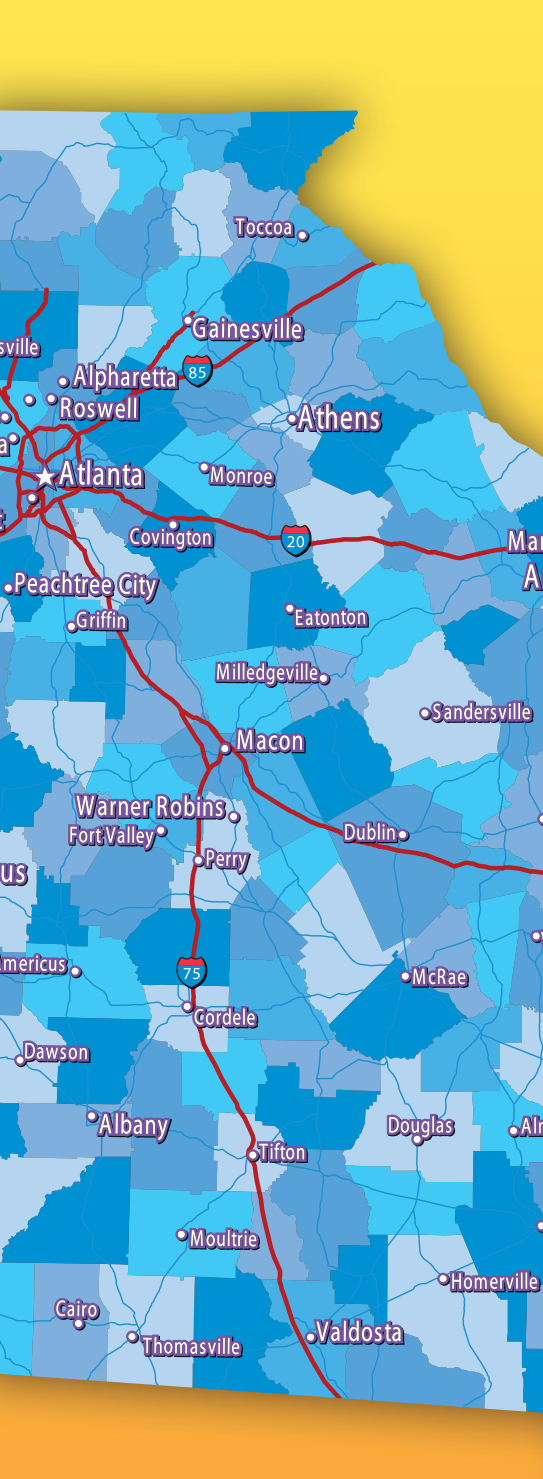


Richard Woods  
Georgia's School Superintendent  
"Educating Georgia's Future"

# CTAE

Career, Technical and  
Agricultural Education

## ANNUAL REPORT 2014



# CTAE

## Educating Georgia's Future Workforce





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



Dear Friends and Colleagues,

Thank you for your interest in learning more about the Georgia Department of Education's Career, Technical and Agricultural Education (CTAE) programs. All across Georgia, CTAE is providing real-world experiences and work-based learning opportunities that prepare students to thrive. Students are learning about potential careers early, participating in professional organizations, earning college credit, and studying in the field. Through the Career Pathways Initiative, they're studying everything from energy to finance to human services. Thousands of students are graduating with a Career Pathway certificate and a career plan – ready and prepared.

This is essential work, because our students are not widgets or manufactured parts. One size does not fit all. We must personalize education for all of Georgia's students, and CTAE programs are helping us do just that. Students are learning about potential careers as early as elementary school; in high school, they are prepared to select a program of study that suits their interest. Through the Career Pathways initiative, students are prepared for both post-secondary work and future careers. Pathways blend core academics and critical thinking with real-world application, made possible by strong business and industry partnerships.

Students who participate in Career, Technical and Agricultural Education are prepared for the future, wherever the future takes them. Their education is real and relevant, exposing them to rewarding future opportunities; it bolsters their practical skills and brings the traditional academic curriculum to life. And because Georgia's CTAE offerings are aligned to workforce needs, they are transforming regional economies as well as student outcomes.

I am proud to present this annual report, which provides details of our strides toward Educating Georgia's Future, and our efforts to personalize education for all of Georgia's students. We greatly appreciate your interest and support.

Sincerely,

Richard Woods

Georgia's School Superintendent

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

*"Educating Georgia's Future"*

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# CTAE

Career, Technical and  
Agricultural Education

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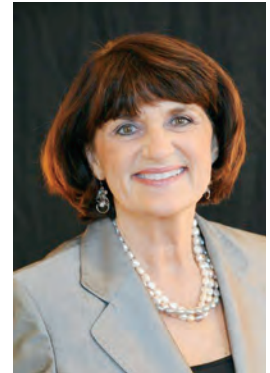
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FROM THE DIRECTOR OF CTAE...

### Message from CTAE Director

This annual report briefly summarizes the status and accomplishments of the secondary Career, Technical and Agricultural Education (CTAE) programs in the state of Georgia during the 2013-14 school year. The mission of CTAE is to educate Georgia's future workforce by engaging students in experiences that will prepare them for workplace success.



Some of the accomplishments highlighted from the 2013-14 school year include increases in high school students earning industry credentials, student membership in Career Technical Student Organizations (CTSOs), postsecondary options, and STEM school/program certification. Industry credentials earned by high school students were 18,352 (43% increase from previous year). Membership was increased from last year in these specific CTSOs: Health Occupations Students of America (17%), Future Business Leaders of America (10%), Future Farmers of America (8%), and Distributive Education Club of America (2%). In FY 14, a total of 10,001 students participated in postsecondary options and earned college credits (37% increase from previous year). Fifteen schools and/or programs within schools achieved STEM certification during 2013-14.

CTAE educators partner with a variety of stakeholders in order to fulfill the CTAE mission of educating Georgia's workforce. These partnerships are formed through relationships built on trust and communication. Many of the CTAE stakeholders include business & industry partners, CTAE Resource Network, Career and Technical Student Organizations, Technical College System of Georgia, University System of Georgia, GaDOE Division of Curriculum & Instruction, General Assembly, and SBOE Members. We value the partnerships of our stakeholders and know that educating Georgia's future workforce takes many people working together.

Sincerely,

*Barbara M. Wall*

Barbara M. Wall, Ed.D.

Director of Career, Technical and Agricultural Education

### CTAE Mission

*To provide experiences that will prepare students  
for postsecondary and workforce success*



## Georgia Career, Technical and Agricultural Education – Educating Georgia’s Future Workforce

### CTAE At-A-Glance

Georgia Department of Education

#### 2013-2014 Georgia Career, Technical and Agricultural Education

#### Secondary Education—Grades 6-12

##### CTAE Programs

- 180 Local School Systems

##### Total Georgia Student Enrollment

- 533,653 Students in Grades 9-12
- 432,698 Students in Grades 6-8

##### Student Enrollment in CTAE Courses

(Students enrolled in one or more CTAE courses)

- 61.12% of all Students in Grades 9-12 Statewide (326,153 students)
- 56.84% of all Students in Grades 6-8 Statewide (245,930 students)

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

- Male 53.4%
- Female 46.6%

##### CTAE Enrollment by Race

- Black 38.3%
- Hispanic 11.3%
- White 44.1%
- Other 6.3%

##### CTAE High School Concentrators

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

- 106,193 Students

##### Graduation Rate for CTAE Concentrators

- 88.9%

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 (2013-2014 CTAE Enrollment), data tables provided by the CTAE division, and Perkins IV Consolidated Annual Report FY 2013-2014.

Georgia's Department of Education Career, Technical and Agricultural Education (CTAE) is dedicated to preparing students for 21st century workplace careers by providing high-quality educational opportunities that support the economy with an educated workforce. Georgia CTAE offers students over 100 career pathways within 17 Career Clusters. Students take classes tailored to a Career Pathway within a Career Cluster which helps them navigate their way to future success – no matter what they choose to do after high school graduation. Each cluster includes multiple career pathways. The aims of the program are to show students the relevance in the workplace of what they are learning in the classroom and to prepare the students to attend a two-year college or four-year university, to train in a specific trade, or to go straight into the world of work. The CTAE Annual Report 2014 reflects the 17 Career Clusters for the first time.<sup>1</sup>

CTAE is making giant strides to bring middle and high school programs to new career readiness goals. The curriculum includes national standards, CTAE standards, and Georgia Performance Standards, in addition to career-development activities allowing students to make the connection between class activities and the workforce. Over 245,900 middle school students and over 326,000 high school students participated in CTAE Career Cluster programs during the 2013-2014 school year.

Georgia students begin learning about potential careers in elementary and middle school, so that they are ready to choose a career pathway once they reach high school. In elementary school, students explore various career areas as integral parts of the curriculum each year. Designed to meet the needs of young adolescents (ages 10-15), middle schools bridge the gap between elementary and high school and provide students with an opportunity to learn about specific career areas in a safe, nurturing, and positive environment. By high school, students may choose an area of interest from the 17 Career Clusters to explore through classroom instruction, experiential laboratory activities, and the extra-curricular activities of the Career Technical Student Organizations (CTSOs). Students also have the opportunity to participate in the workplace through the Youth Apprenticeship Program. During 2014, 6,840 students participated in the Youth Apprenticeship Program (YAP).

High school students develop a solid foundation in their selected career area, and many high school students graduate with industry certifications and college credits along with their high school diplomas. In FY 2014, industry certifications earned by CTAE students (18,352 students) increased by 43% as compared to FY 2013. In FY 2014, a total of 10,001 students participated in postsecondary options and earned college credits, a 37% increase compared to FY 2013. Of the 10,001 students, 9,182 students were in Dual Enrollment classes and 819 students in Joint Enrollment classes.

In FY 2014, CTAE Concentrators 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 88.9% for CTAE Concentrators and 73.7% for all students statewide.

The state career and technical education system consists of 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 No Child Left Behind Act.

#### Foundation Skills Required for Employment Success

- |                         |  |                                      |
|-------------------------|--|--------------------------------------|
| ⚙️ Technical Skills     | ⚙️ Information Technology Applications   | ⚙️ Leadership and Teamwork           |
| ⚙️ Academic Foundations | ⚙️ Organizational Systems                | ⚙️ Ethics and Legal Responsibilities |
| ⚙️ Communications       | ⚙️ Problem Solving and Critical Thinking | ⚙️ Career Development                |
|                         | ⚙️ Safety, Health and Environment        | ⚙️ Entrepreneurship                  |

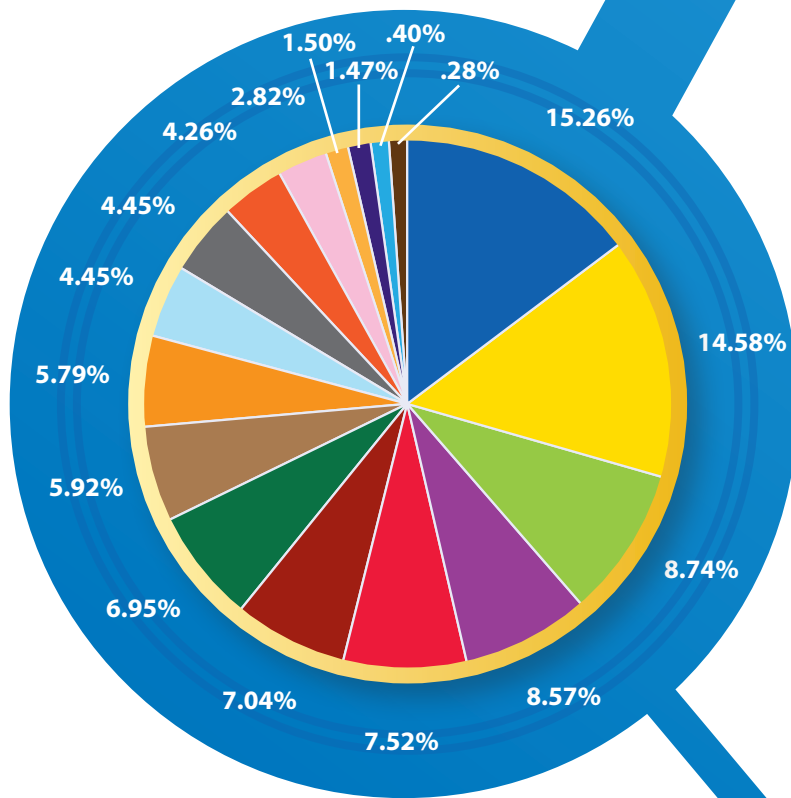
<sup>1</sup> Student Career Cluster data in the CTAE FY 2014 Annual Report cannot be directly compared to previous CTAE Annual Reports which presented student data by CTAE Program Concentration Pathways.

**Through individualized Pathways to Success, all students have the resources to identify, explore, and attain their career and employment goals.**

**Chart: High School Students (Grades 9-12) Enrolled in each CTAE Program Area in 2013-2014**

**Percent of Total CTAE Enrollment  
Total HS Enrollment 466,281**

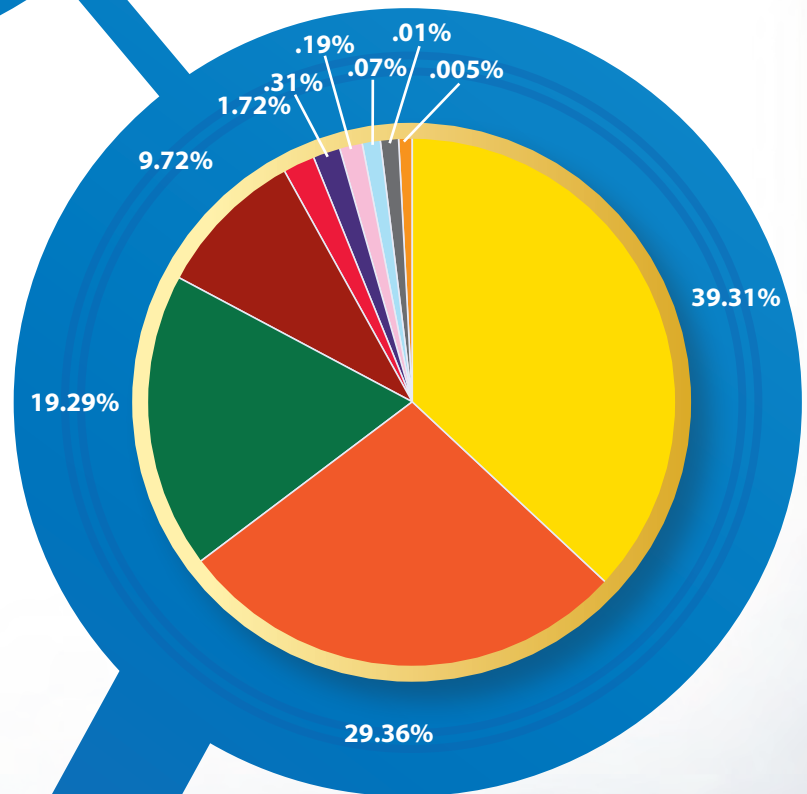
Finance (FIN)	71,148
Business Management and Administration (BMA)	67,976
Government and Public Administration (GPA)	40,765
Information Technology (IT)	39,977
Health Science (HHS)	35,042
Agriculture, Food and Natural Resources (AGED)	32,812
Human Services (HS)	32,408
Hospitality and Tourism (HT)	27,611
Science, Technology, Engineering & Mathematics (STEM)	27,002
Arts, AV/Technology and Communications (AAVTC)	20,755
Architecture and Construction (AC)	20,745
Education and Training (ET)	19,876
Marketing (MKTG)	13,153
Law, Public Safety, Corrections and Security (LPSCS)	6,978
Transportation, Distribution and Logistics (TDL)	6,869
Manufacturing (MANG)	1,846
Energy (NRG)	1,318



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.

**Percent of Total CTAE Enrollment  
Total MS Enrollment 264,309**

Business Management and Administration (BMA)	127,051
Science, Technology, Engineering and Mathematics (STEM)	94,887
Human Services (HS) Family and Consumer Sciences (FACS)	62,345
Agriculture, Food and Natural Resources (AGED)	31,435
Health Science (HHS)	5,558
Transportation, Distribution and Logistics (TDL)	999
Marketing (MKTG)	605
Arts, AV/Technology and Communications (AAVTC)	238
Architecture and Construction (AC)	34
Law, Public Safety, Corrections and Security (LPSCS)	19



**CTAE is preparing the next generation of highly-skilled, sustainable workers needed by Georgia's business and industry to remain globally competitive.**

**Chart: Middle School Students (Grades 6-8) Enrolled in each CTAE Program Area in 2013-2014**

## CTAE Achievements in 2013-2014

### Academic Achievements of CTAE Students

- **92.4% of CTAE Concentrators** who took the End of Course Test (EOCT) met or exceeded state standards in **English/Language Arts** (State Target of 92%) in FY 2014.

### Graduation Rate for CTAE Concentrators

- **CTAE graduation rate of 88.9%** compares favorably with **Georgia's overall graduation rate of 73.7% in FY 2014**.
- CTAE graduation rate of 88.9% is 5.65% above the required 90 percentile of the State Target (92.5%) in FY 2014.

### CTAE Postsecondary Transitions

- In FY 2014 a total of **10,001 students participated in postsecondary options** and earned college credits, compared to 7,324 students in FY 2013 (a **37% increase**).
- A total of **9,182 high school students dual enrolled** in college-level CTAE courses at Georgia's technical colleges or other colleges with technical divisions in FY 2014.
- A total of **819 high school students joint enrolled** in college-level CTAE courses at Georgia's technical colleges or other colleges with technical divisions in FY 2014.

### CTAE Teacher Achievements

- **312 professional development workshops**, including onsite, distant learning, and Webinar sessions, were held with a total attendance of **12,187 CTAE educators** throughout the state in FY 2014.

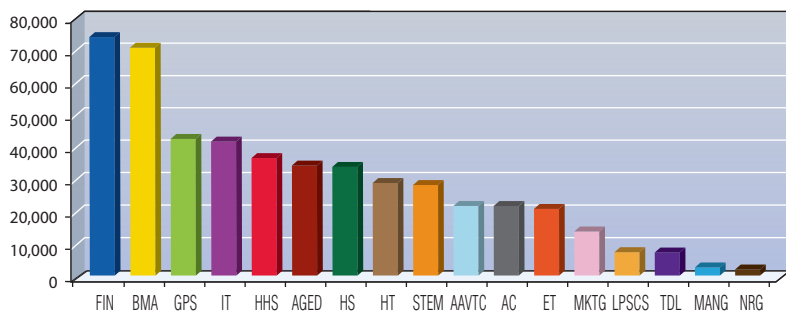
### Georgia STEM (Science, Technology, Engineering, and Mathematics) Program

- **Over 150 teachers participated in the STEM Georgia Teachers' Academy** to learn problem-based learning, effective technology integration, and engineering design.
- **Over 1,200 middle school girls participated in the 5th annual Girls Adventures in STEM** hosted by Kennesaw State University and Abraham Baldwin Agricultural College.
- **Over 1,000 educators participated in the CTAE STEM Forum**, a state-wide program to facilitate CTAE, math, and science teachers to collaborate and to learn about STEM protocols, expectations, and design.
- **More than 370 Georgia schools** are currently working towards STEM Certification from the Georgia Department of Education. During FY 2014, **15 schools and/or programs within schools achieved STEM Certification**.

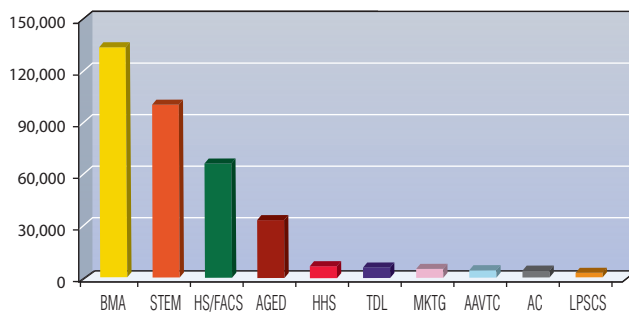
## CTAE Program Achievements

- **Both middle school and high school CTAE course enrollments increased in FY 2014 as compared to FY 2013.**
- **The total number of high school students enrolled in CTAE in FY 2014 (326,153 students) increased (2.2%) as compared to FY 2013 (319,133 students).**
- **The total number of middle school students enrolled in CTAE in FY 2014 (245,930 students) increased (2.1%) as compared to FY 2013 (240,810 students).**
- **57% of all middle school and 61% of all high school students were enrolled in CTAE courses in FY 2014.**
- **In FY 2014, the number of CTAE students completing three or more classes in a program area (106,193 CTAE Concentrators) increased 9.9% as compared with FY 2013.**
- **31,394 pathway completers sat for the end of pathway assessments in FY 2014**, as compared with 25,319 high school students in FY 2013 (a 24% increase).
- CTAE Career Clusters held **457 industry certifications** in FY 2014 compared with 449 industry certifications in FY 2013.
- **18,352 high school students earned an industry credential** in FY 2014 as compared with **12,815 high school students in FY 2013** (a 43% increase).
- **Student unduplicated enrollment in Junior Reserve Officers Training Corps (JROTC) increased in FY 2014** to 40,765 as compared to 39,053 students in 2013, a 4.4% increase.
- **Student membership in CTSOs increased during 2014** in the following Georgia Career Technical Student Organizations: Future Farmers of America (FFA) by 8%; Future Business Leaders of America (FBLA) by 10%; Health Occupations Students of America (HOSA) by 17%; and Distributive Education Club of America (DECA) by 2%.
- **6,840 students participated in the Georgia Youth Apprenticeship Program (YAP) during FY 2014.**
- **100% of employers would recommend the Georgia Youth Apprenticeship Program** to other companies.
- **98.9% of employers participating in the Georgia Youth Apprenticeship Program** agreed that students performed at the level expected, and **98.1%** of employers agreed that students understand written instructions and materials at the level expected.
- **99% of employers** agreed that students who participate in the **Georgia Youth Apprenticeship Program** exhibit satisfactory problem-solving skills, and **97%** of employers agree that students demonstrate computer skills at the level expected.
- **96.3%** of employers found the **Georgia Youth Apprenticeship Program** beneficial to their companies.

CTAE High School Program Enrollment: 2013-2014



CTAE Middle School Program Enrollment: 2013-2014





**AGRICULTURE, FOOD AND NATURAL RESOURCES (AGED) 2013-2014**



**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> 32,812 <b>Male</b> 20,689 (63%) <b>Female</b> 12,123 (37%)
<b>Student Enrollment in Grades 6-8</b>	<b>31,435</b>
<b>Number of Industry-Certified Programs</b>	<i>Note: Program is in the process of becoming industry certified</i>
<b>Number of CTAE Teachers</b>	<b>415 High School Teachers</b> <b>100 Middle School Teachers</b>

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

- ✦ Agribusiness Systems
- ✦ Agriculture Energy Systems
- ✦ Agriculture Leadership in Food Product Processing
- ✦ Agricultural Mechanics and Metal Fabrications
- ✦ Agriculture Leadership in Animal Production
- ✦ Agriculture Leadership in Aquaculture
- ✦ Agriculture Leadership in Forestry
- ✦ Agriculture Leadership in Horticulture
- ✦ Agriculture Leadership in Plant Science
- ✦ Agricultural Mechanics and Electrical Systems
- ✦ Agricultural 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
- ✦ Forest and Animal Science
- ✦ Forest Management Systems
- ✦ Forest/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) 2013-2014**

<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 20,745 <b>Male</b> 17,926 (86%) <b>Female</b> 2,819 (14%)
<b>Student Enrollment in Grades 6-8</b>	34
<b>Number of Industry-Certified Programs</b>	64
<b>Number of CTAE Teachers</b>	300 High School Teachers 4 Middle School Teachers



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



**Architecture and Construction Career Pathways**

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

**ARTS, AV/TECHNOLOGY AND COMMUNICATIONS (AAVTC) 2013-2014**

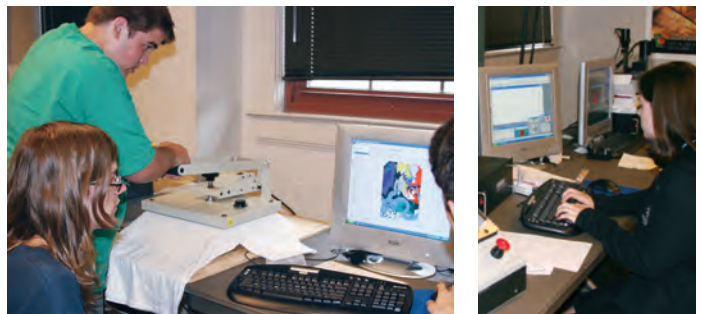
**ARTS, AV/TECHNOLOGY and COMMUNICATIONS (AAVTC) Career Cluster** includes designing, producing, exhibiting, performing, writing, and publishing multimedia content.

<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 20,755 <b>Male</b> 11,464 (55%) <b>Female</b> 9,291 (45%)
<b>Student Enrollment in Grades 6-8</b>	238
<b>Number of Industry-Certified Programs</b>	44
<b>Number of CTAE Teachers</b>	290 High School Teachers 12 Middle School Teachers



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

- ✦ *Audio-Video Technology and Film*
- ✦ *Graphic Communication*
- ✦ *Graphic Design*





## BUSINESS, MANAGEMENT AND ADMINISTRATION (BMA) 2013-2014

Enrollment in Grades 9-12 (Unduplicated Count)	Total 67,976 Male 36,368 (54%) Female 31,608 (46%)
Student Enrollment in Grades 6-8	127,051
Number of Industry-Certified Programs	115
Number of CTAE Teachers	1,046 High School Teachers 446 Middle School Teachers

### Business, Management and Administration Career Pathways

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

### 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.



## EDUCATION AND TRAINING (ET) 2013-2014



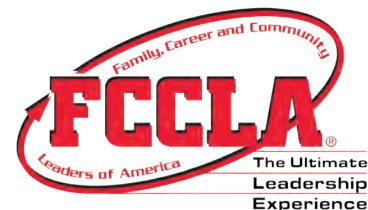
### Education and Training Career Pathways

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

Enrollment in Grades 9-12 (Unduplicated Count)	Total 24,679 Male 2,836 (12%) Female 21,843 (88%)
Number of Industry-Certified Programs	22
Number of CTAE Teachers	202 High School Teachers

### EDUCATION and TRAINING (ET) Career Cluster

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



**ENERGY (NRG) 2013-2014**

<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 1,318 <b>Male</b> 1,057 (80%) <b>Female</b> 261 (20%)
<b>Number of Industry-Certified Programs</b>	22
<b>Number of CTAE Teachers</b>	47 High School Teachers

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



**Energy Career Pathways**

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



**FINANCE (FIN) 2013-2014**



**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.

**Finance Career Pathways**

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



<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 71,148 <b>Male</b> 37,189 (52%) <b>Female</b> 33,959 (48%)
<b>Student Enrollment in Grades 6-8</b>	1,291
<b>Number of Industry-Certified Programs</b>	<i>Note: Program is in the process of becoming industry certified</i>
<b>Number of CTAE Teachers</b>	<b>1,303 High School Teachers</b> <b>47 Middle School Teachers</b>

## GOVERNMENT AND PUBLIC ADMINISTRATION (GPA) 2013-2014

**GOVERNMENT and PUBLIC ADMINISTRATION (GPA) 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> <b>40,765</b>
	<b>Male</b> <b>23,101 (57%)</b>
	<b>Female</b> <b>17,664 (43%)</b>

**Government and Public Administration Career Pathways**

- ✦ *JROTC – Air Force 10,789*
- ✦ *JROTC – Army 20,257*
- ✦ *JROTC – Marines 2,412*
- ✦ *JROTC – Navy 7,564*
- ✦ *Public Management and Administration*

## HOSPITALITY AND TOURISM (HT) 2013-2014

**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> <b>27,611</b>
	<b>Male</b> <b>13,092 (47%)</b>
	<b>Female</b> <b>14,519 (53%)</b>
<b>Student Enrollment in Grades 6-8</b>	<b>752</b>
<b>Number of Industry-Certified Programs</b>	<b>20</b>
<b>Number of CTAE Teachers</b>	<b>494 High School Teachers</b> <b>11 Middle School Teachers</b>



**Hospitality and Tourism Career Pathways**

- ✦ *Culinary Arts (HS)* 
- ✦ *Hospitality, Recreation and Tourism (MKTG)*
- ✦ *Sports and Entertainment Marketing (MKTG)* 

**FCCLA**  
Family, Career and Community  
Leaders of America  
The Ultimate Leadership Experience



**HEALTH SCIENCE (HHS) 2013-2014**

**HEALTH SCIENCE (HHS) Career Cluster** prepares students to plan, manage, and provide therapeutic services, diagnostics services, health informatics support services, and biotechnology research and development.

<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 35,042 <b>Male</b> 7,546 (22%) <b>Female</b> 27,496 (78%)
<b>Student Enrollment in Grades 6-8</b>	5,558
<b>Number of Industry-Certified Programs</b>	68
<b>Number of CTAE Teachers</b>	415 High School Teachers 20 Middle School Teachers



**Health Science Career Pathways**

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

## HUMAN SERVICES (HS) FAMILY AND CONSUMER SCIENCES (FACS) 2013-2014

<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 37,910 <b>Male</b> 10,983 (29%) <b>Female</b> 26,927 (71%)
<b>Student Enrollment in Grades 6-8 (FACS)</b>	<b>62,345</b>
<b>Number of Industry-Certified Programs</b>	<i>Note: Program is in the process of becoming industry certified</i>
<b>Number of CTAE Teachers</b>	<b>798 High School Teachers</b> <b>154 Middle School Teachers</b>

**HUMAN SERVICES (HS) Career Cluster** in the high school, and **FAMILY & CONSUMER SCIENCES (FACS)** in the middle school prepare 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.

### Human Services Career Pathways

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



## INFORMATION TECHNOLOGY (IT) 2013-2014

**INFORMATION TECHNOLOGY (IT) Career Cluster** engages students in hands-on learning to prepare for careers that create, use, modify, and engage technology skills in a rapidly changing digital world. Graphics, multimedia animation, web design, game and application development, networking, and computer repair are all possibilities.



### Information Technology Career Pathways

- ★ *Computer Science*
- ★ *Health Information Technology*
- ★ *Information Support and Services*
- ★ *Networking*
- ★ *Programming*
- ★ *Web and Digital Design*



<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 39,977 <b>Male</b> 18,190 (46%) <b>Female</b> 21,787 (54%)
<b>Student Enrollment in Grades 6-8</b>	<b>1,226</b>
<b>Number of Industry-Certified Programs</b>	<i>Note: Program is in the process of becoming industry certified</i>
<b>Number of CTAE Teachers</b>	<b>400 High School Teachers</b> <b>25 Middle School Teachers</b>

**LAW, PUBLIC SAFETY, CORRECTIONS AND SECURITY (LPSCS) 2013-2014**

<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 6,978 <b>Male</b> 3,662 (52%) <b>Female</b> 3,316 (48%)
<b>Student Enrollment in Grades 6-8</b>	19
<b>Number of Industry-Certified Programs</b>	<i>Note: Program is in the process of becoming industry certified</i>
<b>Number of CTAE Teachers</b>	117 High School Teachers 4 Middle School Teachers

**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.



- 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
  - ✦ Legal Services/Applications of the Law
  - ✦ Legal Services/Legal Administrative Services
  - ✦ Security and Protective Services

**MANUFACTURING (MANG) 2013-2014**



**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**
- ✦ Manufacturing
  - ✦ Mechatronics



<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 1,846 <b>Male</b> 1,424 (77%) <b>Female</b> 422 (33%)
<b>Number of Industry-Certified Programs</b>	<i>Note: Program is in the process of becoming industry certified</i>
<b>Number of CTAE Teachers</b>	23 High School Teachers



## MARKETING (MKTG) 2013-2014

**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> 13,153 <b>Male</b> 6,773 (51%) <b>Female</b> 6,380 (49%)
<b>Student Enrollment in Grades 6-8</b>	605
<b>Number of Industry-Certified Programs</b>	60
<b>Number of CTAE Teachers</b>	245 High School Teachers 7 Middle School Teachers



### Marketing Career Pathways

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

## SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS (STEM) 2013-2014

**SCIENCE, TECHNOLOGY, ENGINEERING and MATHEMATICS (STEM) Career Cluster** includes planning, managing, and providing scientific research and professional and technical services.

<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 27,002 <b>Male</b> 21,908 (81%) <b>Female</b> 5,094 (19%)
<b>Student Enrollment in Grades 6-8</b>	94,887
<b>Number of Industry-Certified Programs</b>	37
<b>Number of CTAE Teachers</b>	348 High School Teachers 291 Middle School Teachers



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

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



**TRANSPORTATION, DISTRIBUTION AND LOGISTICS (TDL) 2013-2014**

<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 6,869 <b>Male</b> 6,083 (89%) <b>Female</b> 786 (11%)
<b>Student Enrollment in Grades 6-8</b>	999
<b>Number of Industry-Certified Programs</b>	27
<b>Number of CTAE Teachers</b>	130 High School Teachers 3 Middle School Teachers



**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.



**Transportation, Distribution & Logistics Career Pathways**

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

**COORDINATED CAREER ACADEMIC EDUCATION/PROJECT SUCCESS (CCA/PS) 2013-2014**

<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 2,624 <b>Male</b> 1,179 (45%) <b>Female</b> 1,445 (55%)
<b>Number of CTAE Teachers</b>	22 High School Teachers

**COORDINATED CAREER ACADEMIC EDUCATION/PROJECT SUCCESS (CCA/PS)** is working 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.

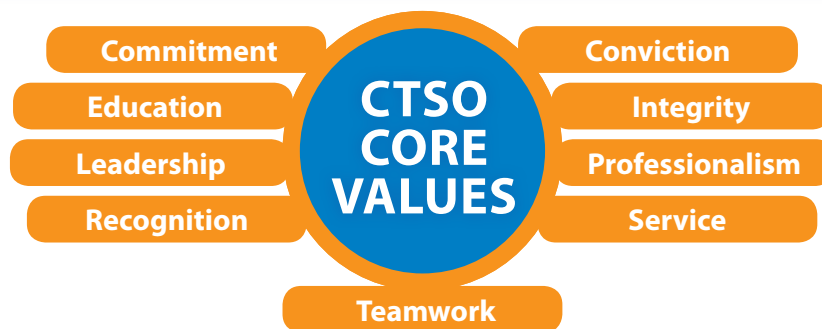


**CAREER AND TECHNICAL INSTRUCTION (CTI) 2013-2014**

The **CAREER AND TECHNICAL INSTRUCTION (CTI)** support service is designed to support students with disabilities enrolled in Career, Technical and Agricultural Education classes. The goal of the secondary (grades 9-12) level services is to provide these students with job-entry skills at the completion of the CTAE experience.

<b>Enrollment in Grades 9-12</b> (Unduplicated Count)	<b>Total</b> 5,180 <b>Male</b> 3,343 (65%) <b>Female</b> 1,837 (35%)
<b>Number of CTAE Teachers</b>	165 High School Teachers

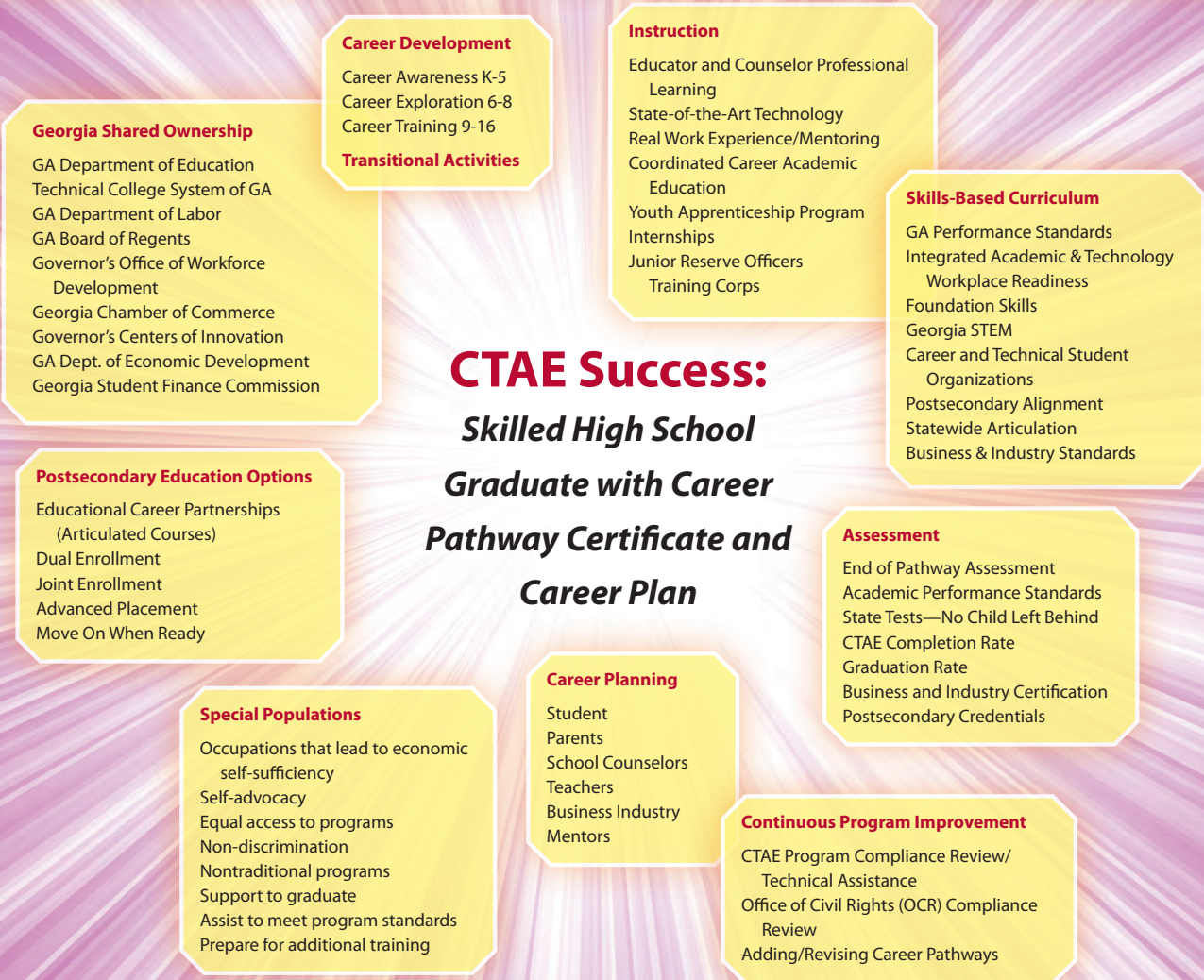
Career Technical Student Organizations (CTSO)	CTAE Program	FY 2014 Membership
 <p><b>Georgia FFA Association (FFA)</b> is an integral component of the agricultural education program. It is the student development and leadership application piece for agricultural education. The FFA offers a variety of experiential learning opportunities through competitive proficiency awards and career development events. Competitions focus on leadership and public speaking, communications, agriscience, and biotechnology, as well as production agriculture. Agricultural education teachers and FFA advisors stress problem solving and decision making through hands-on activities. By applying a science based curriculum learned in a classroom to real life projects, teamwork, and competition, FFA members develop into successful, productive citizens.</p>	Agriculture, Food & Natural Resources	<b>37,684</b>
 <p><b>Georgia SkillsUSA</b> members participate in local, state, and national activities provided through trade and industrial, technical, and health occupations courses and programs. The mission of SkillsUSA is to develop leadership skills and workplace competencies that students will need to succeed 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 national SkillsUSA Championships each June.</p>	Architecture & Construction Law, Public Safety, Corrections & Security	<b>8,212</b>
 <p><b>Future Business Leaders of America (FBLA)</b> is a student organization for all middle and high school students participating in business programs. As an integral part of the business instructional program, FBLA provides opportunities for students to develop vocational and career-supportive competencies. Participation in FBLA activities promotes civic and personal responsibility, helps students develop business leadership skills and establish career goals, and prepares them for useful citizenship and productive careers.</p>	Business, Management & Administration Finance Information Technology	<b>25,532</b>
 <p><b>Georgia Technology Student Association (GA TSA)</b> is committed to providing students with opportunities to excel and advance as part of their instruction in technology education. Georgia TSA promotes technology education as a means of preparing students for a dynamic world, inviting them to become critical thinkers, problem solvers, and technologically literate leaders. 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.</p>	Arts, AV/Technology & Communications Energy Manufacturing Science, Technology Engineering & Mathematics Transportation, Distribution & Logistics	<b>23,119</b>
 <p><b>Family, Career and Community Leaders of America (FCCLA)</b> is a national 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.</p>	Education & Training Hospitality & Tourism Human Services	<b>31,400</b>
 <p><b>Health Occupations Students of America (HOSA)</b> organization's mission is to enhance the delivery of compassionate, quality health care by providing opportunities for knowledge, skill, and leadership development of all health occupations students. Students are enabled to meet the needs of the health care community.</p>	Health Science	<b>12,300</b>
 <p><b>Distributive Education Club of America (DECA)</b> is specifically designed to provide activities for students to learn marketing, management, and entrepreneurial skills that will prepare them to pursue a career in the field of marketing. DECA members become more aware of the value of community service; participate in local, state, and national competitive events program that showcases student skills and allows for interaction with the business community; further develop occupational skills needed for careers in marketing, management, and entrepreneurship; serve in leadership roles; and develop a greater understanding of our competitive, free-enterprise system and an appreciation of the responsibilities of citizenship.</p>	Marketing	<b>11,525</b>
 <p><b>Career and Technical Instruction (CTI)</b>, program is designed to support students with disabilities enrolled in Career, Technical and Agricultural Education classes. The CTI program provides students with disabilities at the secondary level entry-level job skills in broad or specific occupation clusters. CTI offers a Fall Leadership Conference that focuses on students with disabilities in CTAE classes in high schools throughout Georgia. The purpose of the program is to reward students showing the greatest improvement in career and work adjustment skills and to recognize the achievement of these students in their career, technical and agricultural programs.</p>	Coordinated Career Academic Education	<b>6,000+</b>





The Georgia Department of Education CTAE programs expand educational opportunities offered by continuing to develop Career Clusters that are relevant and aligned to the 21st century workplace. As the Georgia economy changes and expands, CTAE programs evolve to ensure that every student in Georgia graduates from high school with the academic skills, hands-on experience in real work environments, and intensive career guidance required for success in college, employment, and life-long learning. The CTAE team has identified several areas for special ongoing focus during FY 2015:

- The **Georgia Career Cluster programs will continue to be implemented and expanded during the 2014-2015 school year with all high school students.** The Development and Transition unit of CTAE provides direction in the development of the CTAE high school and middle school curricula, assessment, work-based learning experiences, professional learning, and instructional resources to enhance student achievement in non-traditional employment fields. In addition, this unit promotes successful transitioning of students from middle school to high school and from high school to college and careers, including promotion of postsecondary credit while still in high school.
- In FY2016, the **Perkins IV Monitoring and Risk Assessment Review and Self-Study** process will assist the local school system in its long-range planning, which is a requirement of the Carl D. Perkins Career and Technical Education Act of 2006. The major goals for the Monitoring and Risk Assessment review are:
  - To provide documentation for continuous program improvement, goal setting, and long-range planning.
  - To provide technical assistance based on the information gathered through the review.
  - To assess the effectiveness of the local school system in providing quality Career, Technical and Agricultural Education programs.
- To consolidate responsibilities for state and federal compliance issues into one on-site visit for every system during a five-year period.
- To fulfill U. S. Office for Civil Rights (OCR) requirements.
- **Georgia STEM (Science, Technology, Engineering and Math)** will continue work to increase the number of students entering science, technology, engineering, and math career areas.
- **CTAE End-of-Pathway Assessments** will continue to be identified and implemented for all career pathways.
- **Career Clusters related to non-traditional fields** will be promoted based on enrollment data. For example, efforts will be made to encourage female students to enroll in the career areas of Agriculture, Food and Natural Resources, Architecture and Construction, Energy, Manufacturing, Science, Technology, Engineering and Mathematics, Transportation, Distribution and Logistics; and to attract male students to the Education and Training, Health Science, and Human Services career areas.
- **Industry Certification/Recertification** will be conducted to maintain existing certifications and to expand to include additional Career Clusters. The CTAE Program Delivery Team provides resources necessary to achieve business and industry accreditation/certification for most CTAE programs.
- **Curriculum Guides** will be updated on an ongoing basis to support all existing Career Pathways and developed for new Career Pathways.
- **In-Service Education Opportunities** will continue to provide high-level professional development for CTAE educators, STEM educators, and school counselors.
- The **Georgia initiative Move On When Ready** will continue and expand opportunities for postsecondary education during high school as an integrated part of CTAE Career Pathways.



**Georgia Career Cluster Pathways Available 2013-2014**

**Arts, A/V Technology & Communications**

**Health Science**

**Energy Education and Training**

**Agriculture, Food and Natural Resources**

**Business, Management and Administration**

**Hospitality and Tourism**

**Arts, A/V Technology & Communications**

Audio Video Technology & Film

Graphic Communications  
Graphic Design

**Health Science**  
Biotechnology Research & Development

Diagnostic Services/Clinical Lab  
Diagnostic/Phlebotomy  
Diagnostics/Non-Invasive Diagnostic Technology

**Energy**

Energy and Power: Generation, Transmission, and Distribution  
Energy Systems

**Education and Training**  
Early Childhood Education I  
Early Childhood Education II  
Teaching as a Profession

**Agriculture, Food and Natural Resources**

Agriculture, Food and Natural Resources  
Agriculture Energy Systems  
Agriculture Leadership in Food Product Processing  
Agricultural Mechanics and Metal Fabrication  
Agriculture Leadership in Animal Production

**Business, Management and Administration**

Business, Management and Administration  
Business and Technology Entrepreneurship  
Human Resources Management  
Human Services  
Housing and Community Management

**Hospitality and Tourism**  
Culinary Arts  
Hospitality, Recreation and Tourism

Sports and Entertainment  
Marketing

**Transportation, Distribution and Logistics**

Automobile Service Technology  
Aviation Maintenance  
Collision Repair (Non Structural Analysis and Damage Repair  
Collision Repair (Painting & Refinishing)

Therapeutic Services - Allied Health and Medicine  
Therapeutic Services - Dental Science  
Therapeutic Services - Emergency Medical Responder  
Therapeutic Services - Exercise Physiology

Advanced Accounting  
Business Accounting  
Financial Services

Agriculture Leadership in Aquaculture  
Agriculture Leadership in Forestry  
Agriculture Leadership in Horticulture  
Agriculture Leadership in Plant Science  
Agriculture Mechanics and Electrical Systems

Personal Care Services - Cosmetology  
Personal Care Services - Esthetics  
Personal Care Services - Nails

**Transportation, Distribution and Logistics**

Flight Operations  
Maintenance and Light Repair  
Marine Engine Technology  
Marine Studies  
Master Automobile Service Technology

Therapeutic Services - Public Health  
Therapeutic Services - Public Safety  
Communications  
Therapeutic Services - Sports Medicine  
Therapeutic Services - Surgical Technology

Corrections Services  
Fire and Emergency Services/Emergency Medical Responder  
Fire and Emergency Services/Firefighting

Food Products and Processing Systems  
Forest Mechanical Systems  
Forest/Renewable Energy  
Forestry and Animal Science Systems  
Forestry Management Systems  
Forestry/Natural Resources Management  
Forestry/Wildlife Systems

Engineering and Technology  
Engineering Drafting & Design  
Marketing  
Fashion, Merchandising and Retail Management  
Marketing and Management  
Marketing Communications

Information Technology  
Computer Science  
Health Information Support & Services  
Information Support & Services  
Networking  
Programming  
Web & Digital Design

**Architecture and Construction**  
Architectural Drawing & Design  
Carpentry  
Electrical  
Heating, Ventilation, Air Conditioning and Refrigeration (HVACR)

Law Enforcement/Criminal Investigations  
Law Enforcement Services/Forensic Science  
Legal Services/Applications of Law  
Legal Services/Legal Administrative Services  
Security and Protective Services

Plant and Floral Design Systems  
Plant and Floriculture Systems  
Plant and Landscape Systems  
Plant Mechanical Systems  
Veterinary Science

**Government and Public Administration**  
JROTC - Air Force  
JROTC - Army  
JROTC - Marines  
JROTC - Navy  
Public Management and Administration

**Information Technology**

Health Information Support & Services  
Information Support & Services  
Networking  
Programming  
Web & Digital Design

**Architecture and Construction**  
Architectural Drawing & Design  
Carpentry  
Electrical  
Heating, Ventilation, Air Conditioning and Refrigeration (HVACR)

Law Enforcement/Criminal Investigations  
Law Enforcement Services/Forensic Science  
Legal Services/Applications of Law  
Legal Services/Legal Administrative Services  
Security and Protective Services

Plant and Floral Design Systems  
Plant and Floriculture Systems  
Plant and Landscape Systems  
Plant Mechanical Systems  
Veterinary Science

**Government and Public Administration**  
JROTC - Air Force  
JROTC - Army  
JROTC - Marines  
JROTC - Navy  
Public Management and Administration

**Manufacturing**

Manufacturing  
Manufacturing  
Mechatronics

Plumbing  
Sheet Metal  
Welding

Security and Protective Services

Veterinary Science

Public Management and Administration

**Architecture and Construction**

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

**Government and Public Administration**



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



# CTAE

## Career, Technical and Agricultural Education

Georgia Career, Technical and Agricultural Education

Georgia Department of Education

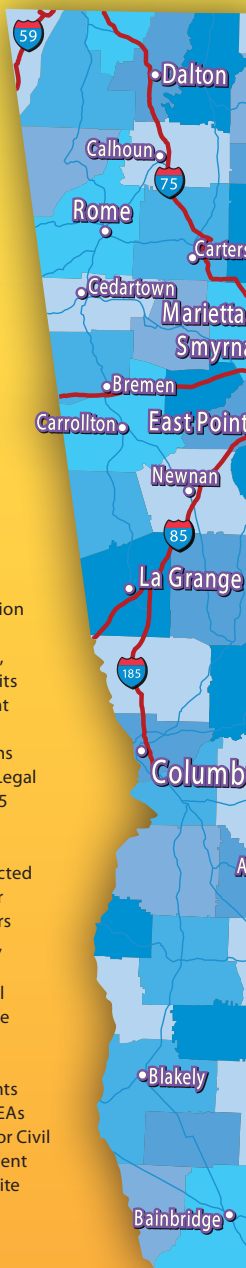
1752 Twin Tower East

Atlanta, GA 30334

(404) 657-8304 Phone

(404) 651-8984 Fax

[ctae.gadoe.org](http://ctae.gadoe.org)



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