

# Georgia CTSOs

CAREER & TECHNICAL STUDENT ORGANIZATIONS

## COMPETITIVE EVENTS & CURRICULUM ALIGNMENT



CAREER, TECHNICAL AND AGRICULTURAL EDUCATION DIVISION  
OF THE GEORGIA DEPARTMENT OF EDUCATION



Career and Technical Student Organizations (CTSO) are a vital part of Career, Technical and Agricultural Education (CTAE). CTSOs play an integral role in preparing students to become college and career ready members of society who hold productive leadership roles in their communities. CTSOs are committed to the growth of students in all CTAE career pathways.

These organizations provide motivation, leadership training, and career development opportunities for students enrolled in Career, Technical and Agricultural Education programs in middle and high schools and enhance their occupational, employability and leadership skills through various activities such as conferences, award programs, service projects, and competitive events. These organizations conduct activities and events at the local, state and national levels in which students can participate and compete.

When integrated into the Career, Technical and Agricultural Education curriculum, the CTSO is a powerful instructional tool which offers organized curriculum-oriented activities that help students maximize employability, gain leadership opportunities, and develop personal skills which enable them to develop into productive members of society.

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

## CTAE At A Glance

### 2012-2013 Georgia Career, Technical and Agricultural Education

*Secondary Education – Grades 6-12*

(Data tables provided by the CTAE division and Perkin's IV Consolidated Annual Report FY 2012-2013)

#### CTAE Programs in Georgia

180 Local School Systems

#### Total Georgia Student Enrollment

524,008 Students in Grades 9-12

429,338 Students in Grades 6-8

#### Student Enrollment in CTAE Courses

*(Students enrolled in one or more CTAE courses)*

60.90% of all Students in Grades 9-12  
Statewide (319,133 students)

56.08% of all Students in Grades 6-8  
Statewide (240,801 students)

#### CTAE High School Concentrators

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

96,663 Students

#### Graduation Rate for CTAE Concentrators

88.4%

#### Academic Achievements of CTAE Students

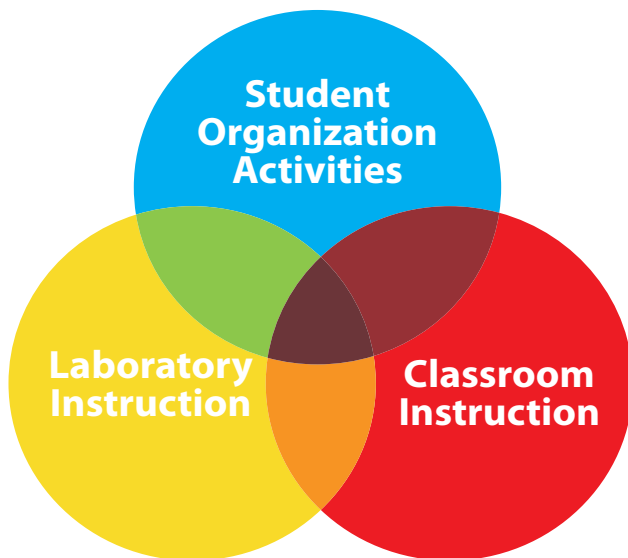
92.42% of CTAE Concentrators who took the End of Course Test (EOCT) met or exceeded state standards in English/Language Arts in FY 2013

## The OVERALL GOALS of Georgia CTSOs are to:

- Operate in a manner consistent with the organization's state and national constitutions and bylaws, within state Department of Education policy guidelines.
- Plan and implement programs that support the Career, Technical and Agricultural Education curriculum.
- Maintain communication and collaborative efforts with teachers on the local level and provide opportunities for college and career readiness.
- Assist in the recruitment of chapter advisors and student members utilizing measurable annual targets.
- Create a sense of community among students who are enrolled in a Career, Technical and Agricultural Education program through CTSO membership.
- Promote Career, Technical and Agricultural Education and CTSOs in the community.
- Compliment and reinforce – rather than compete with or duplicate -- Career, Technical and Agricultural Education curriculum.
- Provide leadership development for students and emphasize the value of employability skills.
- Strengthen academic as well as career and technical skills of students through the co-curricular format by providing contextual learning experiences as part of classroom activities.
- Assist students in developing professionalism/pride by their participation in school and community projects and through networking with business and industry.



## Georgia CTSOs are co-curricular!



This diagram illustrates how the instructional program consists of three overlapping parts: classroom instruction, hands-on lab activities, and CTSO activities. Each element of the diagram is a distinct part of the CTAE division but they are so fully intertwined that they cannot be fully separated if a complete program is to be offered.

When integrated into the Career, Technical and Agricultural Education curriculum, the CTSO is a powerful instructional tool which offers organized curriculum-oriented activities that help students maximize employability, gain leadership opportunities, and develop personal skills which enable them to develop into productive members of society. CTSOs are co-curricular organizations with leadership programs and competitive events which reflect current curriculum standards and competencies for the instructional programs they serve. Teachers infuse the CTSO's activities into the instructional activities, thereby helping students see the real world value of their academic studies.

CTSOs are committed to the growth of students enrolled in all CTAE career pathways. Diversity is defined to be the inclusion of all qualified persons whose differences may include, but are not limited to: age, ethnicity, physical ability, gender, race, or religion.

Currently, in the state of Georgia, there are seven nationally recognized Career and Technical Student Organizations: DECA, Family, Career and Community Leaders of America (FCCLA), FFA, Future Business Leaders of America (FBLA), HOSA - Future Health Professionals, SkillsUSA and Technology Student Association (TSA). Georgia is also host to Career and Technical Instruction (CTI), a Georgia only CTSO designed specifically for students with disabilities.

## Dual Enrollment and Post-Secondary Articulation

### Dual Enrollment Alignment

Alignment of CTSO activities and post-secondary programs is achieved through Transition Career Partnerships which are designed to prepare students for college and career opportunities leading students to postsecondary institutions for an industry recognized certification or licensure, an associate and/or higher college degree, and/or successful employment.

Move On When Ready is a dual enrollment program for students to attend a postsecondary institution full-time during their junior and/or senior year of high school and receive high school credit and college credit simultaneously while attending college classes on the college campus, full-time.

In successful collaboration, Georgia Department of Education's CTAE Program Specialists work directly with the staff of the Technical College System of Georgia (TCSG) to produce quality CTAE course alignment. More than 325 courses are presently aligned and the complete matrix can be viewed at

[www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/Documents/Dual-Enrollment-Matrix-Spring-2015.pdf](http://www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/Documents/Dual-Enrollment-Matrix-Spring-2015.pdf).

Course alignment is also an ongoing, interactive process based on the continuum of requests from local school systems.

### Vision

To form partnerships that build workforce development opportunities for students through career pathways.

### Mission

To strengthen the link between secondary and postsecondary education and to maximize the successful, seamless transition of students from one educational level to another that includes increased student academic, career and technical achievement. To assure that every student will be prepared to advance to a successful career and understand the benefits of lifelong learning.





# Career and Technical Student Organizations

Career, Technical and Agricultural Education (CTAE) is helping our nation address key challenges such as workforce development, student achievement, economic vitality and global competitiveness.

Career and Technical Student Organizations (CTSOs) are key components to strong CTAE programs. They (CTSOs) integrate into CTAE programs and courses and extend teaching and learning through innovative programs, business and community partnerships and leadership experiences at the school, state and national levels.

- CTSOs provide relevant, engaging programs that improve student achievement, reduce dropout rates and help students discover the wide range of career options available.
- CTSOs engage the community and local businesses to help students understand global competition and chart effective and efficient pathways through high school and postsecondary education for their personal success.
- CTSO programs, such as industry based competitive events and community service, provide students with the opportunity to develop 21<sup>st</sup> Century Skills focused on creativity, problem solving, teamwork and goal setting.
- CTSOs bring relevance to the classroom and prepare students to be college and career ready.

## DID YOU KNOW?

CTE programs are supported at the federal level by the Carl D. Perkins Career and Technical Education Improvement Act, which provides approximately \$1.2 billion dollars in state grants annually to serve more than 14 million students nationwide.

Career and Technical Student Organizations are comprised of 8 not-for-profit organizations, specifically authorized by the Congress in the Perkins Act.

CTSOs align with the 16 Career Clusters identified by the US Department of Education.

## MAKING AN IMPACT

With more than 1 million student members nationwide, these 8 organizations have a definite impact on student's overall college and career readiness.



Students who participate in CTSOs demonstrate higher levels of academic engagement and motivation, civic engagement, career self-efficacy and employability skills than other students.

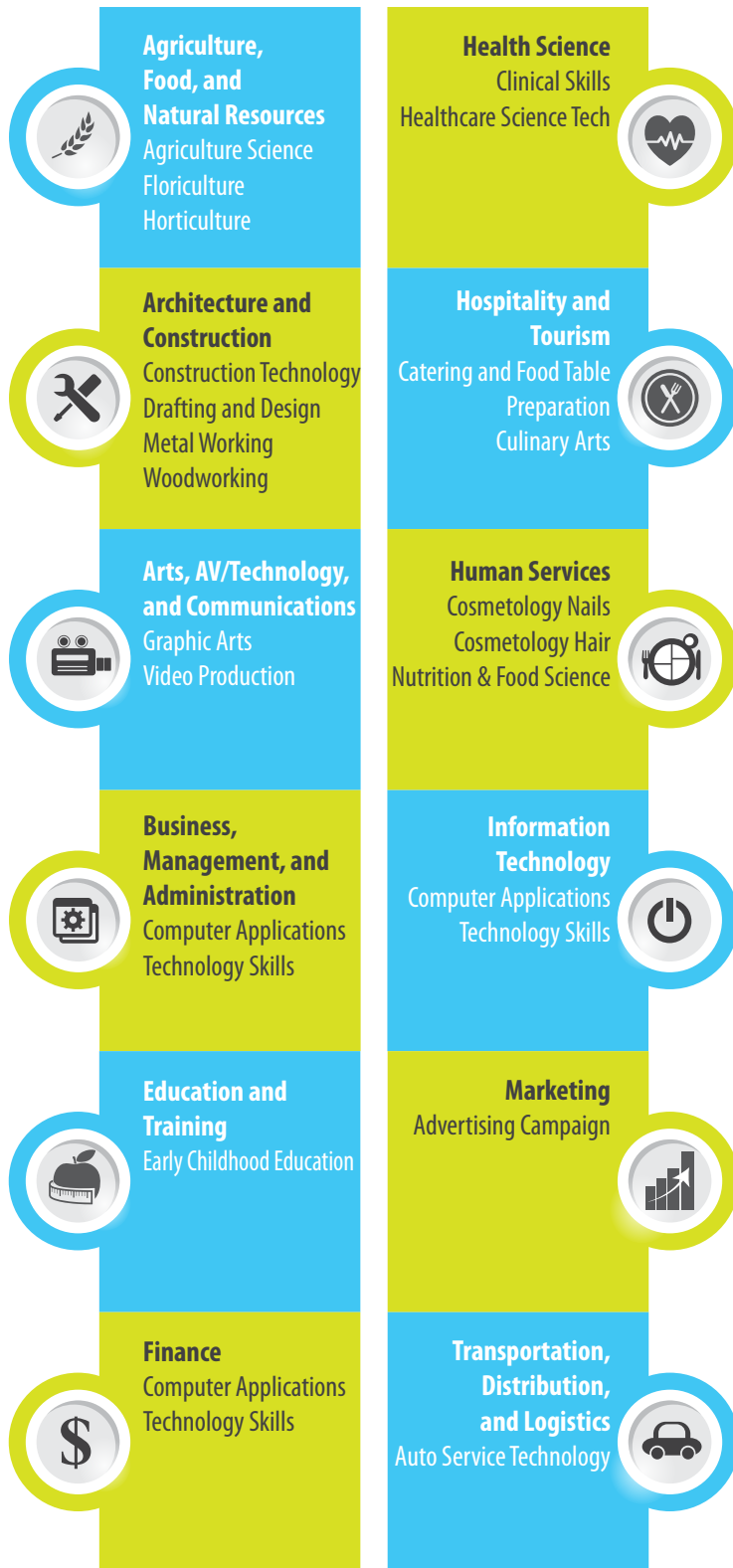


According to the National Research Center for Career and Technical Education, participating in leadership and professional development activities in a CTSO raises students' educational aspirations.



Students who participate in school organizations in 10th grade have higher grade point averages and are more likely to be enrolled in college at 21 than other students.

## Georgia Career Clusters and CTI Events



The Georgia Career and Technical Instruction (CTI) program is designed to provide support services to high school students with disabilities enrolled in Career, Technical, and Agricultural Education (CTAE) courses. These courses give students with disabilities the opportunity to acquire the employability skills needed to transition to post-secondary education and/or the workforce. The CTI Career, Technical Student Organization (CTSO) offers students the opportunity to apply the skills learned in their respective career pathway to work-life experience. Georgia CTI offers 28 competitive events that align directly with Georgia's CTAE course curriculum and standards.

Standard one of all Georgia CTAE foundation courses state that students will demonstrate employability skills required of business and industry. Georgia CTI offers several competitive events that give students the opportunity to display the unique skills required in their chosen field. These include:

- Career Exploration/Job Interview
- Community/Civic Awareness
- Most Improved Person
- Occupational Creative Thinking
- Public Speaking
- School Project
- Team Career Skills

In addition to participation in Georgia CTI competitive events, CTI students are also encouraged to participate in one of the nationally recognized CTSOs that aligns closest to their career goals.



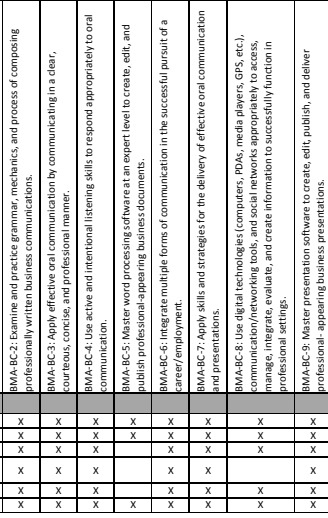
# COMPETITIVE EVENTS & CURRICULUM ALIGNMENT



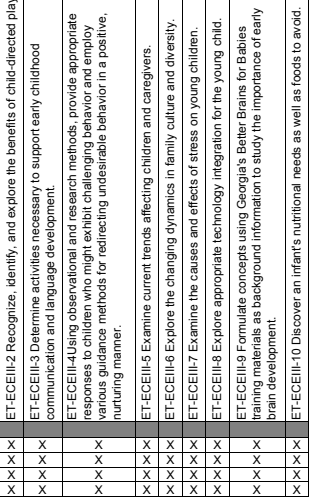
COMPETITIVE EVENTS	Course Title: Introduction to Healthcare									
Clinical Skills	X	X	X	X	X	X	X	X	X	X
Healthcare Science	X	X	X	X	X	X	X	X	X	X
Technology	X	X	X	X	X	X	X	X	X	X
Career Exploration / Job Interview	X	X	X	X	X	X	X	X	X	X



COMPETITIVE EVENTS	Course Title: Introduction to Business & Technology - 07.44130									
Computer Applications	X	X	X	X	X	X	X	X	X	X
Technology Skills	X	X	X	X	X	X	X	X	X	X
Advertising Campaign	X	X	X	X	X	X	X	X	X	X
Career Exploration / Job Interview	X	X	X	X	X	X	X	X	X	X
Community/Civic Awareness	X	X	X	X	X	X	X	X	X	X
Team Career Skills	X	X	X	X	X	X	X	X	X	X



COMPETITIVE EVENTS	EARLY CHILDHOOD EDUCATION I 20.52810									
Early Childhood Education	X	X	X	X	X	X	X	X	X	X
Career Exploration / Job Interview	X	X	X	X	X	X	X	X	X	X
Community/Civic Awareness	X	X	X	X	X	X	X	X	X	X
Team Career Skills	X	X	X	X	X	X	X	X	X	X

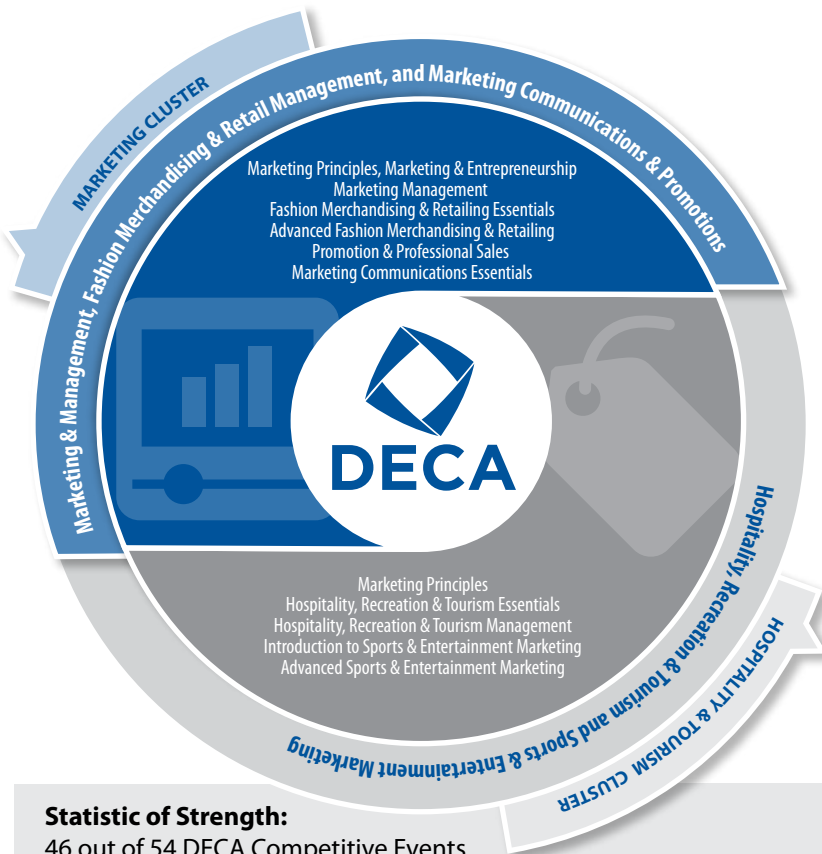


To review the complete series of CTSO competitive events alignment spreadsheets, please visit [www.gactso.org](http://www.gactso.org)



**DECA Mission:**  
DECA prepares emerging leaders and entrepreneurs in marketing, finance, hospitality and management in high schools and colleges around the globe.

Preparation for the DECA Competitive Events starts in the classroom where students learn marketing, management, entrepreneurship, and hospitality and tourism competencies, all of which are aligned to national and state curriculum standards. This alignment ensures that DECA is truly co-curricular. DECA's Comprehensive Learning Program integrates with classroom instruction, applies learning, connects to business and promotes competition. DECA Competitive Events provide exceptional opportunities for project-based instruction since the events are quite rigorous, especially the written events which require a 30 page manual and a 15 minute presentation. Therefore, most DECA members work with a business person to gain realistic insight and data for their events. Participation in the DECA Competitive Events ignites a fire in students that propels them to excel and continually improve in a global economy.



**Statistic of Strength:**

46 out of 54 DECA Competitive Events (85%) align 100% with the 109 GA Marketing Cluster Standards



My name is Sanjay Velappan. As I entered South Forsyth High School 4 years ago, little did I know the impact Marketing and DECA would have on my life. I am proud to say that I have been an active Marketing student and DECA member at South Forsyth High School since my freshman year. Through my DECA career, I have gained unparalleled experiences and made friends and connections that will last a lifetime.

My DECA experience began my freshman year when I competed at the region level and did not win. After my freshman year, I am proud to say that I made it to the DECA International Career Development Conference (ICDC) for the past three years, placing first at the Georgia Career Development Conference two out of the three years and placing in the top 20 at the International CDC.

The experiences gained through my Marketing classes and DECA competitions afforded me the opportunity to attend an extremely selective business residency program at the University of Georgia's Terry Business College. As a result of this business residency program, I met some incredible people, some of whom were also DECA members. As a senior, my DECA competition partner, Ashita Sehgal, and I were given the chance to compete in a national Entrepreneurship Innovation in which we placed in the top 3 three in the nation and were flown to one of America's business hubs- Chicago, Illinois, to present our innovation idea to a panel of top business executives.

This year, I was given the opportunity to serve as the Financial Manager of DECA's school store, The Bird Cage. Being the financial manager has provided me with organizational and analytical skills that parallel a real world financial experience.

Recently, I was selected to attend a three day interview for consideration for the Emory Business Scholar Award. Thousands of students applied for this award and 10 students were selected to participate in the interview process. I wore my DECA blazer to the interviews and showcased all of my experiences over the past four years in Marketing and DECA. I felt that I was well prepared and a step ahead of my peers, due to all of my DECA experience throughout my high school career. I am thrilled to announce that I was awarded a full scholarship, valued at \$220,000 to Emory's Business School. In addition, because of my experience working as the financial manager of our school store, I was chosen to be a part of the Emory Investment Organization in which I will be part of a five person team to oversee \$300,000 of the Emory business school investment.

The experiences, opportunities, and connections I have made in my DECA career cannot be simulated by any other program in the world.



# COMPETITIVE EVENTS & CURRICULUM ALIGNMENT



	Course Title: Advanced Fashion, Merchandising, & Retailing, 08.42200												
	MKT-AFMR-1: Demonstrate employability skills required by business and industry.	MKT-AFMR-2: Review the evolution and movement of fashion.	MKT-AFMR-3: Differentiate various market centers and relate their importance to merchandising decisions.	MKT-AFMR-4: Identify major laws that regulate and/or impact the fashion/retail industry.	MKT-AFMR-5: Analyze economics in the fashion industry.	MKT-AFMR-6: Determine factors to consider when developing a merchandise plan and budget for a business.	MKT-AFMR-7: Understand the concepts, systems, and tools needed to gather, access, synthesize, evaluate, and disseminate information for use in making business decisions.	MKT-AFMR-8: Implement an inventory management plan and compute product pricing utilizing cost control methods.	MKT-AFMR-9: Describe the product selection process for fashion/retail buying.	MKT-AFMR-10: Understand the concepts and actions needed to determine client needs and wants and respond through planned, personalized communication that influences purchase decisions and enhances future	MKT-AFMR-11: Evaluate and explain the effects of promotion in the fashion/retail industry by developing visual merchandising presentations and promotional plans.	MKT-AFMR-12: Analyze the importance of utilizing an efficient distribution system.	
<b>COMPETITIVE EVENTS</b>													
Apparel & Accessories	X	X	X	X	X	X	X	X	X	X	X	X	X
Creative Marketing Project	X	X	X	X	X	X	X	X	X	X	X	X	X
Fashion Merchandising	X	X	X	X	X	X	X	X	X	X	X	X	X



	Course Title: Promotion & Professional Sales, 08.45100												
	MKT-PPS-1: Demonstrate employability skills required by business and industry.	MKT-PPS-2: Analyze the scope of the advertising and promotion industry.	MKT-PPS-3: Critique the role of the promotional mix in a competitive economic environment.	MKT-PPS-4: Apply techniques used to analyze the potential market.	MKT-PPS-5: Distinguish and summarize the steps in planning for advertising campaigns.	MKT-PPS-6: Calculate media costs that affect the elements of the promotional mix.	MKT-PPS-7: Demonstrate advertising techniques used in a promotion plan.	MKT-PPS-8: Design and implement a public relations media campaign.	MKT-PPS-9: Develop visual merchandising to compliment advertising campaigns.	MKT-PPS-10: Identify and interpret the importance of selling to the economy.	MKT-PPS-11: Design sales promotion materials.	MKT-PPS-12: Analyze and apply the steps needed for an effective sales presentation.	MKT-PPS-13: Describe the importance of utilizing follow-up techniques after the sale has been completed.
<b>COMPETITIVE EVENTS</b>													
Advertising Campaign	X	X	X	X	X	X	X	X	X	X	X	X	X
Entrepreneurship Promotion Project	X	X	X	X	X	X	X	X	X	X	X	X	X
Public Relations Project	X	X	X	X	X	X	X	X	X	X	X	X	X



	Course Title: Hospitality, Recreation, & Tourism Management, 08.45400												
	MKT-HRTM-1: Demonstrate employability skills required by business and industry.	MKT-HRTM-2: Draw conclusions about the social, environmental, economic, and consumer factors that impact the hospitality, recreation, and tourism industry and its development.	MKT-HRTM-3: Develop the leadership and management skills needed by upwardly mobile employees in successful hospitality, recreation, and tourism facilities.	MKT-HRTM-4: Analyze the operations and control systems used in the food and beverage division of the hospitality, recreation, and tourism industry.	MKT-HRTM-5: Explore the essential functions of human resources in the hospitality industry.	MKT-HRTM-6: Analyze hospitality, recreation, and tourism services in relation to management structures, service levels, and current issues.	MKT-HRTM-7: Interpret the overall importance of sales, operations, and management of sales activities in the hospitality, recreation, and tourism industry.	MKT-HRTM-8: Demonstrate knowledge of legal and liability issues in the hospitality, recreation, and tourism industry and determine appropriate responses.	MKT-HRTM-9: Determine current and emerging trends in the hospitality, recreation, and tourism industry.	MKT-HRTM-10: Develop customer service skills and an overall understanding of the importance of guest services in the hospitality, recreation, and tourism industry.	MKT-HRTM-11: Determine the importance of cost effective operations in the hospitality, recreation, and tourism industry.	MKT-HRTM-12: Examine the elements of technology used in the hospitality, recreation, and tourism industry.	
<b>COMPETITIVE EVENTS</b>													
Hotel & Lodging Management	X	X	X	X	X	X	X	X	X	X	X	X	X
Principles of Hospitality & Tourism	X	X	X	X	X	X	X	X	X	X	X	X	X
Hospitality & Tourism	X	X	X	X	X	X	X	X	X	X	X	X	X

To review the complete series of CTSO competitive events alignment spreadsheets, please visit [www.gactso.org](http://www.gactso.org)

**Business Management & Administration Cluster**

**Pathways:** Business and Technology, Human Resources Management, Entrepreneurship

**Courses:** Introduction to Business and Technology, Business & Technology, Business Communication, Legal Environment of Business, Human Resources Principles, Entrepreneurship

**Competitive Events:** Agribusiness, American Enterprise Project, Business Communication, Business Law, Business Plan, Business Procedures, Client Service, Computer Applications, Database Design & Applications, Desktop Publishing, Economics, Entrepreneurship, Global Business, Health Care Administration, Hospitality Management, Introduction to Business, Introduction to Business Communication, Local Chapter Annual Business Report, Management Decision Making, Marketing, Sales Presentation, Social Media Campaign, Sports & Entertainment Management, Spreadsheet Applications, Virtual Business Management Challenge, Word Processing



**Finance Cluster**

**Pathways:** Advanced Accounting, Business Accounting, Financial Services

**Courses:** Introduction to Business and Technology; Principles of Accounting I; Principles of Accounting II; Financial Literacy; Banking, Investing, and Insurance

**Competitive Events:** Accounting I, Accounting II, Banking & Financial Systems, Business Calculations, Business Financial Plan, Business Math, Business Plan, Insurance & Risk Management, Personal Finance, Securities & Investments, Spreadsheet Applications

**Information Technology Cluster**

**Pathways:** Web and Digital Design, Information Support and Services, Networking, Programming, Health Information Technology, Computer Science

**Courses:** Introduction to Digital Technology; Digital Design; Web Design; IT Essentials; IT Support; Networking Fundamentals; Networking Systems and Support; Computer Science Principles; Programming, Games, Apps, and Society; Essentials of Health Information Technology; Applications of Health Information Technology; AP Computer Science

**Competitive Events:** Computer Game & Simulation Programming, Computer Problem Solving, Cyber Security, Database Design & Applications, Desktop Application Programming, Digital Design & Promotion, Digital Video Production, E-business, Help Desk, Introduction to Information Technology, Management Information Systems, Mobile Application Development, Networking Design, Networking Concepts, Public Service Announcement, 3-D Animation, Website Design.



**Business Leadership Competitive Events**

Business Ethics, Business Presentation, Community Service Project, Electronic Career Portfolio, Emerging Business Issues, FBLA Principles & Procedures, Future Business Leader, Impromptu Speaking, Introduction to Parliamentary Procedure, Job Interview, LifeSmarts, Parliamentary Procedure, Partnership with Business Project, Public Speaking I, Public Speaking II

**FBLA's mission is to bring business and education together in a positive working relationship through innovative leadership and career development programs.**

FBLA's competitive events at the Region, State, and National Leadership Conferences play an integral role in the mission of FBLA. They prepare students for successful careers in business by providing opportunities to apply classroom concepts in a workforce-simulated competitive environment.

**US News & World Report Top 50 Jobs of Next 10 Years:**

**Business Management & Administration**

Training & Development Specialists, Convention & Meeting Planners, Operations Research Analyst, Business Operations Manager, HR Specialist

**Finance**

Financial Analysts, Accountants, Financial Advisor, Logistician, Insurance Agent, Bookkeeping/Accounting/Auditing Clerk, Loan Officer

**Information Technology**

Software Developers, Computer Systems Analysts, Web Developers, Database Administrators, Information Security Analysts, IT Manager, Computer Systems Administrator

# COMPETITIVE EVENTS & CURRICULUM ALIGNMENT



	Course Title: Banking, Investing, and Insurance - 07.43100	FIN-BI-1: Demonstrate employability skills required by business and industry.	FIN-BI-2: Demonstrate an understanding of basic banking concepts, terminology and operating procedures.	FIN-BI-3: Compare and contrast various types of negotiable instruments and describe the effects of E-commerce on banking.	FIN-BI-4: Interpret and measure financial performance of banking institutions.	FIN-BI-5: Demonstrate an understanding of basic investment principles, including the importance of investment planning and establishing financial goals.	FIN-BI-6: Demonstrate an understanding of investment instruments and their proper use in financial planning, retirement planning, estate-planning and wealth management.	FIN-BI-7: Predict future investment trends and explain the role of international finance in the investing process.	FIN-BI-8: Demonstrate an understanding of risk management basics and personal insurance coverage.	FIN-BI-9: Identify risks present in business and the insurance needed to protect a business.	FIN-BI-10: Students will evaluate the ethical needs of the financial services industry and examine the effects of fraud upon the industry.	FIN-BI-11: Students will identify and evaluate careers in the financial services industry.
<b>COMPETITIVE EVENTS</b>												
Banking & Financial Systems		x	x	x	x	x	x	x	x	x	x	
Business Ethics		x	x	x	x	x	x	x	x	x	x	
Business Financial Plan		x	x	x	x	x	x	x	x	x	x	
Insurance & Risk Management		x	x						x	x	x	
Introduction to Business		x	x	x	x		x	x	x	x	x	
Personal Finance		x	x	x	x	x	x	x	x	x	x	
Securities & Investments		x	x	x	x	x	x	x			x	



	Course Title: Introduction to Business & Technology - 07.44130	BMA-IBT-1: Demonstrate employability skills required by business and industry.	BMA-IBT-2: Apply technology as a tool to increase productivity to create, edit, and publish industry appropriate documents	BMA-IBT-3: Master word processing software to create, edit, and publish professional-appearing business documents.	BMA-IBT-4: Analyze and integrate leadership skills and management functions within the business environment	BMA-IBT-5: Demonstrate understanding of the concept of marketing and its importance to business ownership.	BMA-IBT-6: Use professional oral, written, and digital communication skills to create, express, and interpret information and ideas.	BMA-IBT-7: Demonstrate an understanding of entrepreneurship through recognizing a business opportunity, how to start a business based on the recognized opportunity, and basics of how to operate and maintain that business.	BMA-IBT-8: Understand, interpret, and use accounting principles to make financial decisions.	BMA-IBT-9: Develop effective money management strategies and understand the role and functions of financial institutions.	BMA-IBT-10: Research and interpret the various risks involved in operating a business while determining the role of insurance for a business.	BMA-IBT-11: Examine basic human resources and the legal aspects of a business while incorporating the methods into business practices.
<b>COMPETITIVE EVENTS</b>												
American Enterprise Project		x	x	x	x	x	x	x	x	x	x	x
Business Financial Plan		x	x	x	x	x	x	x	x	x	x	
Business Plan		x	x	x	x	x	x	x	x	x	x	x
Business Procedures		x	x	x	x	x	x	x	x	x	x	x
Future Business Leader		x	x	x	x	x	x	x	x	x	x	x
Introduction to Business		x	x	x	x	x	x	x	x	x	x	x
Partnership with Business Project		x	x	x	x	x	x	x	x	x	x	x



	Course Title: Networking Systems and Support - 11.46200	IT-NSS-1: Demonstrate employability skills required by business and industry.	IT-NSS-2: Identify the fundamental principles of networking demonstrating installation, configuration, optimization, and upgrades of networking.	IT-NSS-3: Explore local-area network (LAN), metropolitan area network (MAN), wide-area network (WAN), and wireless local-area network (WLAN) trends and issues including the basics of telecommunications and use in the interconnection of networks.	IT-NSS-4: Demonstrate knowledge of LAN physical media and knowledge of network connectivity basics.	IT-NSS-5: Understand through explanation and demonstration of the two standard computer network communication protocols (OSI Layer and TCP/IP) and its importance to standards-based networks.	IT-NSS-6: Demonstrate the concept of subnetting and the importance to standards-based networks.	IT-NSS-7: Identify the fundamental principles of network security systems for optimal network operation and administration.	IT-NSS-8: Troubleshoot network problems and functions.	IT-NSS-9: Create a network using design standards, analysis, and section for networks.	IT-NSS-10: Explain computer network operation and management procedures including network maintenance and diagnostic testing.	IT-NSS-11: Apply network applications and knowledge of network operating systems by installing basic system architectures using current windows operating system software and perform network administration.
<b>COMPETITIVE EVENTS</b>												
Cyber Security				x	x	x	x	x	x	x	x	x
Network Design			x	x	x	x	x	x	x	x	x	x
Networking Concepts				x	x	x	x	x	x	x	x	x

To review the complete series of CTSO competitive events alignment spreadsheets, please visit [www.gactso.org](http://www.gactso.org)

**FCCLA MISSION:**

Family, Career and Community Leaders of America (FCCLA), founded in 1945, promotes personal growth and leadership development through family and consumer sciences education. Focusing on the multiple roles of family member, wage earner, and community leader, members develop skills for life through Character Development, Interpersonal Communication, Career Preparation, Creative and Critical Thinking, and Practical Knowledge.

Georgia FCCLA has 35,903 members in public schools, and has the largest membership in the nation.

**Hospitality and Tourism**

**Culinary Arts**

Culinary Arts students have the opportunity to participate in both National and State FCCLA competitive events. State events include baking and pastry, creative garnishes, knife skills, chicken fabrication and food safety and sanitation. Students in the culinary pathway can pursue careers as a sous chef, pastry chef, garde manger chef or executive chef. There are 44 competitive events/national programs that align with the Culinary Arts Pathway.

**Education and Training**

**Early Childhood Care and Education I**

**Early Childhood Care and Education II**

**Teaching as a Profession**

The Early Childhood Care and Education pathways focus on the growth and development of children from birth to 8 years of age. Career pathways in education introduce the foundations of education, combined with knowledge and skills gained in both the classroom and in the workplace, to prepare students for a career in education. There are 37 FCCLA competitive events/national programs that align with the Education and Training Cluster.

**Human Services**

**Interiors, Fashion and Textiles**

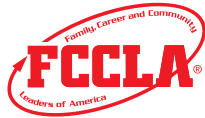
**Nutrition and Food Science**

**Housing and Community Management**

**Middle School Family and Consumer Sciences**

Educational programs in this cluster prepare students for employment in career pathways that relate to families and human needs, such as family and community services, personal care, and consumer services. There are 46 FCCLA competitive events/national programs that align with the Human Services Cluster.





	Early Childhood Education I												
	ET-ECE-1	Demonstrate employability skills required by business and industry.											
	ET-ECE-2	Examine how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, and competitive events.											
	ET-ECE-3	Analyze career paths within early childhood education and care.											
	ET-ECE-4	Identify the role of professionalism in early childhood care and guidance.											
	ET-ECE-5	Examine the theories of human development.											
	ET-ECE-6	Explore prenatal development and the growth, development, and care of the infant.											
	ET-ECE-7	Explore the growth, development and care of the toddler.											
	ET-ECE-8	Explore the growth, development, and care of the preschool child.											
	ET-ECE-9	Survey the growth and development of the school age child, 6-12 years of age.											
	ET-ECE-10	Identify techniques for positive collaborative relationships with children.											
	ET-ECE-11	Determine components of a well-organized, developmentally appropriate learning environment.											
	ET-ECE-12	Examine program management and curriculum in early childhood education and care.											
	ET-ECE-13	Incorporate diversity throughout early childhood education and care.											
COMPETITIVE EVENTS													
Advocacy		X	X	X	X	X	X	X	X	X	X	X	X
Chapter Service Project Display		X	X	X	X	X	X	X	X	X	X	X	X
Early Childhood Education		X	X	X	X	X	X	X	X	X	X	X	X
Focus on Children		X	X	X	X	X	X	X	X	X	X	X	X
Teach and Train		X	X	X	X	X	X	X	X	X	X	X	X



	Food for Life												
	HUM-FL-1	Demonstrate employability skills required by business and industry.											
	HUM-FL-2	Outline the function of the digestive system and absorption process during the lifespan.											
	HUM-FL-3	Design and demonstrate a nutritious diet.											
	HUM-FL-4	Identify and discuss the requirements of maternal and fetal nutrition during pregnancy.											
	HUM-FL-5	Investigate the proper feeding of newborns by analyzing nutritional requirements and potential deficiencies of mother and child during the first weeks after birth.											
	HUM-FL-6	Develop a nutritionally balanced diet for infants from birth through the first year of life.											
	HUM-FL-7	Develop a nutritionally balanced diet for children in the different stages of childhood.											
	HUM-FL-8	Develop a nutritionally balanced diet for an adolescent.											
	HUM-FL-9	Develop a nutritionally-balanced diet for the middle adult years.											
	HUM-FL-10	Develop a nutritionally balanced diet for the elderly.											
	HUM-FL-11	Research careers in foods and nutrition.											
COMPETITIVE EVENTS													
Advocacy			X	X	X	X	X	X	X	X	X	X	X
Chapter Service Project Display		X	X	X	X	X	X	X	X	X	X	X	X
Chapter Service Project Portfolio		X	X	X	X	X	X	X	X	X	X	X	X
Early Childhood Education		X	X										
Focus on Children		X	X										
Food Innovations		X	X	X	X	X	X	X	X	X	X	X	X
Illustrated Talk		X	X	X	X	X	X	X	X	X	X	X	X
National Programs in Action		X	X	X	X	X	X	X	X	X	X	X	X
Nutrition and Wellness		X	X	X	X	X	X	X	X	X	X	X	X
Sports Nutrition		X	X	X	X	X	X	X	X	X	X	X	X



	Culinary Arts I												
	HOSP-CAI-1	Demonstrate employability skills required by business and industry.											
	HOSP-CAI-2	Examine and apply the principles of food sanitation and safety in foodservice operations and kitchen environments to achieve a nationally recognized food safety certificate.											
	HOSP-CAI-3	Acquire and apply basic knowledge of using and maintaining professional kitchen equipment.											
	HOSP-CAI-4	Demonstrate basic knowledge in business and culinary math skills.											
	HOSP-CAI-5	Identify and demonstrate the principles and processes of cooking in a professional kitchen.											
	HOSP-CAI-6	Examine the various cooking methods, techniques, and preparations such as dry heat, combination and moist heat methods. Perform basic food preparations of poultry, meat, dairy, fruits, and vegetables using proper commercial kitchen equipment and techniques to examine these fundamental methods, as applied in a commercial kitchen.											
	HOSP-CAI-7	Identify and apply fundamentals of baking in the preparation and production of baked food products and will identify and use equipment normally found in the bakeshop.											
	HOSP-CAI-8	Examine the nutritional concepts that affect the food service industry today with emphasis on healthy diets, allergies, and obesity issues.											
	HOSP-CAI-9	Apply fundamentals of human relations and management skills in both personal and professional aspects and levels.											
	HOSP-CAI-10	Identify and apply menu planning fundamentals for various food-service types and for various diets and allergies.											
	HOSP-CAI-11	Identify various foods used in a commercial kitchen and bake shop and analyze the purchasing procedures for each.											
COMPETITIVE EVENTS													
Culinary Arts		X	X	X	X	X	X	X	X	X	X	X	X
Food Innovations		X	X	X	X	X	X	X	X	X	X	X	X
Baking and Pastry		X	X	X	X	X	X	X	X	X	X	X	X
Creative Garnishes		X	X	X	X	X	X	X	X	X	X	X	X
Knife Skills		X	X	X	X	X	X	X	X	X	X	X	X
Food Safety and Sanitation		X	X	X	X	X	X	X	X	X	X	X	X
Professional Foods		X	X	X	X	X	X	X	X	X	X	X	X

To review the complete series of CTSO competitive events alignment spreadsheets, please visit [www.gactso.org](http://www.gactso.org)



- Largest HOSA State Leadership Conference in U.S.
- Fastest Growing State and National CTSO
- 100% Healthcare
- Surgeon General Regina Benjamin Attended the National Leadership Conference

The mission of HOSA is to enhance the delivery of compassionate, quality health care by providing opportunities for knowledge, skill and leadership development of all health science technology education students, therefore, helping students to meet the needs of the health care community.

### U.S.A. News 100 Best Jobs

“Nearly 40% of our picks are Healthcare jobs”

6 in the Top 10 are Healthcare

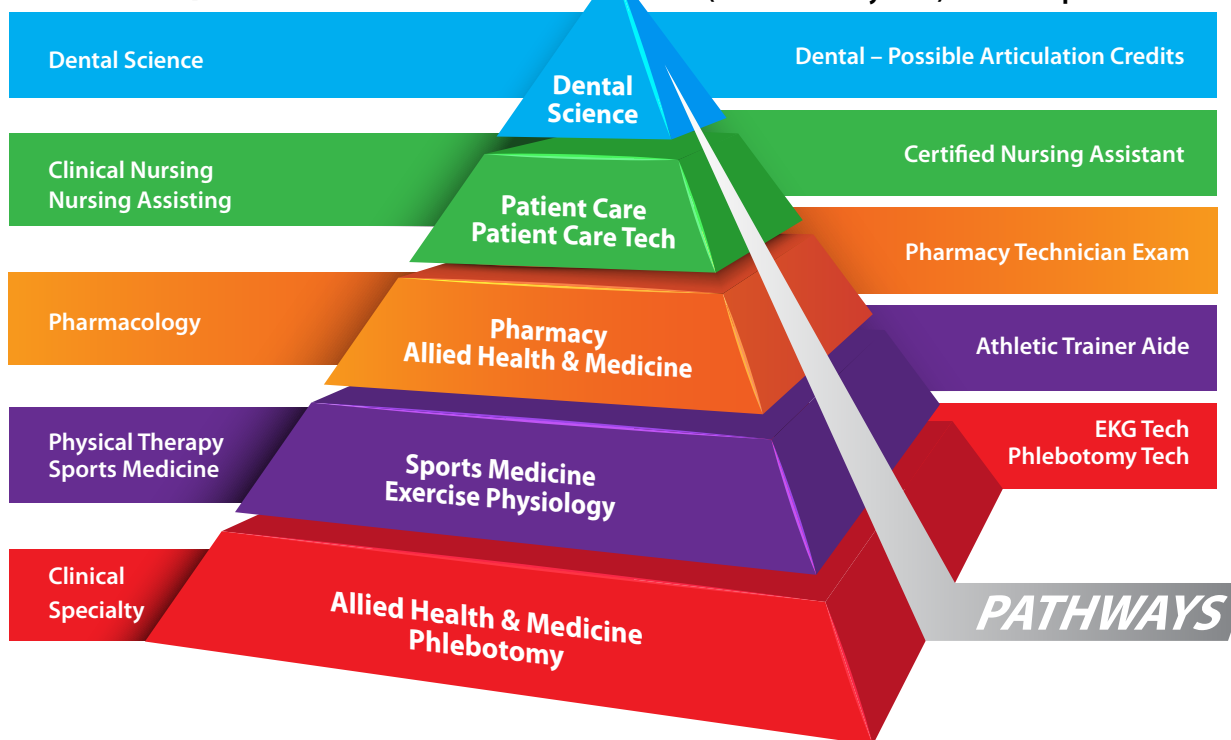


“Georgia HOSA is a student organization that is changing the future of healthcare by supplying skilled and enthusiastic candidates into the workforce every year. It is incredible to see the positive long-term impact Georgia HOSA is having on our society, economy and quality of health care.”


U.S. Senator Johnny Isakson [R-GA]

### HOSA Competitive Events

### Industry Credentials/Possible Articulation Credits (Post-secondary level)/Clinical Experience



# COMPETITIVE EVENTS & CURRICULUM ALIGNMENT

 <b>HOSA Competitive Events</b>	Denial Terminology KT: Human Growth & Development KT: Nutrition KT: Pathophysiology KT: Pharmacology KT: Medical Law & Ethics KT: Transcultural Health Care Medical Math Medical Reading Medical Spelling Medical Terminology Extraneous Health poster Extemporaneous Writing Healthy Lifestyle Job Seeking Skills Interviewing Skills Medical Photography Prepared Speaking Researched Persuasive Speaking Speaking Skills Biomedical Laboratory Science Clinical Nursing Clinical Specialty Dental Science Home Health Aide Medical Assisting Nursing Assisting Personal Care Physical Therapy Sports Medicine Veterinary Science Biomedical Debate Health Career Display Medical Innovations Community Awareness Creative Problem Solving Forensic Medicine Health Education HOSA BOWL Parliamentary Procedure Public Service Announcement CERT Skills CPR/First Aid Emergency Medical Technician Epidemiology Life Support Skills MRC Partnership Public Health																			
<b>Healthcare Science Pathways</b>																				
<b>Course Title: Introduction to Healthcare</b>																				
<b>HS-IHS-1</b> Demonstrate employability skills required by business & industry.	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
<b>HS-IHS-4</b> Develop a career plan.																				
<b>HS-IHS-7</b> Identify & demonstrate the various methods of providing & obtaining information from patients, family members, other agencies, & other members of the healthcare team.																				
<b>HS-IHS-12</b> Utilize information technology applications required within all career specialties. Demonstrate use as appropriate to healthcare applications.																				
<b>Course Title: Emergency Medical Responder</b>																				
<b>HS-EMR-9</b> Recognize local public health resources & the role EMS personnel play in public health emergencies.																				
<b>HS-EMR-16</b> Recognize & manage life threats based on assessment findings of a patient with a medical emergency while awaiting additional emergency response.																				
<b>HS-EMR-30</b> Prepare for the NREMT EMR evaluation.	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
<b>Course Title: Essentials of Healthcare</b>																				
<b>HS-EHS-4</b> Investigate the anatomy, physiology, & basic pathophysiology of the cardiovascular system, & evaluate & monitor blood pressure & pulse.																				
<b>HS-EHS-5</b> Examine the anatomy, physiology, & basic pathophysiology of the respiratory system, & evaluate & monitor respirations.																				
<b>HS-EHS-6</b> Evaluate the anatomy, physiology, & basic pathophysiology of the muscular & skeletal systems, & perform technical skills related to the systems.																				
<b>HS-EHS-9</b> Examine the anatomy, physiology, & basic pathophysiology of the nervous system & special senses & perform technical skills related to these systems.																				
<b>Course Title: Pharmacy Operations &amp; Fundamentals</b>																				
<b>HS-POF-3</b> Support & explain the need for safety & proper infection control in the pharmacy & demonstrate precautions to prevent medication errors.																				
<b>HS-POF-8</b> Compare & contrast the differences when dealing with pediatric & geriatric pharmacology including administration, dosage, compliance, & complications																				
<b>HS-POF-9</b> Perform necessary skills needed to prepare medication for patient use including: prescription processing, packaging, labeling, & dispensing.																				

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**SkillsUSA is a national, nonprofit student organization that has developed more than 10 million workers through active partnerships between employers and educators. Hundreds of American industries have turned to SkillsUSA as the source for employees who exemplify “Champions at Work” in both skills and attitudes.**

SkillsUSA's mission is to empower its members to become world-class workers, leaders and responsible American citizens. At the heart of this mission are SkillsUSA's core values: integrity, responsibility, citizenship, service and respect.

## Clusters and Pathways Served by SkillsUSA



### Architecture and Construction

Architectural Drafting	HVACR
Carpentry	Fine Furniture & Cabinet making
Electrical	Machining
Masonry	Sheet Metal
Plumbing	Welding

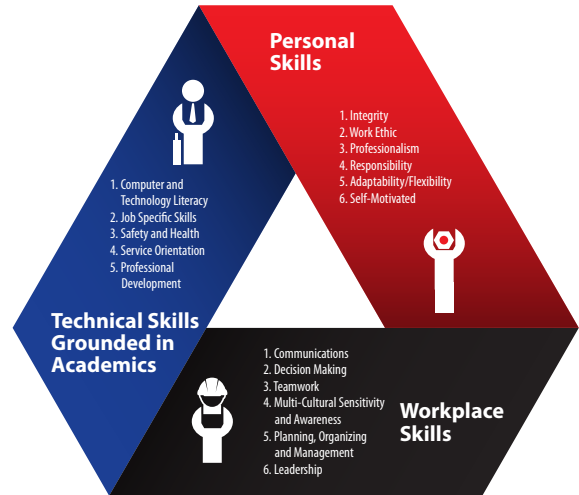
All fourteen SkillsUSA Construction related contests align 100% with the Industry Fundamentals and Occupational Safety course standards. Every student enrolled in a Construction related pathway will begin their course work by taking this introductory course. 12,600 students enrolled in Architecture & Construction pathways had the opportunity to compete in SkillsUSA Construction related contests in 2014. In Georgia there are approximately 83,000 craft jobs opened annually.



### Arts, AV Technology & Communication

Graphic Design	Audio Video Technology & Film
Graphic Communication	Digital Animation

There are nine Communications related contests which align with 90% of the standards in each introductory course for that pathway. Each student must take the corresponding introductory course. In 2014, there were 32,400 students enrolled in Communications related pathways, giving them the opportunity to participate in SkillsUSA competitive events. Multimedia is one of the fastest growing industries in the state of Georgia.



## Organizational Framework



### Transportation, Distribution & Logistics

Maintenance & Light Repair	Flight Operations
Automobile Service Technology	Aviation Maintenance
Master Automobile Service Technology	Distribution & Logistics
Marine Engine Technology	

SkillsUSA offers five Automobile related contests which align 100% with their related course standards. The National SkillsUSA Association does not yet offer contests in Logistics nor Flight Operations, however, SkillsUSA Georgia offer two state only contests to serve these program areas. There are 21,650 students enrolled in Transportation related pathways.



### Law, Public Safety, Corrections & Security

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

There are four SkillsUSA contests that serve the 11,260 Law, Public Safety, Corrections and Security students in Georgia. Each competitive event aligns with at least five standards within each course offering.



### Human Services/Personal Care Services

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

SkillsUSA offers three contests within the Human Services/Cosmetology pathways. Each contest aligns at least 85% with the course standards.



# COMPETITIVE EVENTS & CURRICULUM ALIGNMENT



	Course Title: Industry Fundamentals and Occupational Safety 46.54500												
	AC-IFOS-1 Demonstrate employability skills required by business and industry.												
	AC-IFOS-2 Understand and practice construction safety.												
	AC-IFOS-3 Understand and apply math concepts as applied to construction.												
	AC-IFOS-4 Utilize basic hand and power tools in a professional and safe manner.												
	AC-IFOS-5 Understand knowledge of construction drawing terms, components and symbols.												
	AC-IFOS-6 Organize and implement safety rigging procedures.												
	AC-IFOS-7 Understand hazards associated with materials handling.												
	AC-IFOS-8 Demonstrate knowledge of the different forms of communication used in the construction industry.												
	AC-IFOS-9 Develop an understanding of construction careers and describe the principal fields of specialties (i.e. Carpentry, masonry, plumbing, electrical, etc.) including performance, training, and identify associated career opportunities.												
	AC-IFOS-10 Understand the importance of career and technical education through leadership development, school and community service projects, and competitive events.												
<b>COMPETITIVE EVENTS</b>													
Carpentry	x	x	x	x	x	x	x	x	x	x	x	x	x
Cabinetmaking	x	x	x	x	x	x	x	x	x	x	x	x	x
Electrical Construction Wiring	x	x	x	x	x	x	x	x	x	x	x	x	x
HVAC	x	x	x	x	x	x	x	x	x	x	x	x	x
Industrial Motor Control	x	x	x	x	x	x	x	x	x	x	x	x	x
Plumbing	x	x	x	x	x	x	x	x	x	x	x	x	x
TeamWorks	x	x	x	x	x	x	x	x	x	x	x	x	x
Welding Sculpture	x	x	x	x	x	x	x	x	x	x	x	x	x
Welding Fabrication	x	x	x	x	x	x	x	x	x	x	x	x	x
Welding	x	x	x	x	x	x	x	x	x	x	x	x	x
Sheet Metal	x	x	x	x	x	x	x	x	x	x	x	x	x
CNC Turning Specialist	x	x	x	x	x	x	x	x	x	x	x	x	x
CNC Technician	x	x	x	x	x	x	x	x	x	x	x	x	x
CNC Milling Specialist	x	x	x	x	x	x	x	x	x	x	x	x	x



	Course Title: Introduction to Graphics and Design 48.36100													
	AAVTC-GD-1 Demonstrate employability skills required by business and industry.													
	AAVTC-GD-2 Explore careers available in the field of graphic communications and the design process (1-14).													
	AAVTC-GD-3 Discuss developments and individuals relating to the history of the graphics and design industry and explore emerging trends and technologies.													
	AAVTC-GD-6 Explain and demonstrate how to operate equipment in a safe manner.													
	AAVTC-GD-7 Demonstrate proper use of measuring units and devices.													
	AAVTC-GD-8 Recognize and utilize basic paper types and sizes for output.													
	AAVTC-GD-9 Generate and manipulate various graphic imaging processes.													
	AAVTC-GD-10 Analyze pre-press, pre-flight, and output operations.													
	AAVTC-GD-11 Understand and demonstrate how to design a page layout.													
	AAVTC-GD-12 Identify and demonstrate page layout terminology and tools.													
	AAVTC-GD-13 Distinguish and demonstrate the difference between page layout, raster-based, and vector-based graphic software applications.													
	AAVTC-GD-18 Evaluate the function of typographic design in supporting legibility in a variety of media applications.													
	AAVTC-GD-19 Distinguish between the different print/output processes.													
	AAVTC-GD-20 Explore the different electronic imaging processes.													
	AAVTC-GD-27 Explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, and competitive events.													
<b>COMPETITIVE EVENTS</b>														
Advertising Design	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Graphic Communications	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Screen Printing	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Photography	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Web Design	x	x	x	x	x	x	x	x	x	x	x	x	x	x



	Course Title: Audio & Video Technology & Film 110.51810													
	AAVTC-AVTE-1 Demonstrate employability skills required by business and industry.													
	AAVTC-AVTE-2 Understand and follow safety procedures when working with TV equipment.													
	AAVTC-AVTE-3 Understand and utilize trade terminology in an appropriate manner.													
	AAVTC-AVTE-4 Demonstrate proper set-up and use of basic production equipment.													
	AAVTC-AVTE-5 Identify and create various types of scripts.													
	AAVTC-AVTE-6 Demonstrate proper use and operation of audio equipment and techniques while working as part of a production team during a studio broadcast.													
	AAVTC-AVTE-7 Understand and proper use of equipment while participating in a live field production which may include electronic news gathering, film work or streaming live events.													
	AAVTC-AVTE-8 Demonstrate the use of technology in recording and post-production applications.													
	AAVTC-AVTE-9 Develop an understanding of audio video and film careers, describe the principal fields of specialties, and identify associated career opportunities.													
	AAVTC-AVTE-10 Examine how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects and competitive events.													
<b>COMPETITIVE EVENTS</b>														
Audio/Radio Production	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Broadcast News Production	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Digital Cinema Production	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Television Video Production	x	x	x	x	x	x	x	x	x	x	x	x	x	x

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The Technology Student Association fosters personal growth, leadership and opportunities in Science, Technology, Engineering and Mathematics (STEM); members apply and integrate these concepts through co-curricular activities, competitions, and related programs.

**Competitions:**

TSA provides rules and guidelines for all middle school and high school level competitive events that originated from "best practice" classroom activities from around the country.

At State and National Conferences, students are challenged to use and improve their STEM skills in both team and individual events in such areas as, communication; design and engineering; environmental systems; transportation; and manufacturing/construction.

All TSA competitions are aligned with STEM standards; ten core leadership skills (communication, creative thinking, critical thinking, decision making, ethics, evaluation, organization, problem solving, self-esteem, and teamwork); and the 17 Career Clusters.

TSA was one of the first to align its competitive events to STEM standards. Each event was matched with the available standards from Science and Math, the Standards for Technological Literacy, and CRITERIA FOR ACCREDITING ENGINEERING PROGRAMS (Accreditation Board for Engineering and Technology [ABET, Inc.]

In addition to the National TSA Official Competition, TSA also provides other signature programs and initiatives: In cooperation with the U.S. Army Educational Outreach Program, the Junior Solar Sprint is offered to the middle school students.

TEAMS (Tests of Engineering Aptitude, Mathematics and Science) offers an annual STEM competition to teams of math, science and engineering students.


TSA VEX Robotics is an engaging, multifaceted event steeped in STEM skills made possible through collaboration between TSA and VEX Robotics, Inc.


STEM education is intrinsically exciting, rewarding, and meaningful for instructors and students alike. It is our belief that, as with STEM education, TSA's activities provide the same kind of stimulation, challenge, and relevancy for all involved.


**Standards Alignment for Program Concentration: Engineering and Technology:**


*TSA Event Alignment: All competitive events meet at least one or all of the standards for all STEM, Manufacturing and Energy pathway courses.*


- Electronics Pathway**  
Foundations of Electronics  
Advanced AC and DC Circuits  
Digital Electronics  
Electronics Internship



- Energy Systems Pathway**  
Foundations of Energy Technologies  
Energy and Power Technology  
Appropriate and Alternative Energy Technologies  
Energy Systems Internship



- Energy and Power: Generation, Transmission, & Distribution**  
Foundations of Energy Technologies  
Energy and Power: Generation, Transmission, & Distribution  
Energy Systems Applications  
Energy Systems Internship


- Engineering Pathway**  
Foundations of Engineering and Technology  
Engineering Concepts  
Engineering Applications  
Engineering Internship


- Engineering Drafting & Design Pathway**  
Introduction to Drafting and Design  
Survey of Engineering Graphics  
3D Modeling and Analysis  
Engineering Internship



- Manufacturing Pathway**  
Foundations of Manufacturing and Materials Science  
Robotics and Automated Systems  
Production Enterprises  
Manufacturing Internship



- Manufacturing - Mechatronics Pathway**  
Introduction to Mechatronics - DC Theory, Pneumatic Systems, and Programmable Logic Controllers  
AC Theory, Electric Motors, and Hydraulic Systems  
Semiconductors, Mechanical Systems, and Pump and Piping Systems  
Manufacturing Internship



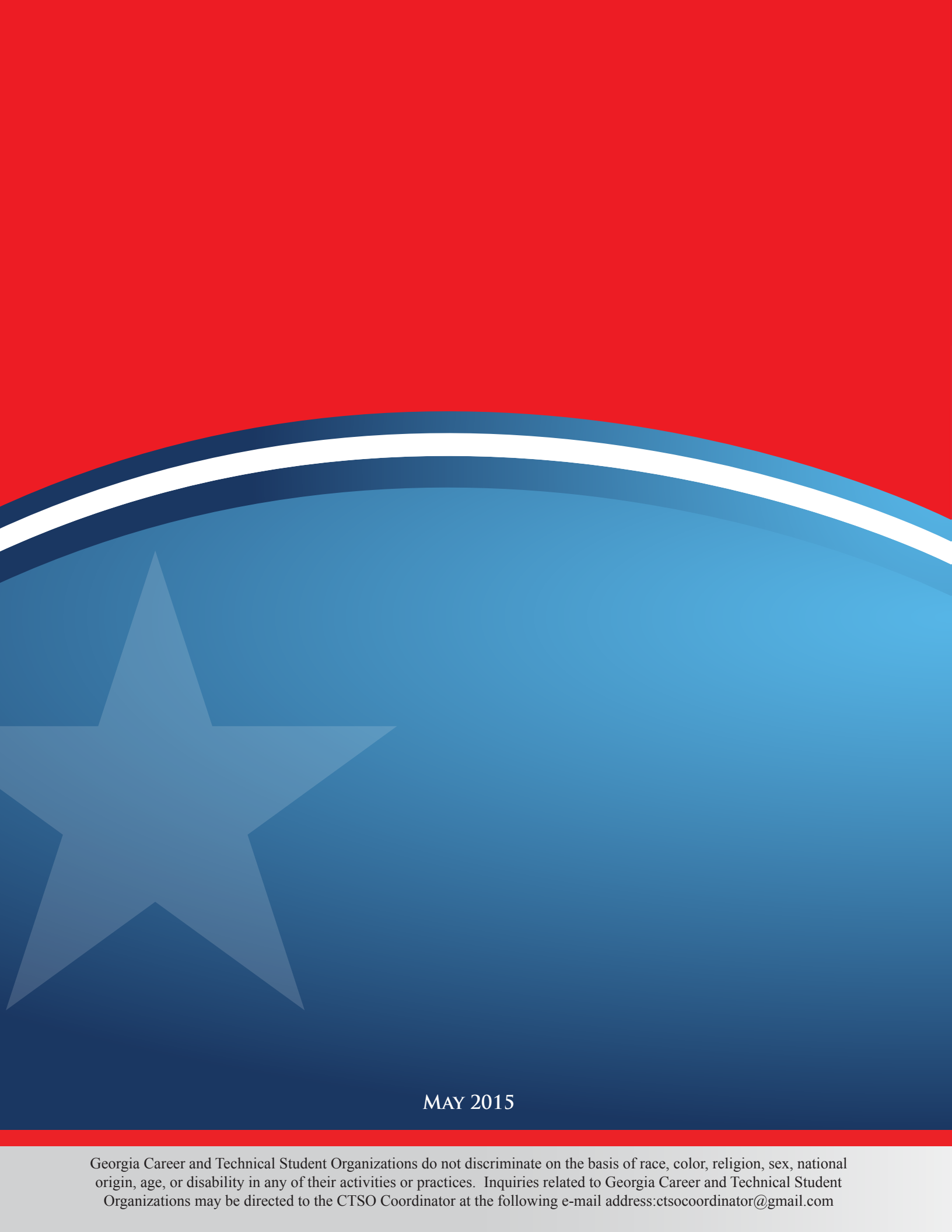


# COMPETITIVE EVENTS & CURRICULUM ALIGNMENT

		Course Title: Survey of Engineering Graphics, 48.54200	STEM-SEDG-1: Demonstrate employability skills required by business and industry.	STEM-SEDG-2: Demonstrate and follow safety, health, and environmental standards related to the STEM workplace and apply specific engineering tools, machines, materials and processes in a safe and orderly manner to formulate, analyze, and verify engineering practices and solutions.	STEM-SEDG-3: Analyze applied math required by business and industry for engineering graphics.	STEM-SEDG-4: Demonstrate purpose and correct application of sectional views.	STEM-SEDG-5: Demonstrate purpose and correct application of Auxiliary views.	STEM-SEDG-6: Demonstrate purpose and correct application of pictorial views.	STEM-SEDG-7: Cite evidence of developments in engineering graphics and engineering.	STEM-SEDG-8: Present appropriate views of an object.
<b>TSA Competitive Events -- High School</b>										
Animatronics		x	x	x	x	x	x	x	x	x
Architectural Renovation		x	x	x	x	x	x	x	x	x
Biotechnology Design		x	x	x	x	x	x	x	x	x
CAD 2D Architecture		x	x	x	x	x	x	x	x	x
CAD 3D Engineering		x	x	x	x	x	x	x	x	x
Computer Numerical Control Production		x	x	x	x	x	x	x	x	x
Dragster Design		x	x	x	x	x	x	x	x	x
Engineering Design		x	x	x	x	x	x	x	x	x
Flight Endurance		x	x	x	x	x	x	x	x	x
Future Technology Teacher		x	x	x	x	x	x	x	x	x
Manufacturing Prototype		x	x	x	x	x	x	x	x	x
SciVis		x	x	x	x	x	x	x	x	x
Structural Design & Engineering		x	x	x	x	x	x	x	x	x
Technical Sketching and Application		x	x	x	x	x	x	x	x	x
Technology Bowl		x	x	x	x	x	x	x	x	x
Transportation Modeling		x	x	x	x	x	x	x	x	x

		Course Title: Foundation of Engineering & Technology, 21.42500	STEM-FET-1: Demonstrate employability skills required by business and industry.	STEM-FET-2: Develop an understanding of engineering and technology and describe the principal fields of engineering specializations (ex. aeronautical, automotive, chemical, civil, industrial, mechanical, computer software, electrical, and biomedical) and identify associated career tracks.	STEM-FET-3: Identify the history of technology and engineering and its impact on society in the past, present, and future.	STEM-FET-4: Demonstrate and follow safety, health, and environmental standards related to the Science, Technology, Engineering, and Math (STEM) workplaces.	STEM-FET-5: Identify criteria of usage, care, and maintenance for tools and machines.	STEM-FET-6: Apply fundamental principles of the engineering design process.	STEM-FET-7: Use appropriate technology to collect, record, manipulate, analyze, and report data.	STEM-FET-8: Students design a solution to an engineering problem applying math and science principles.	STEM-FET-9: Demonstrate the application of STEM in the real world.	STEM-FET-10: Students explore how related career and technology student organizations are integral parts of career and technology education courses. Students will develop leadership, interpersonal, and problem-solving skills through participation in co-curricular activities associated with the Technology Student Association.
<b>TSA Competitive Events -- High School</b>												
Architectural Renovation		x	x	x	x	x	x	x	x	x	x	x
Computer Numerical Control Production		x	x			x	x	x	x	x	x	x
Dragster Design		x	x			x	x	x	x	x	x	x
Engineering Design		x	x	x		x	x	x	x	x	x	x
Fashion Design		x	x			x	x	x	x	x	x	x
Flight Endurance		x	x			x	x	x	x	x	x	x
Manufacturing Prototype		x	x			x	x	x	x	x	x	x
SciVis		x	x	x		x	x	x	x	x	x	x
Software Development		x	x				x	x	x	x	x	x
Structural Design & Engineering		x	x			x	x	x	x	x	x	x
Systems Control Technology		x	x			x	x	x	x	x	x	x
Technology Problem Solving		x	x			x	x	x	x	x	x	x
Transportation Modeling		x	x	x		x	x	x	x	x	x	x

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MAY 2015

Georgia Career and Technical Student Organizations do not discriminate on the basis of race, color, religion, sex, national origin, age, or disability in any of their activities or practices. Inquiries related to Georgia Career and Technical Student Organizations may be directed to the CTSO Coordinator at the following e-mail address:[ctsocoordinator@gmail.com](mailto:ctsocoordinator@gmail.com)

