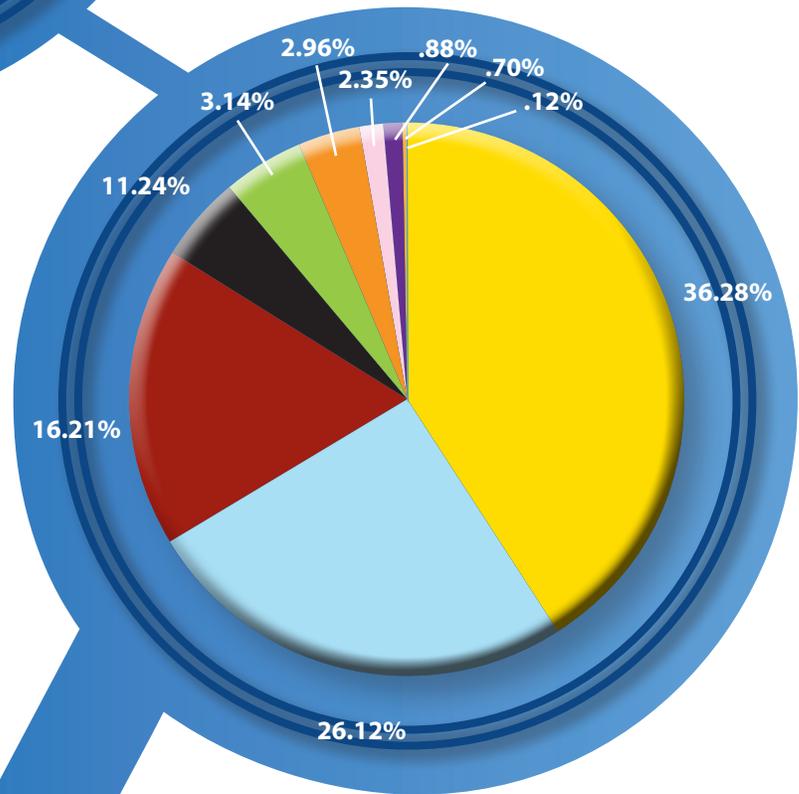


**Total CTAE Enrollment**

Business Management and Administration (BMA)	73,075
Information Technology (IT)	70,191
Finance (FIN)	65,450
Health Science (HHS)	53,198
Human Services (HS)/Family and Consumer Sciences (FACS)	39,954
Agriculture, Food and Natural Resources (AGED)	37,148
Hospitality and Tourism (HT)	35,479
Arts, AV/Technology and Communications (AAVTC)	34,694
Science, Technology, Engineering and Mathematics (STEM)	33,881
Marketing (MKTG)	30,302
Manufacturing (MANG)	30,204
Government and Public Administration (GPS)	29,024
Education and Training (ET)	22,671
Law, Public Safety, Corrections and Security (LPSCS)	18,520
Architecture and Construction (AC)	17,947
Transportation, Distribution and Logistics (TDL)	12,699
Energy (NRG)	707

**Total CTAE Enrollment**

Business Management and Administration (BMA)	130,216
Science, Technology, Engineering and Mathematics (STEM)	93,746
Human Services (HS)/Family and Consumer Sciences (FACS)	58,175
Agriculture, Food and Natural Resources (AGED)	40,341
Health Science (HHS)	11,272
Arts, AV/Technology and Communications (AAVTC)	10,637
Marketing (MKTG)	8,446
Law, Public Safety, Corrections and Security (LPSCS)	3,175
Architecture and Construction (AC)	2,522
Transportation, Distribution and Logistics (TDL)	429



**Chart: Percentage of Middle School Students (Grades 6-8) Enrolled in each CTAE Program Area in 2017-2018**

Note: Student enrollment in each CTAE program area is an unduplicated count. A student could be counted more than once if enrolled in multiple programs.

*We have over 1,000 schools that are in the STEM pipeline and students who complete career pathways achieve a 96 percent graduation rate. Our state is ranked 15th in the nation for AP, and we have worked to create STEM and economic development partnership designations for our districts and schools. We have expanded opportunities by establishing diploma seals in the areas of fine arts, international skills, employability skills, leadership skills, and career readiness for our high school students.*

*– Richard Woods, Georgia's School Superintendent*

## CTAE Achievements in 2017-2018

### Graduation Rate for CTAE Concentrators

- The FY 2018 graduation rate of 96.30% for CTAE Concentrators compares favorably with Georgia's overall graduation rate of 81.60%.
- The CTAE graduation rate of 96.30% is 3.8% above the State Target (92.5%) in FY 2018.
- The FY 2018 CTAE graduation rate (96.30%) increased as compared to the FY 2017 CTAE graduation rate (96.00%).

### CTAE Postsecondary Transitions

- In FY 2018 a total of 37,706 students participated in Dual Enrollment, earning college credits, compared to 35,862 students in FY 2017 (a 5.14% increase).

### CTAE Professional Learning Participation

- 209 CTAE Professional Learning Workshops were held during FY2017, with over 8,289 CTAE educators participating in a total of 50,032 professional learning contact hours.
- 230 CTAE Professional Learning Workshops were held during FY 2018, with over 7,124 CTAE educators participating.

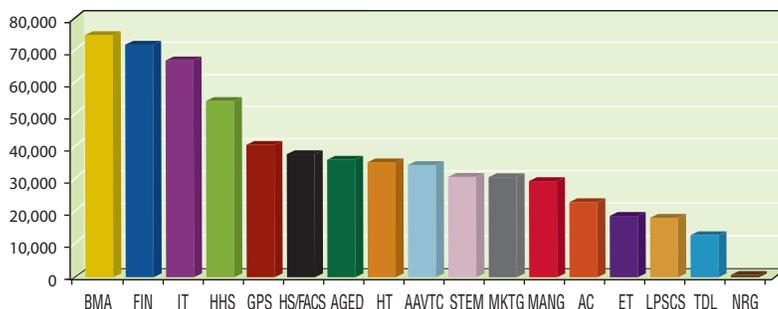
### Georgia STEM (Science, Technology, Engineering, and Math) Program

- In FY 2018 over 1,270 educators, including 578 CTAE teachers, participated in the CTAE Annual STEM Forum, a state-wide program to facilitate CTAE, math, and science teachers collaborated and learned about STEM initiatives, methods to implement STEM strategies in the classroom, and the statewide STEM Georgia Teachers Academies.
- Over 1,000 Georgia schools are currently working towards STEM Certification from the Georgia Department of Education. During FY 2018, 71 schools, including 15 high schools, 15 middle schools, and 41 elementary schools held STEM certification. These schools are required to have 50% female students in the STEM programs.

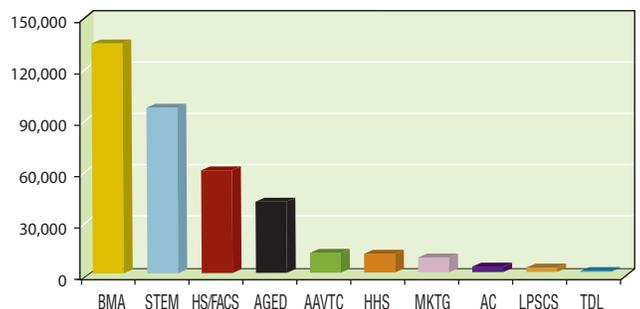
### CTAE Program Achievements

- The total number of high school students enrolled in CTAE in FY 2018 (385,431 students) increased as compared to FY 2017 (350,948 students).
- The total number of middle school students enrolled in CTAE in FY 2018 (271,064 students) increased as compared to FY 2017 (240,224 students).
- 61.75% of all middle school and 67.88% of all high school students were enrolled in CTAE courses in FY 2018.
- In FY 2018, the number of CTAE students completing three or more classes in a program area (150,603 CTAE Concentrators) increased 15.36% as compared with 130,547 CTAE Concentrators in FY 2017.
- 56,522 pathway completers sat for the end of pathway assessments in FY 2018 as compared with 49,911 high school students in FY 2017 (a 13.25% increase).
- CTAE Career Clusters held 510 industry certifications in FY 2018 compared with 505 industry certifications in FY 2017 (a 1% increase).
- 36,177 high school students earned an industry credential in FY 2017 as compared with 32,292 high school students in FY 2017 (a 12.03% increase).
- Student unduplicated enrollment in Junior Reserve Officers Training Corps (JROTC) numbered 42,368 in FY 2018. This was an 11.37% increase over FY 2017 (38,044 students).
- Student membership in CTSOs included 148,610 students in FY 2018.
- 98% of employers would recommend the Georgia Youth Apprenticeship Program to other companies.
- 97.6% of employers participating in the Georgia Youth Apprenticeship Program agreed that students performed at the level expected, and 98.5% of employers agreed that students understand written instructions and materials at the level expected.
- 98% of employers agreed that students in the Georgia Youth Apprenticeship Program exhibit satisfactory communication (written and verbal) skills. 97.5% of employers agreed that students who participate in YAP exhibit satisfactory problem-solving skills, and 95.5% of employers agree that students demonstrate technology skills at the level expected.
- 96.5% of employers found the Georgia Youth Apprenticeship Program beneficial to their companies.

CTAE High School Program Enrollment: 2017-2018



CTAE Middle School Program Enrollment: 2017-2018



**AGRICULTURE, FOOD AND NATURAL RESOURCES (AGED) 2017-2018**



**AGRICULTURE, FOOD and NATURAL RESOURCES (AGED) Career Cluster** includes the production, processing, marketing, financing, distribution, and development of agricultural commodities and resources. These commodities include food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.

<b>Student Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 37,148 <b>Male</b> 23,086 (62%) <b>Female</b> 14,062 (38%)
<b>Student Enrollment in Grades 6-8</b>	<b>40,341</b>
<b>Number of Industry-Certified Programs</b>	<b>37</b>
<b>Number of CTAE Teachers</b>	<b>411 High School Teachers</b> <b>144 Middle School Teachers</b>

\*A teacher may teach in more than one Career Cluster.

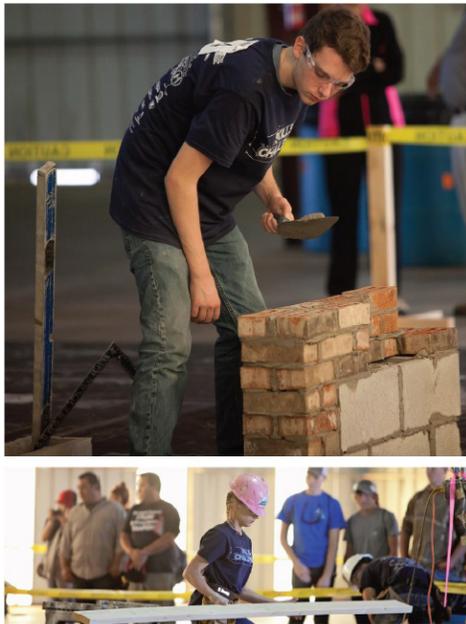


**Agriculture, Food and Natural Resources Career Pathways**

- ✦ *Agribusiness Systems*
- ✦ *Agriculture Energy Systems*
- ✦ *Agriculture Leadership in Food Product Processing*
- ✦ *Agricultural Mechanics and Metal Fabrication*
- ✦ *Agriculture Leadership in Animal Production*
- ✦ *Agriculture Leadership in Aquaculture*
- ✦ *Agriculture Leadership in Forestry*
- ✦ *Agriculture Leadership in Horticulture*
- ✦ *Agriculture Leadership in Plant Science*
- ✦ *Agriculture Mechanics and Electrical Systems*
- ✦ *Agriculture Mechanics Systems*
- ✦ *Agriscience Systems*
- ✦ *Animal Production and Processing*
- ✦ *Animal/Mechanical Systems*
- ✦ *Companion Animal Systems*
- ✦ *Environmental Agriculture Systems*
- ✦ *Equine Science*
- ✦ *Food Animal Systems*
- ✦ *Food Products and Processing Systems*
- ✦ *Forest Mechanical Systems*
- ✦ *Forest/Renewable Energy*
- ✦ *Forestry and Animal Science*
- ✦ *Forestry Management Systems*
- ✦ *Forestry/Natural Resources Management*
- ✦ *Forestry/Wildlife Systems*
- ✦ *Horticulture and Animal Science*
- ✦ *Horticulture and Forest Science*
- ✦ *Horticulture Mechanical Systems*
- ✦ *Landscape Management Systems*
- ✦ *Plant and Floral Design Systems*
- ✦ *Plant and Floriculture Systems*
- ✦ *Plant and Landscape Systems*
- ✦ *Plant Mechanical Systems*
- ✦ *Veterinary Science*

**ARCHITECTURE AND CONSTRUCTION (AC) 2017-2018**

**ARCHITECTURE and CONSTRUCTION (AC) Career Cluster** trains students for careers in designing, planning, managing, and building structures.



<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 17,947 <b>Male</b> 14,874 (83%) <b>Female</b> 3,073 (17%)
<b>Student Enrollment in Grades 6-8</b>	2,522
<b>Number of Industry-Certified Programs</b>	64
<b>Number of CTAE Teachers</b>	281 High School Teachers 12 Middle School Teachers

\*A teacher may teach in more than one Career Cluster.

**Architecture and Construction Career Pathways**

- ✦ *Architectural Drawing and Design*
- ✦ *HVACR Electrical*
- ✦ *Carpentry*
- ✦ *Industrial Maintenance*
- ✦ *Electrical*
- ✦ *Machining Operations*
- ✦ *Fine Furniture-Cabinetmaking*
- ✦ *Masonry*
- ✦ *Heating, Ventilation, Air Conditioning & Refrigeration*
- ✦ *Plumbing*
- ✦ *Sheet Metal*
- ✦ *Welding*

**ARTS, AV/TECHNOLOGY AND COMMUNICATIONS (AAVTC) 2017-2018**

**ARTS, AV/TECHNOLOGY and COMMUNICATIONS (AAVTC) Career Cluster** trains students for careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content.



**Arts, AV/Technology and Communications Career Pathways**

- ✦ *Animation and Digital Media*
- ✦ *Audio Video Technology and Film*
- ✦ *Graphic Communication*
- ✦ *Graphic Design*



<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 34,694 <b>Male</b> 20,070 (58%) <b>Female</b> 14,624 (42%)
<b>Student Enrollment in Grades 6-8</b>	10,637
<b>Number of Industry-Certified Programs</b>	49
<b>Number of CTAE Teachers</b>	390 High School Teachers 51 Middle School Teachers

\*A teacher may teach in more than one Career Cluster.



## BUSINESS, MANAGEMENT AND ADMINISTRATION (BMA) 2017-2018

### BUSINESS, MANAGEMENT, and ADMINISTRATION (BMA)

**Career Cluster** prepares 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.

<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 73,075 <b>Male</b> 40,606 (56%) <b>Female</b> 32,469 (44%)
<b>Student Enrollment in Grades 6-8</b>	<b>130,216</b>
<b>Number of Industry-Certified Programs</b>	<b>99</b>
<b>Number of CTAE Teachers</b>	<b>922 High School Teachers</b> <b>437 Middle School Teachers</b>

\*A teacher may teach in more than one Career Cluster.

### Business, Management and Administration Career Pathways

- ✦ *Business and Technology*
- ✦ *Entrepreneurship*
- ✦ *Human Resources Management*



## EDUCATION AND TRAINING (ET) 2017-2018

### EDUCATION and TRAINING (ET)

**Career Cluster** includes planning, managing, and providing education and training services as well as related learning support services.



### Education and Training Career Pathways

- ✦ *Early Childhood Care and Education*
- ✦ *Teaching as a Profession*

<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 22,671 <b>Male</b> 2,684 (12%) <b>Female</b> 19,987 (88%)
<b>Number of Industry-Certified Programs</b>	<b>29</b>
<b>Number of CTAE Teachers</b>	<b>342 High School Teachers</b>

\*A teacher may teach in more than one Career Cluster.



**ENERGY (NRG) 2017-2018**

**ENERGY (NRG) Career Cluster** prepares individuals for careers in the designing, planning, maintaining, generating, transmission, and distribution of traditional and alternative energy.

<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 707 <b>Male</b> 601 (85%) <b>Female</b> 106 (15%)
<b>Number of Industry-Certified Programs</b>	<i>Note: Program is exploring industry certification</i>
<b>Number of CTAE Teachers</b>	<b>24 High School Teachers</b>

\*A teacher may teach in more than one Career Cluster.



**Energy Career Pathways**

- ✦ *Energy and Power: Generation, Transmission and Distribution*
- ✦ *Energy Systems*



**FINANCE (FIN) 2017-2018**

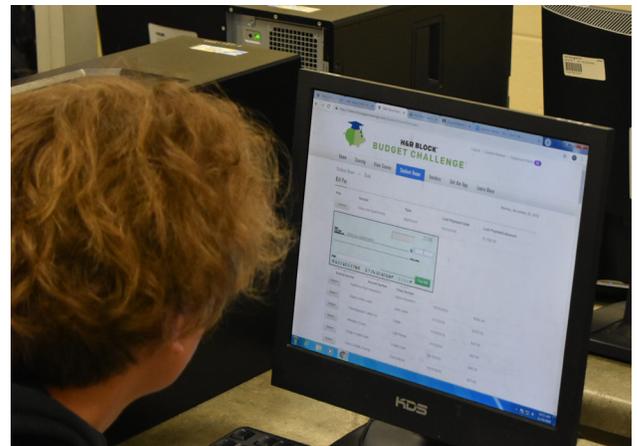
**FINANCE (FIN) Career Cluster** focuses on money management, including planning, investing, and spending. Students gain career development skills for the finance world with opportunities that expand beyond basic business skills into financial literacy, banking, investing, insurance, and risk management.

<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 65,450 <b>Male</b> 36,579 (56%) <b>Female</b> 28,871 (44%)
<b>Student Enrollment in Grades 6-8</b>	<b>130,216</b>
<b>Number of Industry-Certified Programs</b>	<b>99</b>
<b>Number of CTAE Teachers</b>	<b>905 High School Teachers</b> <b>437 Middle School Teachers</b>

\*A teacher may teach in more than one Career Cluster.

**Finance Career Pathways**

- ✦ *Advanced Accounting*
- ✦ *Business Accounting*
- ✦ *Financial Services*



## GOVERNMENT AND PUBLIC ADMINISTRATION (GPA) 2017-2018

**GOVERNMENT and PUBLIC ADMINISTRATION (GPS) Career Cluster** includes the 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.

<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 29,024 <b>Male</b> 15,181 (52%) <b>Female</b> 13,843 (48%)
<b>Number of Industry-Certified Programs</b>	<i>Note: Industry certification process in review</i>
<b>Number of CTAE Teachers</b>	<b>540 High School Teachers</b>

\*A teacher may teach in more than one Career Cluster.

### Government and Public Administration Career Pathways

- ★ **Public Management and Administration**
- ★ **Junior Reserve Officers' Training Corps (JROTC)**

<b>JROTC – Air Force</b>	<b>10,867</b>
<b>JROTC – Army</b>	<b>21,328</b>
<b>JROTC – Marines</b>	<b>2,516</b>
<b>JROTC – Navy</b>	<b>7,657</b>



## HOSPITALITY AND TOURISM (HT) 2017-2018

**HOSPITALITY and TOURISM (HT) Career Cluster** encompasses the management, marketing, and operations of restaurants, and other food services, lodging, attractions, recreation events, and travel related services.

<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 35,479 <b>Male</b> 17,641 (50%) <b>Female</b> 17,838 (50%)
<b>Number of Industry-Certified Programs</b>	<b>27</b>
<b>Number of CTAE Teachers</b>	<b>426 High School Teachers</b> <b>31 Middle School Teachers</b>

\*A teacher may teach in more than one Career Cluster.



### Hospitality and Tourism Career Pathways

- ★ **Culinary Arts**
- ★ **Hospitality, Recreation and Tourism**
- ★ **Sports and Entertainment Marketing**



**HEALTH SCIENCE (HHS) 2017-2018**

**HEALTH SCIENCE (HHS) Career Cluster** includes planning, managing, and providing services in therapeutics, diagnostics, health informatics, support areas, and biotechnology research and development.

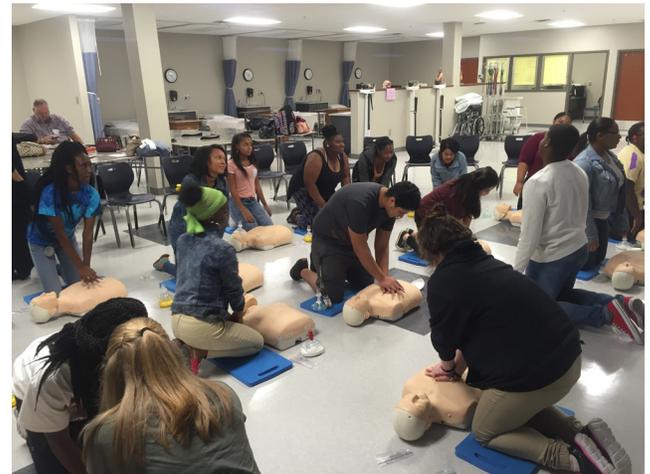


**Health Science Career Pathways**

- ✦ *Biotechnology Research & Development*
- ✦ *Therapeutic Services - Dental Science*
- ✦ *Diagnostics - Clinical Lab*
- ✦ *Therapeutic Services - Emergency Medical Responder*
- ✦ *Diagnostics - Phlebotomy*
- ✦ *Therapeutic Services - Exercise Physiology*
- ✦ *Diagnostics - Non-Invasive Technology in Healthcare*
- ✦ *Therapeutic Services - Patient Care*
- ✦ *Health Informatics - Health Information Management/ Medical Office*
- ✦ *Therapeutic Services - Pharmacy*
- ✦ *Health Informatics - Health Information Technology*
- ✦ *Therapeutic Services - Public Health*
- ✦ *Support Services*
- ✦ *Therapeutic Services - Public Safety Communications*
- ✦ *Therapeutic Services - Sports Medicine*
- ✦ *Therapeutic Services - Allied Health and Medicine*
- ✦ *Therapeutic Services - Surgical Technology*

<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 53,198 <b>Male</b> 12,422 (23%) <b>Female</b> 40,776 (77%)
<b>Student Enrollment in Grades 6-8</b>	11,272
<b>Number of Industry-Certified Programs</b>	72
<b>Number of CTAE Teachers</b>	716 High School Teachers 41 Middle School Teachers

\*A teacher may teach in more than one Career Cluster.



## HUMAN SERVICES (HS)/FAMILY AND CONSUMER SCIENCES (FACS) 2017-2018

**HUMAN SERVICES (HS)/FAMILY AND CONSUMER SCIENCE (FACS) Career Cluster** prepares individuals for employment activities 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.

<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 39,954 <b>Male</b> 13,167 (33%) <b>Female</b> 26,787 (67%)
<b>Student Enrollment in Grades 6-8</b>	58,175
<b>Number of Industry-Certified Programs</b>	27
<b>Number of CTAE Teachers</b>	409 High School Teachers 152 Middle School Teachers



\*A teacher may teach in more than one Career Cluster.



### Human Services Career Pathways

- ✦ Food and Nutrition
- ✦ Housing and Community Management
- ✦ Interiors, Fashion, and Textiles
- ✦ Personal Care Services - Barbering
- ✦ Personal Care Services - Cosmetology
- ✦ Personal Care Services - Esthetics
- ✦ Personal Care Services - Nails



## INFORMATION TECHNOLOGY (IT) 2017-2018

**INFORMATION TECHNOLOGY (IT) Career Cluster** engages students in hands-on learning to prepare 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.



<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 70,191 <b>Male</b> 37,997 (54%) <b>Female</b> 32,194 (46%)
<b>Number of Industry-Certified Programs</b>	99
<b>Number of CTAE Teachers</b>	971 High School Teachers

\*A teacher may teach in more than one Career Cluster.

### Information Technology Career Pathways

- ✦ Computer Science
- ✦ Cybersecurity
- ✦ Game Design
- ✦ Health Information Technology
- ✦ Information Support and Services
- ✦ Internet of Things
- ✦ Networking
- ✦ Programming
- ✦ Web and Digital Design
- ✦ Web Development



**LAW, PUBLIC SAFETY, CORRECTIONS AND SECURITY (LPSCS) 2017-2018**

**LAW, PUBLIC SAFETY, CORRECTIONS and SECURITY (LPSCS) Career Cluster** prepares individuals for employment relating to emergency and fire services, legal services, protective services, and homeland security.



<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 18,520 <b>Male</b> 8,768 (47%) <b>Female</b> 9,752 (53%)
<b>Student Enrollment in Grades 6-8</b>	<b>3,175</b>
<b>Number of Industry-Certified Programs</b>	<i>Note: Program is exploring industry certification</i>
<b>Number of CTAE Teachers</b>	<b>310 High School Teachers</b> <b>13 Middle School Teachers</b>



\*A teacher may teach in more than one Career Cluster.

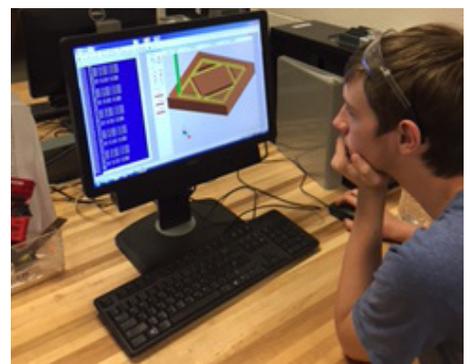
**Law, Public Safety, Corrections, and Security Career Pathways**

- ✦ **Corrections Services**
- ✦ **Fire and Emergency Services**  
- Emergency Medical Responder
- ✦ **Fire and Emergency Services**  
- Firefighting
- ✦ **Fire and Emergency Services**  
- Public Safety Communications
- ✦ **Law Enforcement Services**  
- Criminal Investigations
- ✦ **Law Enforcement Services**  
- Forensic Science
- ✦ **Law Enforcement Services**  
- Public Safety Communications
- ✦ **Legal Services - Applications of the Law**
- ✦ **Legal Services - Legal Administrative Services**
- ✦ **Security and Protective Services**



**MANUFACTURING (MANG) 2017-2018**

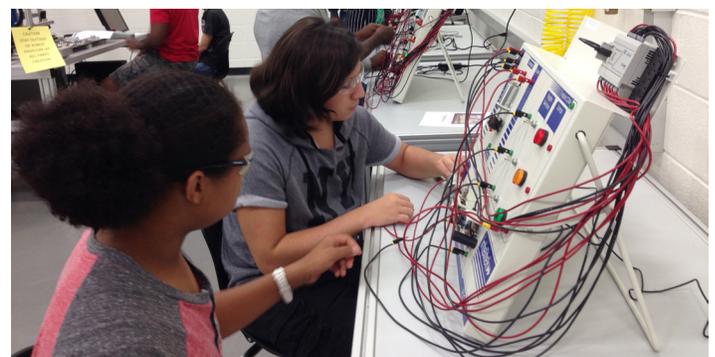
**MANUFACTURING (MANG) Career Cluster** includes the processing of materials into intermediate or final products and related professional and technical support activities, such as production control, maintenance, and process engineering.



**Manufacturing Career Pathways**

- ✦ **Granite Technology**
- ✦ **Industrial Maintenance**
- ✦ **Manufacturing**
- ✦ **Mechatronics**

<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 30,204 <b>Male</b> 20,375 (67%) <b>Female</b> 9,829 (33%)
<b>Number of Industry-Certified Programs</b>	<i>Note: Program is exploring industry certification</i>
<b>Number of CTAE Teachers</b>	<b>350 High School Teachers</b>



\*A teacher may teach in more than one Career Cluster.

## MARKETING (MKTG) 2017-2018

**MARKETING (MKTG) Career Cluster** generates the strategy that underlies advertising and promotional techniques, business communication, and business development. Marketing is the process of anticipating, managing, and satisfying consumers' demand for products, services, and ideas.



<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 30,302 <b>Male</b> 15,818 (52%) <b>Female</b> 14,484 (48%)
<b>Student Enrollment in Grades 6-8</b>	8,446
<b>Number of Industry-Certified Programs</b>	61
<b>Number of CTAE Teachers</b>	292 High School Teachers 31 Middle School Teachers

\*A teacher may teach in more than one Career Cluster.

### Marketing Career Pathways

- ✦ Fashion, Merchandising and Retail Management
- ✦ Marketing and Management
- ✦ Marketing Communications and Promotions

## SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS (STEM) 2017-2018

**SCIENCE, TECHNOLOGY, ENGINEERING and MATHEMATICS (STEM) Career Cluster** prepares students for careers in planning, managing, and providing scientific research and professional and technical services.



<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 33,881 <b>Male</b> 26,629 (79%) <b>Female</b> 7,252 (21%)
<b>Student Enrollment in Grades 6-8</b>	93,746
<b>Number of Industry-Certified Programs</b>	43
<b>Number of CTAE Teachers</b>	396 High School Teachers 311 Middle School Teachers

\*A teacher may teach in more than one Career Cluster.

### Science, Technology, Engineering and Mathematics Career Pathways

- ✦ Electronics
- ✦ Engineering and Technology
- ✦ Engineering Drafting and Design



## TRANSPORTATION, DISTRIBUTION AND LOGISTICS (TDL) 2017-2018

**TRANSPORTATION, DISTRIBUTION and LOGISTICS (TDL) Career Cluster** encompasses 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.



<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 12,699 <b>Male</b> 11,498 (91%) <b>Female</b> 1,201 (9%)
<b>Student Enrollment in Grades 6-8</b>	429
<b>Number of Industry-Certified Programs</b>	29
<b>Number of CTAE Teachers</b>	136 High School Teachers 2 Middle School Teachers



\*A teacher may teach in more than one Career Cluster.

### Transportation, Distribution & Logistics Career Pathways

- ✦ Aircraft Maintenance*
- ✦ Collision Repair-Non-Structural Analysis and Damage Repair*
- ✦ Flight Operations*
- ✦ Automobile Maintenance and Light Repair*
- ✦ Collision Repair-Painting and Refinishing*
- ✦ Marine Engine Technology*
- ✦ Automobile Service Technology*
- ✦ Distribution and Logistics*
- ✦ Master Automobile Service Technology*

## COORDINATED CAREER ACADEMIC EDUCATION/PROJECT SUCCESS (CCA/PS) 2017-2018

**COORDINATED CAREER ACADEMIC EDUCATION/PROJECT SUCCESS (CCA/PS)** works with students who are at risk of dropping out of high school based on the Carl Perkins Federal Regulations. The students who are targeted receive assistance from a designated teacher as they continue throughout their high school career.

<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 2,528 <b>Male</b> 1,298 (51%) <b>Female</b> 1,230 (49%)
<b>Number of CTAE Teachers</b>	74 High School Teachers

## CAREER AND TECHNICAL INSTRUCTION (CTI) 2017-2018

**CAREER AND TECHNICAL INSTRUCTION (CTI)** is a specialized intervention service designed to support high school students with disabilities enrolled in Career, Technical, and Agricultural Education classes. The primary goals of the program are to provide appropriate learning supports in the CTAE environment, instruction, and opportunities that result in the attainment of entry level job skills, self-determination skills, and transition skills.



<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 5,000 <b>Male</b> 2,900 (58%) <b>Female</b> 2,100 (42%)
<b>Number of CTAE Teachers</b>	25 High School Teachers



\*A teacher may teach in more than one program.

## GEORGIA'S CAREER CLUSTER EDUCATIONAL PROGRAMS

<p><b>Agriculture, Food, and Natural Resources</b></p> <ul style="list-style-type: none"> <li>Animal Production &amp; Processing</li> <li>Animal/Mechanical Systems</li> <li>Agriculture Leadership in Animal Production</li> <li>Companion Animal Systems</li> <li>Veterinary Science</li> <li>Equine Science</li> <li>Food Animal Systems</li> <li>Food / Renewable Energy</li> <li>Forest / Renewable Energy</li> <li>Agriculture Leadership in Aquaculture</li> <li>Forest Mechanical Systems</li> <li>Forest Leadership in Forestry</li> <li>Agriculture Leadership in Forestry</li> <li>Forest / Natural Resources Management</li> <li>Forest Management Systems</li> <li>Forestry / Wildlife Systems</li> <li>Environmental Agriculture Systems</li> <li>Horticulture Mechanical Systems</li> <li>Agriculture Leadership in Plant Science</li> <li>Agriculture Leadership in Horticulture</li> <li>Landscape Management Systems</li> <li>Plant and Floral Design Systems</li> <li>Plant and Landscape Systems</li> <li>Plant and Floriculture Systems</li> <li>Agriculture Mechanics &amp; Electrical Systems</li> <li>Agriculture Mechanics &amp; Metal Fabrication</li> <li>Agriculture Energy Systems</li> <li>Agriculture Mechanics Systems</li> <li>Food Products &amp; Processing Systems</li> <li>Agriculture Leadership in Food Product Processing</li> <li>Horticulture and Forest Science</li> <li>Plant Mechanical Systems</li> <li>Horticulture and Animal Science</li> <li>Forestry and Animal Science</li> <li>Agribusiness Systems</li> <li>Agri-science Systems</li> </ul>	<p><b>Architecture &amp; Construction</b></p> <ul style="list-style-type: none"> <li>Architectural, Drawing &amp; Design</li> <li>Carpentry</li> <li>Electrical</li> <li>Fine Furniture - Cabinetry</li> <li>Heating, Ventilation, Air Conditioning, and Refrigeration</li> <li>HVACR – Electrical</li> <li>Industrial Maintenance</li> <li>Masonry</li> <li>Plumbing</li> <li>Machining Operations</li> <li>Sheet Metal</li> <li>Welding</li> </ul>	<p><b>Arts, AV/Technology &amp; Communications</b></p> <ul style="list-style-type: none"> <li>Audio Video Technology &amp; Film</li> <li>Graphic Communication</li> <li>Graphic Design</li> <li>Animation and Digital Media</li> </ul>
<p><b>Business, Management, &amp; Administration</b></p> <ul style="list-style-type: none"> <li>Advanced Accounting</li> <li>Business Accounting</li> <li>Financial Services</li> <li>Entrepreneurship</li> <li>Business and Technology</li> <li>Human Resources Management</li> </ul>	<p><b>Manufacturing</b></p> <ul style="list-style-type: none"> <li>Industrial Maintenance</li> <li>Manufacturing</li> <li>Mechatronics</li> <li>Granite Technology</li> </ul>	<p><b>Science, Technology, Engineering, Mathematics</b></p> <ul style="list-style-type: none"> <li>Engineering and Technology</li> <li>Engineering Drafting and Design</li> <li>Electronics</li> </ul>
<p><b>Law, Public Safety, Corrections &amp; Security</b></p> <ul style="list-style-type: none"> <li>Fire and Emergency Services – Emergency Medical Responder</li> <li>Fire and Emergency Services – Public Safety Communications</li> <li>Fire and Emergency Services – Firefighting</li> <li>Corrections Services</li> <li>Law Enforcement Services – Criminal Investigations</li> <li>Law Enforcement Services – Forensic Science</li> <li>Law Enforcement Services – Public Safety Communications</li> <li>Security and Protective Services</li> <li>Legal Services – Applications of the Law</li> <li>Legal Services – Legal Administrative Services</li> </ul>	<p><b>Finance</b></p> <ul style="list-style-type: none"> <li>Advanced Accounting</li> <li>Business Accounting</li> <li>Financial Services</li> </ul>	<p><b>Education &amp; Training</b></p> <ul style="list-style-type: none"> <li>Early Childhood Care &amp; Education</li> <li>Teaching as a Profession</li> </ul>
<p><b>Transportation, Distribution &amp; Logistics</b></p> <ul style="list-style-type: none"> <li>Automobile Maintenance and Light Repair</li> <li>Automobile Service Technology</li> <li>Master Automobile Service Technology</li> <li>Flight Operations</li> <li>Aircraft Maintenance</li> <li>Distribution and Logistics</li> <li>Collision Repair – Painting and Refinishing</li> <li>Collision Repair – Non-Structural Analysis and Damage Repair</li> <li>Marine Engine Technology</li> </ul>	<p><b>Government &amp; Public Administration</b></p> <ul style="list-style-type: none"> <li>Public Management &amp; Administration</li> <li>JROTC – Air Force</li> <li>JROTC – Army</li> <li>JROTC – Marines</li> <li>JROTC – Navy</li> </ul>	<p><b>Energy</b></p> <ul style="list-style-type: none"> <li>Energy Systems</li> <li>Energy &amp; Power: Generation, Transmission, and Distribution</li> </ul>
<p><b>Advanced Academics, Fine Arts, &amp; World Languages</b></p> <ul style="list-style-type: none"> <li>Advanced Academics – English Language Arts; Mathematics; Science &amp; Social Studies</li> <li>Fine Arts</li> <li>World Languages</li> </ul>	<p><b>Human Services/Family &amp; Consumer Sciences</b></p> <ul style="list-style-type: none"> <li>Personal Care Services – Cosmetology</li> <li>Personal Care Services – Barbering</li> <li>Personal Care Services – Esthetics</li> <li>Personal Care Services – Nails</li> <li>Food and Nutrition</li> <li>Housing and Community Management</li> <li>Interiors, Fashion &amp; Textiles</li> </ul>	<p><b>Health Science</b></p> <ul style="list-style-type: none"> <li>Diagnostics – Clinical Lab</li> <li>Diagnostics – Phlebotomy</li> <li>Diagnostics – Non-Invasive Technology in Healthcare</li> <li>Therapeutic Services – Public Health</li> <li>Therapeutic Services – Exercise Physiology</li> <li>Therapeutic Services – Sports Medicine</li> <li>Therapeutic Services – Allied Health and Medicine</li> <li>Therapeutic Services – Dental Science</li> <li>Therapeutic Services – Pharmacy</li> <li>Therapeutic Services – Emergency Medical Responder</li> <li>Therapeutic Services – Patient Care</li> <li>Therapeutic Services – Public Safety Communications</li> <li>Therapeutic Services – Surgical Technology</li> <li>Health Informatics – Health Information Management/Medical Office</li> <li>Health Informatics – Health Information Technology</li> <li>Biotechnology Research and Development</li> <li>Support Services</li> </ul>
<p><b>Hospitality &amp; Tourism</b></p> <ul style="list-style-type: none"> <li>Culinary Arts</li> <li>Hospitality, Recreation, &amp; Tourism</li> <li>Sports &amp; Entertainment Marketing</li> </ul>	<p><b>Marketing</b></p> <ul style="list-style-type: none"> <li>Marketing and Management</li> <li>Fashion, Merchandising &amp; Retail Management</li> <li>Marketing Communications &amp; Promotions</li> </ul>	<p><b>Information Technology</b></p> <ul style="list-style-type: none"> <li>Cybersecurity</li> <li>Game Design</li> <li>Health Information Technology</li> <li>Information Support &amp; Services</li> <li>Internet of Things</li> <li>Networking</li> <li>Programming</li> <li>Computer Science</li> <li>Web &amp; Digital Design</li> <li>Web Development</li> </ul>



Richard Woods, Georgia's School Superintendent  
"Educating Georgia's Future"

**CTSOs are co-curricular organizations with leadership programs and competitive events which reflect current curriculum standards and competencies for the instructional programs they serve. Teachers infuse the CTSo's activities into the instructional activities, thereby helping students see the real world value of their academic studies.**

CAREER TECHNICAL STUDENT ORGANIZATIONS (CTSOs)		
	<p><b>Future Farmers of America (FFA)</b> - The mission of the FFA is to make a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education.</p> <p><b>CTAE Program</b> • Agriculture, Food &amp; Natural Resources</p>	<p><b>FY 2018 Membership</b> 42,227</p>
	<p><b>Future Business Leaders of America (FBLA)</b> - FBLA brings business and education together in a positive working relationship through innovative leadership and career development programs.</p> <p><b>CTAE Program</b> • Business, Management &amp; Administration • Finance • Information Technology</p>	<p><b>FY 2018 Membership</b> 24,844</p>
	<p><b>Georgia Technology Student Association (GA TSA)</b> - The Technology Student Association fosters personal growth, leadership, and opportunities in technology, innovation, design, and engineering. Members apply and integrate science, technology, engineering and mathematics concepts through activities, competitive events and programs integral to the curriculum.</p> <p><b>CTAE Program</b> • Energy • Manufacturing • Science, Technology, Engineering and Mathematics</p>	<p><b>FY 2018 Membership</b> 22,032</p>
	<p><b>Family, Career and Community Leaders of America (FCCLA)</b> - FCCLA promotes personal growth and leadership development through family and consumer sciences education. FCCLA focuses on the multiple roles of family member, wage earner and community leaders. Members develop skills for life through Character Development, Creative and Critical Thinking, Interpersonal Communication, Practical Knowledge, and Career Preparation.</p> <p><b>CTAE Program</b> • Education and Training • Hospitality and Tourism • Human Services/Family and Consumer Sciences</p>	<p><b>FY 2018 Membership</b> 18,669</p>
	<p><b>Health Occupations Students of America (HOSA)</b> - 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 science technology education students, therefore, helping students to meet the needs of the health care community.</p> <p><b>CTAE Program</b> • Health Science</p>	<p><b>FY 2018 Membership</b> 15,064</p>
	<p><b>Distributive Education Club of America (DECA)</b> - DECA prepares emerging leaders and entrepreneurs in marketing, finance, hospitality and management in high schools and colleges around the globe. DECA's core values and attributes are competence, innovation, integrity, and teamwork. These values are central to DECA's mission and purpose in classrooms around the world.</p> <p><b>CTAE Program</b> • Hospitality and Tourism • Marketing</p>	<p><b>FY 2018 Membership</b> 12,615</p>
	<p><b>Georgia SkillsUSA</b> - SkillsUSA's mission is to help its members become world-class workers, leaders and responsible American citizens. SkillsUSA is a partnership of students, teachers and industry working together to ensure America has a skilled workforce. SkillsUSA helps each student excel.</p> <p><b>CTAE Program</b> • Architecture and Construction • Arts, AV/Technology &amp; Communications • Human Services/Family &amp; Consumer Sciences • Law, Public Safety, Corrections &amp; Security • Manufacturing • Transportation, Distribution and Logistics</p>	<p><b>FY 2018 Membership</b> 7,669</p>
	<p><b>Career and Technical Instruction (CTI)</b> - CTI provides meaningful leadership and employability experiences for students with disabilities through career, technical and agricultural education courses.</p> <p><b>CTAE Program</b> • All</p>	<p><b>FY 2018 Membership</b> 4,009</p>
	<p><b>Georgia FIRST (FIRST)</b> - Georgia FIRST mission is to inspire young people to be science and technology leaders, by engaging them in exciting mentor-based programs that build science, engineering and technology skills that inspire innovation, and foster well-rounded life capabilities including self-confidence, communication, and leadership.</p> <p><b>CTAE Program</b> • Science, Technology, Engineering and Mathematics</p>	<p><b>FY 2018 Membership</b> 1,681</p>

Georgia has risen to become the No. 1 place in the nation in which to do business, a goal achieved by creating the Competitiveness Initiative, reforming our tax code, shaping our educational system to support our workforce needs and recruiting businesses to relocate here.

- Georgia Department of Economic Development Newsletter



# CTAE

## Career, Technical and Agricultural Education

The Georgia Department of Education (GaDOE) does not discriminate on the basis of race, color, religion, sex, national origin, age, or disability in its programs, activities, or employment practices.

Inquiries related to GaDOE programs may be directed to the Director of Legal Services, 2052 Twin Towers East, 205 Jesse Hill Jr. Drive, Atlanta, Georgia, 30334. Inquiries related to GaDOE employment practices may be directed to the Associate Superintendent for Human Resources, 2052 Twin Towers East, 205 Jesse Hill Jr. Drive, Atlanta, Georgia, 30334.

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