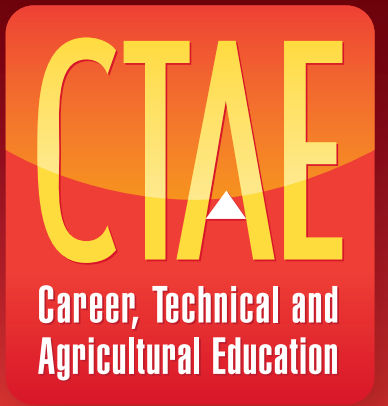


Richard Woods
Georgia's School Superintendent
"Educating Georgia's Future"



ANNUAL REPORT 2016

CTAE =

Education +
Workforce Development





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 programs. This is a subject of real importance, not just to educators and students, but to our business/industry community and all those who are invested in a strong future for the state of Georgia. Education is truly economic development! Georgia's CTAE programs blend the best of the classroom with meaningful, hands-on career experiences for our students. Our ultimate goal is to give every single Georgia student the opportunity to enter college or a career after high school and experience a rewarding future.

This is not something we can accomplish alone. On these pages, you'll learn about the partnerships that make CTAE in Georgia a reality. Our commitment to collaborating with leaders in business, higher education, and the public sector allows us to offer courses and pathways that connect students with the real world of work.

CTAE is good news for students and good news for Georgia. These programs are transforming student outcomes, helping kids see the relevance of what they're learning and keeping them engaged in their education. CTAE is also helping Georgia's communities thrive, connecting employers with skilled graduates and ensuring students are gaining skills that will serve them well in the workplace.

We don't need to guess that Career, Technical, and Agricultural Education works: we see it very clearly in the results. I'm proud to present this annual report on our progress, and I deeply appreciate your interest and support.

Sincerely,

Richard Woods
State 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

FROM THE DIRECTOR OF CTAE...

A summary of the status and accomplishments of the secondary Career, Technical and Agricultural Education (CTAE) programs in the state of Georgia during the 2015-16 school year is contained in this annual report. Two main goals were established for FY 2016: increase business & industry involvement with CTAE pathways throughout Georgia and increase the visibility of CTAE pathway options and opportunities for students. This year marks the year that three reports began driving CTAE work in Georgia: (1) Pathways to Prosperity Report, 2011, (2) Georgia Competitiveness Report, January 2012, and (3) Georgia's High Demand Career Initiative Report, December 2014. Based on the information from these three reports, it was evident that economic development become a focus of CTAE. An Economic Development Liaison was hired in the CTAE Division to assist with the on-going work of CTAE in the areas of increased business & industry involvement and of increased visibility of CTAE options and opportunities.



In fall 2015, Partners Educating Georgia's Future Workforce Initiative was launched. The goal of the new initiative was to emphasize the importance of education and workforce development to economic development. One of the components of the new effort was to host 12 regional meetings across the state with employers, economic development leaders, CTAE professionals, and other educators. The key message we heard across the state was the need to strengthen partnerships with the business community and better equip entry level workers with soft skills.

I believe that it is imperative for Georgia's CTAE Leadership Team to set the example for strengthening the business community partnerships and for focusing on economic development. Listening sessions with state board members and business & industry representatives, completion of the Georgia Economic Development Academy, and annual participation in a 3-day business & industry externship became the norm for the state's CTAE leaders. Local CTAE leaders are encouraged to participate in these opportunities too.

The mission of CTAE is to educate Georgia's future workforce by engaging students in experiences that will prepare them for workplace success. Through CTAE, students see the relevance of their high school efforts to their future career goals thus resulting in many of the accomplishments contained in this annual report. One of these accomplishments is the graduation rate of 94.8% for CTAE concentrators as compared to 79.4% for Georgia's overall graduation rate. Another accomplishment is the increase in enrollment of both middle and high school CTAE courses. Soft skills are often learned through the Career Technical Student Organizations (CTSOs). Membership in 6 of the 8 CTSOs saw an increase in FY 2016. Sixty percent of jobs require some type of post-secondary education. Student participation in post-secondary options through the Move On When Ready (MOWR) program increased significantly in FY 2016. I encourage you to take time to review all the accomplishments in this report for FY 2016.

CTAE educators are doing an incredible job preparing students for workplace success and building the career pipeline; however, CTAE educators need many partners to assist with this important work. We value the partnerships of our stakeholders and know that educating Georgia's future workforce takes many people working together with our CTAE educators in order to create a strong career pipeline for Georgia.

Sincerely,

Barbara M. Wall, Ed.D.

Director of Career, Technical and Agricultural Education

CTAE Mission

To prepare students to be successful as they transition to college and the workforce

Annual Report 2016

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To have a successful future in Georgia, and remain competitive nationwide and globally, we have to have an educated workforce, and that means we need to do a better job getting people into college, make sure they receive a high-quality education and then graduate them.

– Governor Nathan Deal, State of Georgia

Georgia Career, Technical and Agricultural Education

CTAE = Education + Workforce Development

CTAE At-A-Glance

Georgia Department of Education

2015-2016 Georgia Career, Technical and Agricultural Education

Secondary Education—Grades 6-12

CTAE Programs

- 180 Local School Systems

Total Georgia Student Enrollment

- 560,332 Students in Grades 9-12
- 431,557 Students in Grades 6-8

Student Enrollment in CTAE Courses

(Students enrolled in one or more CTAE courses)

- 61.57% of all Students in Grades 9-12 Statewide (344,971 students)
- 53.94% of all Students in Grades 6-8 Statewide (232,854 students)

CTAE Enrollment by Gender in Middle and High Schools

- Male 52.83%
- Female 47.17%

CTAE Enrollment by Race

- Black 38.35%
- Hispanic 12.50%
- White 42.57%
- Other 6.58%

CTAE High School Concentrators

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

- 119,852 Students

Graduation Rate for CTAE Concentrators

- 94.8%

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 (2015-2016 CTAE Enrollment), data tables provided by the CTAE division, and Perkin's IV Consolidated Annual Report FY 2015-2016.

Energy		Information Technology
Finance	Agriculture, Food, & Natural Resources	Law, Public Safety, Corrections & Security
Government & Public Administration	Architecture & Construction	Manufacturing

GEORGIA'S CAREER CLUSTERS

Health Science	Arts, AV/Technology & Communications	Marketing
Hospitality & Tourism	Business, Management & Administration	Science, Technology, Engineering & Mathematics
Human Services/Family & Consumer Sciences	Education & Training	Transportation, Distribution & Logistics

Over 232,854 middle school students (54% of all Georgia middle school students) and 344,971 high school students (62% of all Georgia high school students) participated in Georgia's Department of Education Career, Technical and Agricultural Education (CTAE) Career Cluster programs during the 2015-2016 school year. CTAE offers students more than 130 career pathways within 17 Career Clusters modeled after the National Career Center. The CTAE program enables students to experience the relevance in the workplace of what they are learning in the classroom. The 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 students participate in local, state, regional, and national Career Technical



Student Organization (CTSO) activities and events which support classroom instruction and laboratory experiences. Students are prepared for registered apprenticeship, college, the military, or immediately beginning a career. Georgia CTAE course offerings, and the new Educating Georgia's Future Workforce initiative, leverage partnerships with industry and higher education to ensure these students have the skills they need to thrive in the workforce of the future.

The state career and technical education system consists of programs offered at the middle and high 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.

One indicator of program success is the graduation rate of students participating in CTAE. In FY 2016, 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 94.8% for CTAE Concentrators and 79.4% for all students statewide.

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
- Entrepreneurship

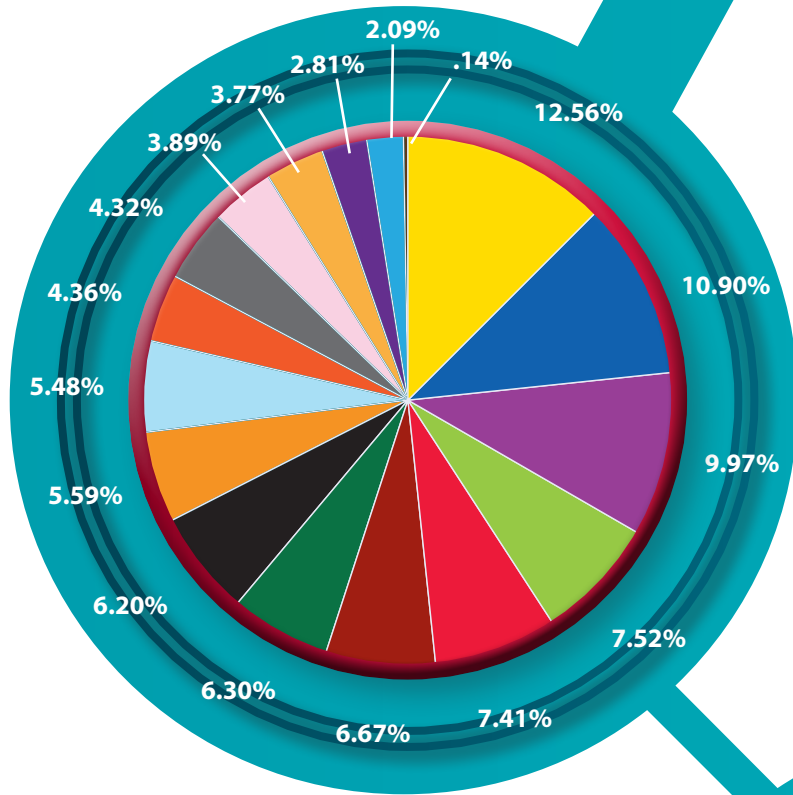
CTSOs are committed to the growth of students in all CTAE career pathways, and they play an integral role in preparing students to become college and career ready.

Because strong schools are the only proven route to tomorrow's good jobs, we must focus efforts on producing well-prepared students who are life-, college-, and work-ready. Economic development begins with strong schools.
 – Governor Nathan Deal, State of Georgia

Chart: High School Students (Grades 9-12) Enrolled in each CTAE Program Area in 2015-2016

Percent of Total CTAE Enrollment

Business Management and Administration (BMA)	67,509
Information Technology (IT)	58,594
Finance (FIN)	53,579
Health Science (HHS)	40,411
Government and Public Administration (GPA)	39,830
Human Services (HS)/Family and Consumer Sciences (FACS)	35,839
Hospitality and Tourism (HT)	33,841
Agriculture, Food and Natural Resources (AGED)	33,308
Arts, AV/Technology and Communications (AAVTC)	30,053
Science, Technology, Engineering and Mathematics (STEM)	29,459
Education and Training (ET)	23,447
Manufacturing (MANG)	23,207
Marketing (MKTG)	20,889
Architecture and Construction (AC)	20,250
Law, Public Safety, Corrections and Security (LPSCS)	15,095
Transportation, Distribution and Logistics (TDL)	11,239
Energy (NRG)	777



Percent of Total CTAE Enrollment

Business Management and Administration (BMA)	116,987
Science, Technology, Engineering and Mathematics (STEM)	80,806
Human Services (HS)/Family and Consumer Sciences (FACS)	50,143
Agriculture, Food and Natural Resources (AGED)	29,062
Arts, AV/Technology and Communications (AAVTC)	8,798
Health Science (HHS)	6,426
Marketing (MKTG)	3,656
Law, Public Safety, Corrections and Security (LPSCS)	1,645
Architecture and Construction (AC)	1,559
Transportation, Distribution and Logistics (TDL)	87

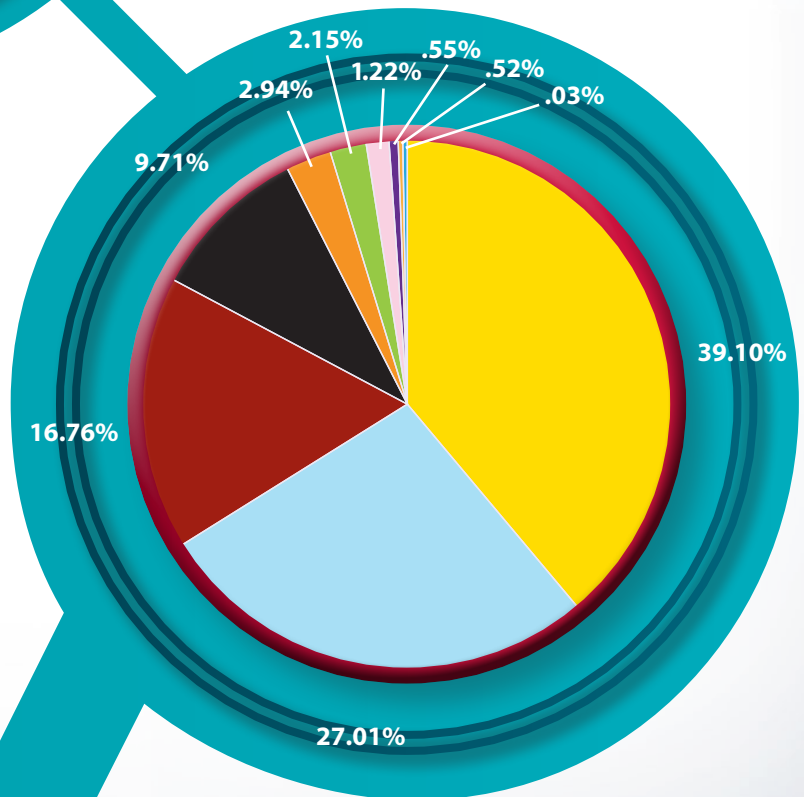


Chart: Middle School Students (Grades 6-8) Enrolled in each CTAE Program Area in 2015-2016

More personalized instruction, coupled with multiple paths for graduation, ensures a strong pipeline leading to post-high school opportunities for our students.
 – Richard Woods, Georgia's School Superintendent

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.

CTAE Achievements in 2015-2016

Graduation Rate for CTAE Concentrators

- ▶ The graduation rate of 94.8% for CTAE Concentrators compares favorably with Georgia's overall graduation rate of 79.40 in FY 2016.
- ▶ The CTAE graduation rate of 94.8% is 2.3% above the State Target (92.5%) in FY 2016.

CTAE Move on When Ready Postsecondary Transitions

- ▶ In FY 2016, a total of 27,512 students participated in Move On When Ready compared to a total of about 21,000 in FY 2015 comprising of Accel, Hope Grant Dual Enrollment and MOWR, student participation in 2016 MOWR.
- ▶ Student participation in 2016 MOWR increased significantly.
- ▶ A total of 437 public high schools participated in MOWR in 2016.
- ▶ Top 5 FY 2016 CTAE course subject areas were Healthcare Sciences (2,479 students); Business and Computer Science (2,095 students); Architecture, Construction, Communications and Transportation (1,514 students); Government, Law, Public Safety, Corrections and Security (1,207 students); Education/Culinary Arts/Family and Consumer Science (987 students) (Georgia Student Finance Commission)

CTAE Professional Learning Participation

- ▶ 366 CTAE Professional Learning Workshops were held during FY 2016, with more than 7,952 CTAE educators participating in a total of 50,032 professional learning contact hours.

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

- ▶ In FY 2016 over 1,600 educators, including 650 CTAE teachers, participated in the CTAE Annual STEM Forum, a state-wide program to facilitate CTAE, math, and science teachers to collaborate and to learn about STEM initiatives, methods to implement STEM strategies in the classroom, and the statewide STEM Georgia Teachers Academies.
- ▶ More than 950 Georgia schools are currently working towards STEM Certification from the Georgia Department of Education. During FY 2016, 46 schools, including 10 high schools, 8 middle schools, and 28 elementary schools held STEM certification. These schools are required to have 50% female students in the STEM programs.

CTAE Program Achievements

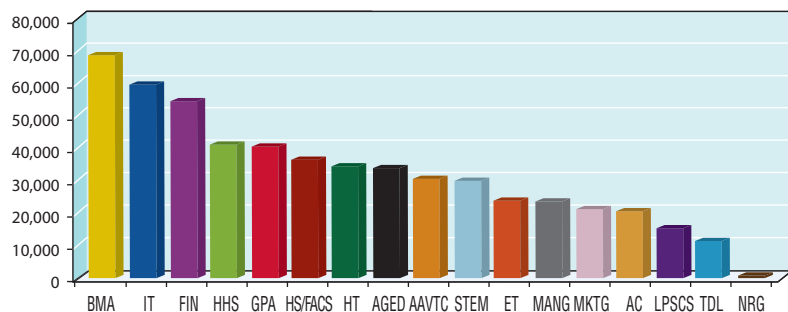
- ▶ The total number of high school students enrolled in CTAE in FY 2016 (344,971 students) increased as compared to FY 2015 (330,094 students).
- ▶ 53.96% of all middle school and 61.57% of all high school students were enrolled in CTAE courses in FY 2016.
- ▶ In FY 2016, the number of CTAE students completing three or more classes in a program area (119,852 CTAE Concentrators) increased 7.9% as compared with 111,077 CTAE Concentrators in FY 2015.
- ▶ 44,057 pathway completers sat for the end of pathway assessments in FY 2016 as compared with 37,339 high school students in FY 2015 (an 18% increase).
- ▶ 480 CTAE Career Cluster Programs were recognized as industry certified in 2016 compared with 471 industry certifications in FY 2015 (a 1.9% increase).
- ▶ 26,522 high school students earned an industry credential in FY 2016 as compared with 21,702 high school students in FY 2015 (a 22.2% increase).
- ▶ Student unduplicated enrollment in Junior Reserve Officers Training Corps (JROTC) numbered 39,994 in FY 2016.
- ▶ Student membership in CTSOs increased during 2016 in the following Georgia Career Technical Student Organizations: Health Occupations Students of America (HOSA) by 17.9%; Georgia SkillsUSA by 13.1%; Family, Career and Community Leaders of America (FCCLA) by 10.5%; Distributive Education Club of America (DECA) by 9.3%; Future Farmers of America (FFA) by 5.7%; and Career and Technical Instruction (CTI) by 3.0%.
- ▶ 17,701 students participated in the Georgia Youth Apprenticeship Program (YAP) during FY 2016. This was a 9.8% increase as compared to FY 2015 (16,118 YAP students).
- ▶ 100% of employers would recommend the Georgia Youth Apprenticeship Program to other companies. 97.4% of employers agreed that the program was beneficial to their company.
- ▶ 97.9% of employers participating in the Georgia Youth Apprenticeship Program agreed that students performed at the level expected, and 98.8% of employers agreed that students understand written instructions and materials at the level expected.
- ▶ 96.5% of employers agreed that students in the Georgia Youth Apprenticeship Program exhibit satisfactory communication (written and verbal) skills. 94.4% of employers agreed that students who participate in YAP exhibit satisfactory problem-solving skills, and 93.8% of employers agree that students demonstrate computer skills at the level expected.

"...educating Georgia's future workforce takes many people working together with our CTAE educators..."

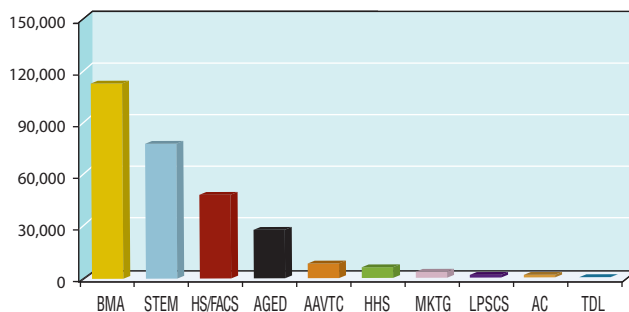
- Barbara M. Wall, Ed.D.

Director of Career, Technical and Agricultural Education

CTAE High School Program Enrollment: 2015-2016



CTAE Middle School Program Enrollment: 2015-2016



AGRICULTURE, FOOD AND NATURAL RESOURCES (AGED) 2015-2016



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.

Student Enrollment in Grades 9-12 (Unduplicated Count)	Total 33,308 Male 20,867 (62.6%) Female 12,441 (37.4%)
Student Enrollment in Grades 6-8	29,062
Number of Industry-Certified Programs	7
Number of CTAE Teachers	445 High School Teachers 111 Middle School Teachers



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) 2015-2016



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

*Industry Certified Program

Enrollment in Grades 9-12 (Unduplicated Count)	Total 20,250 Male 17,269 (85.3%) Female 2,981 (14.7%)
Student Enrollment in Grades 6-8	1,559
Number of Industry-Certified Programs	63
Number of CTAE Teachers	263 High School Teachers 8 Middle School Teachers



ARTS, AV/TECHNOLOGY AND COMMUNICATIONS (AAVTC) 2015-2016

ARTS, AV/TECHNOLOGY and COMMUNICATIONS (AAVTC) Career Cluster includes 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*

*Industry Certified Program



Enrollment in Grades 9-12 (Unduplicated Count)	Total 30,053 Male 16,992 (57%) Female 13,061 (43%)
Student Enrollment in Grades 6-8	8,798
Number of Industry-Certified Programs	48
Number of CTAE Teachers	333 High School Teachers 46 Middle School Teachers

BUSINESS, MANAGEMENT AND ADMINISTRATION (BMA) 2015-2016

Enrollment in Grades 9-12 (Unduplicated Count)	Total 67,509 Male 37,113 (55%) Female 30,396 (45%)
Student Enrollment in Grades 6-8	116,987
Number of Industry-Certified Programs	106
Number of CTAE Teachers	989 High School Teachers 456 Middle School Teachers



BUSINESS, MANAGEMENT and ADMINISTRATION (BMA) Career Cluster

prepares students with technical 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.



Business, Management and Administration Career Pathways

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

EDUCATION AND TRAINING (ET) 2015-2016

Education and Training Career Pathways

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

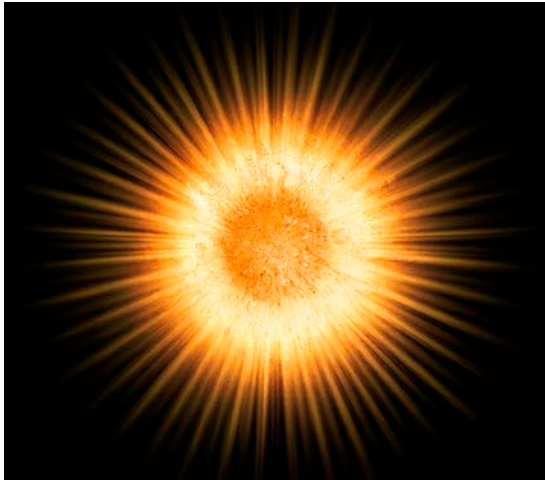
EDUCATION and TRAINING (ET) Career Cluster

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



Enrollment in Grades 9-12 (Unduplicated Count)	Total 23,447 Male 2,667 (11%) Female 20,780 (89%)
Number of Industry-Certified Programs	26
Number of CTAE Teachers	323 High School Teachers

ENERGY (NRG) 2015-2016



Energy Career Pathways

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

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

Enrollment in Grades 9-12 (Unduplicated Count)	Total 777 Male 661 (85%) Female 116 (15%)
Number of Industry-Certified Programs	Currently Reviewing Industry Certification Process
Number of CTAE Teachers	21 High School Teachers

FINANCE (FIN) 2015-2016

Finance Career Pathways

- ★ *Advanced Accounting*
- ★ *Business Accounting*
- ★ *Financial Services*



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.

Enrollment in Grades 9-12 (Unduplicated Count)	Total 53,579 Male 29,621 (55%) Female 23,958 (45%)
Student Enrollment in Grades 6-8	116,987
Number of Industry-Certified Programs	106
Number of CTAE Teachers	980 High School Teachers 456 Middle School Teachers



GOVERNMENT AND PUBLIC ADMINISTRATION (GPA) 2015-2016

Enrollment in Grades 9-12 (Unduplicated Count)	Total 39,830 Male 21,685 (54%) Female 18,145 (46%)
Number of Industry-Certified Programs	Not Available
Number of CTAE Teachers	542 High School Teachers



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.

Government and Public Administration Career Pathways

- ★ *Public Management and Administration*
- ★ *Junior Reserve Officers' Training Corps (JROTC)*
 - JROTC – Air Force 10,273
 - JROTC – Army 19,826
 - JROTC – Marines 2,454
 - JROTC – Navy 7,441



HOSPITALITY AND TOURISM (HT) 2015-2016

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.

Enrollment in Grades 9-12 (Unduplicated Count)	Total 33,841 Male 16,254 (48%) Female 17,587 (52%)
Student Enrollment in Grades 6-8	81,550
Number of Industry-Certified Programs	Currently Reviewing Industry Certification Process
Number of CTAE Teachers	518 High School Teachers 284 Middle School Teachers



Hospitality and Tourism Career Pathways

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



*Industry Certified Program

HEALTH SCIENCE (HHS) 2015-2016

Health Science Career Pathways

- ✦ *Biotechnology Research & Development*
- ✦ *Diagnostics - Clinical Lab*
- ✦ *Diagnostics - Phlebotomy*
- ✦ *Diagnostics - Non-Invasive Technology in Healthcare*
- ✦ *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*
- ✦ *Therapeutic Services - Pharmacy*
- ✦ *Therapeutic Services - Public Health*
- ✦ *Therapeutic Services - Public Safety Communications*
- ✦ *Therapeutic Services - Sports Medicine*
- ✦ *Therapeutic Services - Surgical Technology*

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



Enrollment in Grades 9-12 (Unduplicated Count)	Total 40,411 Male 8,960 (22%) Female 31,451 (78%)
Student Enrollment in Grades 6-8	6,426
Number of Industry-Certified Programs	82
Number of CTAE Teachers	510 High School Teachers 27 Middle School Teachers

HUMAN SERVICES (HS)/FAMILY AND CONSUMER SCIENCES (FACS) 2015-2016

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*



HUMAN SERVICES (HS)/FAMILY AND CONSUMER SCIENCES (FACS) Career Cluster prepares individuals for employment activities related to family and human needs, such as nutrition and food science, family and community services, personal care, and consumer services.

Enrollment in Grades 9-12 (Unduplicated Count)	Total 35,839 Male 11,330 (30%) Female 24,509 (70%)
Student Enrollment in Grades 6-8 (FACS)	50,143
Number of Industry-Certified Programs	21
Number of CTAE Teachers	541 High School Teachers 284 Middle School Teachers



INFORMATION TECHNOLOGY (IT) 2015-2016

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 science are all possibilities.

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*



Enrollment in Grades 9-12 (Unduplicated Count)	Total 58,594 Male 29,866 (51%) Female 28,728 (49%)
Number of Industry-Certified Programs	106
Number of CTAE Teachers	903 High School Teachers 456 Middle School Teachers

LAW, PUBLIC SAFETY, CORRECTIONS AND SECURITY (LPSCS) 2015-2016



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.

Enrollment in Grades 9-12 (Unduplicated Count)	Total 15,095 Male 7,505 (50%) Female 7,590 (50%)
Student Enrollment in Grades 6-8	1,645
Number of Industry-Certified Programs	Not Available
Number of CTAE Teachers	158 High School Teachers 9 Middle School Teachers

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) 2015-2016

Manufacturing Career Pathways

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



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.



Enrollment in Grades 9-12 (Unduplicated Count)	Total 23,207 Male 12,279 (53%) Female 10,928 (47%)
Number of Industry-Certified Programs	Currently Reviewing Industry Certification Process
Number of CTAE Teachers	320 High School Teachers

MARKETING (MKTG) 2015-2016

Enrollment in Grades 9-12 (Unduplicated Count)	Total 20,889 Male 10,448 (50%) Female 10,441 (50%)
Student Enrollment in Grades 6-8	3656
Number of Industry-Certified Programs	59
Number of CTAE Teachers	279 High School Teachers 15 High School Teachers

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.



Marketing Career Pathways

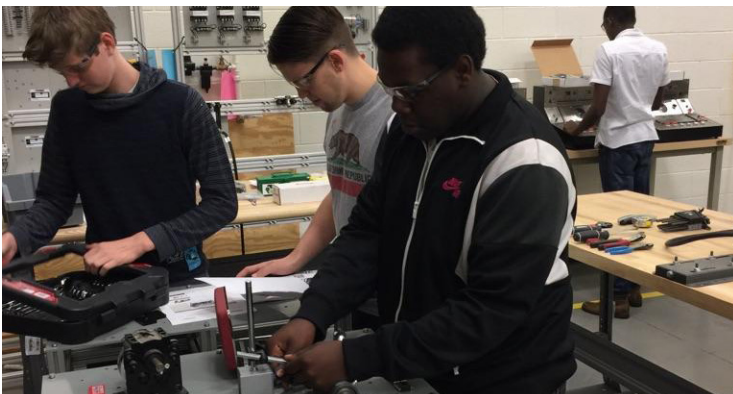
- ✦ *Fashion, Merchandising and Retail Management*
- ✦ *Marketing and Management*
- ✦ *Marketing Communications and Promotions*

SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS (STEM) 2015-2016

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



Enrollment in Grades 9-12 (Unduplicated Count)	Total 29,459 Male 23,683 (80%) Female 5,776 (20%)
Student Enrollment in Grades 6-8	80,806
Number of Industry-Certified Programs	45
Number of CTAE Teachers	330 High School Teachers 256 Middle School Teachers



Science, Technology, Engineering and Mathematics Career Pathways

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

*Industry Certified Program

TRANSPORTATION, DISTRIBUTION AND LOGISTICS (TDL) 2015-2016



Transportation, Distribution & Logistics Career Pathways

- ✦ Aircraft Maintenance
- ✦ Automobile Maintenance and Light Repair
- ✦ Automobile Service Technology
- ✦ 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

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.

Enrollment in Grades 9-12 (Unduplicated Count)	Total 11,239 Male 10,068 (90%) Female 1,171 (10%)
Student Enrollment in Grades 6-8	87
Number of Industry-Certified Programs	30
Number of CTAE Teachers	123 High School Teachers 1 Middle School Teacher



COORDINATED CAREER ACADEMIC EDUCATION/PROJECT SUCCESS (CCAIE/PS) 2015-2016

COORDINATED CAREER ACADEMIC EDUCATION/PROJECT SUCCESS (CCAIE/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.

Enrollment in Grades 9-12 (Unduplicated Count)	Total 1,409 Male 850 (57%) Female 604 (43%)
Number of CTAE Teachers	158 High School Teachers

CAREER AND TECHNICAL INSTRUCTION (CTI) 2015-2016

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



Enrollment in Grades 9-12 (Unduplicated Count)	Total 5,008 Male 3,276 (65%) Female 1,732 (35%)
Number of CTAE Teachers	115 High School Teachers

GEORGIA'S CAREER CLUSTERS AND CAREER PATHWAYS

<p>Agriculture, Food, and Natural Resources</p> <ul style="list-style-type: none"> Animal Production & Processing Animal/Mechanical Systems Agriculture Leadership in Animal Production Companion Animal Systems Veterinary Science Equine Science Food Animal Systems Forest / Renewable Energy Agriculture Leadership in Aquaculture Forest Mechanical Systems Agriculture Leadership in Forestry Forest / Natural Resources Management Forest Management Systems Forestry / Wildlife Systems Environmental Agriculture Systems Horticulture Mechanical Systems Agriculture Leadership in Plant Science Agriculture Leadership in Horticulture Landscape Management Systems Plant and Floral Design Systems Plant and Landscape Systems Plant and Floriculture Systems Agriculture Mechanics & Electrical Systems Agriculture Mechanics & Metal Fabrication Agriculture Energy Systems Agriculture Mechanics Systems Food Products & Processing Systems Agriculture Leadership in Food Product Processing Horticulture and Forest Science Plant Mechanical Systems Horticulture and Animal Science Forestry and Animal Science Agribusiness Systems Agriscience Systems
<p>Law, Public Safety, Corrections & Security</p> <ul style="list-style-type: none"> Fire and Emergency Services – Emergency Medical Responder Fire and Emergency Services – Public Safety Communications Fire and Emergency Services – Firefighting Corrections Services Law Enforcement Services – Criminal Investigations Law Enforcement Services – Forensic Science Law Enforcement Services – Public Safety Communications Security and Protective Services Legal Services – Applications of the Law Legal Services – Legal Administrative Services
<p>Transportation, Distribution & Logistics</p> <ul style="list-style-type: none"> Automobile Maintenance and Light Repair Automobile Service Technology Master Automobile Service Technology Flight Operations Aircraft Maintenance Distribution and Logistics Collision Repair – Painting and Refinishing Collision Repair – Non-Structural Analysis and Damage Repair Marine Engine Technology

<p>Architecture & Construction</p> <ul style="list-style-type: none"> Architectural, Drawing & Design Carpentry Electrical Fine Furniture - Cabinetry Heating, Ventilation, Air Conditioning, and Refrigeration HVACR – Electrical Industrial Maintenance Masonry Plumbing Machining Operations Sheet Metal Welding
<p>Finance</p> <ul style="list-style-type: none"> Advanced Accounting Business Accounting Financial Services
<p>Business, Management, & Administration</p> <ul style="list-style-type: none"> Business and Technology Entrepreneurship Human Resources Management
 <p>Georgia Department of Education Richard Woods, Georgia's School Superintendent Ensuring a bright future for every child</p> <p>Government & Public Administration</p> <ul style="list-style-type: none"> Public Management & Administration JROTC – Air Force JROTC – Army JROTC – Marines JROTC – Navy
<p>Human Services/FACS</p> <ul style="list-style-type: none"> Personal Care Services – Cosmetology Personal Care Services – Barbering Personal Care Services – Esthetics Personal Care Services – Nails Food and Nutrition Housing and Community Management Interiors, Fashion & Textiles
<p>Advanced Academics, Fine Arts, & World Languages</p> <ul style="list-style-type: none"> Advanced Academics – English Language Arts; Mathematics, Science & Social Studies Fine Arts World Languages
<p>Hospitality & Tourism</p> <ul style="list-style-type: none"> Culinary Arts Hospitality, Recreation, & Tourism Sports & Entertainment Marketing

<p>Arts, AV/Technology & Communications</p> <ul style="list-style-type: none"> Audio Video Technology & Film Graphic Communication Graphic Design Animation and Digital Media
<p>Manufacturing</p> <ul style="list-style-type: none"> Industrial Maintenance Manufacturing Mechatronics Granite Technology
<p>Science, Technology, Engineering, Mathematics</p> <ul style="list-style-type: none"> Engineering and Technology Engineering Drafting and Design Electronics
<p>Education & Training</p> <ul style="list-style-type: none"> Early Childhood Care & Education Teaching as a Profession
<p>Energy</p> <ul style="list-style-type: none"> Energy Systems Energy & Power: Generation, Transmission, and Distribution
<p>Health Science</p> <ul style="list-style-type: none"> Diagnostics – Clinical Lab Diagnostics – Phlebotomy Diagnostics – Non-Invasive Technology in Healthcare Therapeutic Services – Public Health Therapeutic Services – Exercise Physiology Therapeutic Services – Sports Medicine Therapeutic Services – Allied Health and Medicine Therapeutic Services – Dental Science Therapeutic Services – Pharmacy Therapeutic Services – Emergency Medical Responder Therapeutic Services – Patient Care Therapeutic Services – Public Safety Communications Therapeutic Services – Surgical Technology Health Informatics – Health Information Management/Medical Office Health Informatics – Health Information Technology Biotechnology Research and Development Support Services
<p>Marketing</p> <ul style="list-style-type: none"> Marketing and Management Fashion, Merchandising & Retail Management Marketing Communications & Promotions
<p>Information Technology</p> <ul style="list-style-type: none"> Cybersecurity Game Design Health Information Technology Information Support & Services Internet of Things Networking Programming Computer Science Web & Digital Design Web Development

...the more students participate in Career and Technical Student Organization (CTSO) activities, the higher their academic motivation, academic engagement, grades, career self-efficacy, college aspirations, and employability skills.
 - National Research Center for Career Technical Education

Career and Technical Student Organizations (CTSOs) are student-governed organizations with leadership programs and competitive events which reflect current curriculum standards and competencies for the instructional programs they serve within Career, Technical and Agricultural Education (CTAE).

CAREER TECHNICAL STUDENT ORGANIZATIONS (CTSOS)		
	<p>Future Farmers of America (FFA) 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; and use a learning by doing method. By applying a science-based curriculum to real life projects, teamwork, and competition, FFA members develop into successful, productive citizens. The strength of the FFA and agricultural education lies in the dedication of the teachers, whose philosophy is, "We don't just teach agriculture, we teach students!"</p>	<p>CTAE Program • Agriculture, Food & Natural Resources FY 2016 Membership 41,117</p>
	<p>Future Business Leaders of America (FBLA) 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>	<p>CTAE Program • Business, Management & Administration • Finance • Information Technology FY 2016 Membership 25,436</p>
	<p>Georgia Technology Student Association (GA TSA) 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>	<p>CTAE Program • Energy • Manufacturing • Science, Technology, Engineering and Mathematics FY 2016 Membership 24,606</p>
	<p>Family, Career and Community Leaders of America (FCCLA) 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>	<p>CTAE Program • Education and Training • Hospitality and Tourism • Human Services/Family and Consumer Sciences FY 2016 Membership 18,014</p>
	<p>Health Occupations Students of America (HOSA) The mission is to enhance the delivery of compassionate, quality healthcare by providing opportunities for knowledge, skill and leadership development of all health occupations students, thereby, helping the students to meet the needs of the health care community.</p>	<p>CTAE Program • Health Science FY 2016 Membership 14,500</p>
	<p>Distributive Education Club of America (DECA) is 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 a 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>	<p>CTAE Program • Hospitality and Tourism • Marketing FY 2016 Membership 12,270</p>
	<p>Georgia SkillsUSA 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 more than 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 in June.</p>	<p>CTAE Program • Architecture and Construction • Arts, AV/Technology & Communications • Human Services/Family & Consumer Sciences • Law, Public Safety, Corrections & Security • Manufacturing • Transportation, Distribution and Logistics FY 2016 Membership 9,133</p>
	<p>Career and Technical Instruction (CTI) program is designed to support students with disabilities enrolled in Career, Technical and Agricultural Education classes. The CTI program provides high school students with disabilities the opportunity to develop 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>	<p>CTAE Program • Coordinated Career Academic Education FY 2016 Membership 5,008</p>

Career, Technical and Agricultural Education (CTAE), a division of the Georgia Department of Education, believes it is only possible to move education forward by working together. In the best interest of Georgia's students, CTAE is working to foster relationships, strong communication, and meaningful collaboration with these groups and others.



CTAE

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