Program of Study: Internet of Things

This Program of Study may serve as a graduation guide for the next four plus years, along with other career planning and educational materials. Courses listed in this model may include recommended coursework and should be individualized to students' educational and career goals. Each graduation plan needs to meet minimum high school graduation requirements. Dual Enrollment courses can be high school academic and/or career technical education courses.

Secondary: Internet of Things					Entrance or Exit Point	Postsecondary:			
Course/Grade	**9**	**10**	**11**	**12**		**TCC**	**Diploma or AAS**		**Bachelor of Science**
English 4 credits	9th Grade Lit	10th Grade Lit	American Lit	British Lit		**WAM1 TCC Web and Mobile Application Development** • CIST 1305 Program Design and Development • CIST 1510 Web Development I • CIST 1520 Scripting Technologies	The following computer programming degree options are available: • Computer Programming (CP23) • Computer Programming (CP24)		The University System of Georgia offers students' higher education options at 30 institutions throughout the state, providing a wide range of academic programming including certificates and associate, baccalaureate, masters, doctoral and professional degrees.
Math 4 credits	Algebra I	Geometry	Algebra II	Fourth Math Selection					
Science 4 credits	Environmental Science	Physical Science	Biology	Fourth Science Selection					
Social Studies 3 credits	World History	US History	Economics and Government						
PE 1 credit	Health and Personal Fitness		Consult your counselor for course progression. Course progression on this sheet is based on general guidelines.						
Pathway 3 credits	**Intro to Digital Technology**	**Computer Science Principles**	**Embedded Computing**	See Related CTAE Electives Below					
Electives	**World Language Sequence** French or Spanish *2 Units Required for admission to Georgia University System Colleges*		**Fine Arts** Visual Arts Band Chorus Drama	Advanced Placement Courses Dual Enrollment Courses			For more information on technical college programs, visit https://kms.tcsg.edu/POA		For more information on college and university programs, visit apps.ds.usg.edu
	Related CTAE Electives Introduction to Business and Tech Business and Technology		**Work-Based Learning** Internship Cooperative Education Youth Apprenticeship						

NOTE: Students have many options to ENTER and EXIT from their academic studies into the workforce. When a student graduates from high school, they are eligible to choose one of many ENTRANCE POINT options: 1. Enroll in either a 2- or 4-year post-secondary program; 2. Enroll in an apprenticeship program or the military; or 3. Enter the workforce using technical skills learned in high school. When a student finishes a 2- or 4-year degree program, they may choose to EXIT and 1. Enroll in an apprenticeship program or the military; 2. Enroll in a professional university degree program; or 3. Enter the workforce using technical skills learned.

Internet of Things Career Pathway Completers - Industry Credentialing for High School Students

Upon completion of sequenced courses in the Internet of Things Career Pathway, students are eligible to complete the Industry-Recognized student credential for fulfillment of the End of Pathway Assessment. A national assessment is not currently available. A local exam will be provided until one is approved at the state level.

Sample High Demand Careers in Georgia				
Occupation Specialties	**Level of Education Needed**	**Georgia Average Salary**	**Annual Average Openings**	**2014-2024 Employment Outlook**
Computer Support Specialist	Some College	$44,700	830	In Demand, High Skill
Network and Computer Systems Admin.	Bachelor's Degree	$73,700	470	In Demand, High Skill
Computer Information System Managers	Bachelor's Degree	$116,600	350	In Demand, High Skill

GDOL Labor Market Explorer

Go to GAfutures at www.gafutures.org for more information about your education and career planning, including valuable financial information (grants and scholarships including HOPE Program, grants and loans, FAFSA, and CSS forms).

Career Enhancement Opportunities

Career-Related Education Activities

- Career Awareness
- Career Exploration
- Instructional Related
- Connecting
- Work-Based Learning

Postsecondary Options:

- 4-Year Universities/ Colleges
- 2-Year Colleges
- Technical Colleges
- State Registered Apprenticeships
- Special Purpose Schools
- On-the-Job Training
- Military

Earning Postsecondary Credits While in High School

A vital way to get ahead and realize you can pass college courses is by earning postsecondary credits as a high school student. Georgia offers a dual credit program titled Dual Enrollment. You need to talk with your parents, school counselor, or advisor about the proper courses to take each year in high school and dual credit.

Students completing the course work in this Plan, will have earned/completed an Industry Credential, Technical Certificate of Credit (TCC), Associates of Applied Science Degree, and/or Bachelor's Degree.

Postsecondary Transition

- Students who will continue their education in a Program of Study at one of the University System of Georgia institutions should prepare to take the ACT or SAT for admissions. Tests for admissions may vary from institution to institution. Contact the selected institution for specific testing information. Additional admissions information can be found at Staying On Course.(https://www.usg.edu/assets/student_affairs/documents/Staying_on_Course.pdf)
- Students who will continue their education in a Program of Study at one of the Technical College System of Georgia institutions should prepare to complete a placement exam.
- Students who will continue their education and training in the US Military should take the ASVAB assessment.
- Students should utilize electronic college and career databases to select the most appropriate postsecondary opportunities to match their selected career field, including registered apprenticeships.
- Georgia's dual-credit programs have been combined into one program entitled Dual Enrollment, in which high school students may earn their high school course credits while taking college courses.

Related Pathway Occupations	Other Related Occupations
• Software Engineers • Computer Hardware Engineers • Computer Programmers • Computer & Information Systems Managers • Computer Network Architects • Computer System Analysts	• Information Security Analysts • Network & Computer Systems Administrators • Video Game Designers ONET Online

Internet of Things Pathway Description

An IoT architect sorts through all the data transmitted between networks from the various machines and gadgets used every day by millions of people. IoT architects help organizations fix business problems by designing IoT solutions. They are also responsible for creating and communicating the IoT concept, message, and architecture.

An IoT architect position will require at least a bachelor's degree in computer science, engineering, or information technology. There are quite a few training and technology organizations that offer IoT courses and certifications, such as Microsoft and Cisco.

An IoT architect needs to stay up to date on IoT businesses, data governance, and good data practices to provide better security and performance in this advancing technological world. The technical skills required are varied. Proficiency in programming; data management; programming languages such as Java, Python, or CSS; embedded systems; network topologies; transport protocols; cloud computing; stream processing; analytics; and application development is required. An IoT architect cannot just rely on their technical skills, however. They will be working closely with business leaders to resolve business problems, so communication and leadership skills are a must.

Information provided by https://study.com/.

Student Organization: Future Business Leaders of America (FBLA)	**Programs of Study Developed in Partnership**: the Georgia Department of Education, the Technical College System of Georgia, and the University System of Georgia. #CTAEDelivers