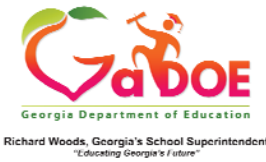


# Student Plan of Study – Computer Science



Name \_\_\_\_\_ Date \_\_\_\_\_ School \_\_\_\_\_

Parent/Guardian Signature \_\_\_\_\_ Date \_\_\_\_\_ Advisor/Counselor Signature \_\_\_\_\_ Date \_\_\_\_\_

*Current Area of Interest: **Information Technology/Computer Science** - This PLAN OF STUDY should serve as a guide for the next four years. **Courses listed in this plan are only recommended coursework and should be individualized to meet each student's educational and career goals. All plans will meet minimum high school graduation requirements. Applicants to the University System of Georgia and the Technical College System of Georgia institutions should be advised that meeting minimum requirements will not guarantee admission. Postsecondary institutions may set additional requirements.***

Grade Level	I. English/Language Arts Total 4 credits	II. Math Total 4 credits	III. Science Total 4 credits	IV. Social Studies Total 3 credits	V. Health/Personal Fitness Total 1 credit	VII. Possible electives in additional pathways (students should check the local course description catalog for these and other electives) Total 4 credits
<b>Computer Science</b>	9 9 <sup>th</sup> Literature & Composition or Approved Dual Enrollment Course  1 credit  Credit Earned <input type="checkbox"/>	1 CCGPS Cord. Algebra 2 CCGPS Analytic Geometry 3 CCGPS Accel Cord. Algebra/Analytic Geometry 4 CCGPS Accel Analytic Geometry B/Adv Algebra 1 credit *  Credit Earned <input type="checkbox"/>	Biology or Approved Dual Enrollment Course  1 credit *  Credit Earned <input type="checkbox"/>	American Government/Civics or AP Government/ Politics US or Approved Dual Enrollment Course  ½ credit  Credit Earned <input type="checkbox"/>	Health ½ credit Credit Earned <input type="checkbox"/> Personal Fitness ½ credit Credit Earned <input type="checkbox"/> <b>*** VI. CTAE Pathway Total 3 credits</b>	<b>Advanced Academic Pathways</b> English/Language Arts, Math, Science, Social Studies  An advanced academic pathway may be followed in any one of the content subjects listed above. Upon graduation, students earn an advanced academic pathway when they complete the required coursework to include at least one AP or one IB or one <a href="#">Dual Enrollment</a> course. An advanced academic pathway should also include at least two credits in one world language. AP, Dual Enrollment and <a href="#">Georgia Virtual School</a> courses may be available.
	10 10 <sup>th</sup> Literature & Composition or World Literature & Composition or Approved Dual Enrollment Course  1 credit Credit Earned <input type="checkbox"/>	1 CCGPS Analytic Geometry 2 CCGPS Adv Algebra 3 CCGPS Accel Analytic Geometry/Adv. Algebra 4 CCGPS Pre-Calculus  1 credit * Credit Earned <input type="checkbox"/>	Physical Science or Physics or AP Physics or Approved Dual Enrollment Course  1 credit * Credit Earned <input type="checkbox"/>	World History or AP World History or Approved Dual Enrollment Course  1 credit Credit Earned <input type="checkbox"/>	11.41500 Intro to Digital Technology or Approved Dual Enrollment Course  1 credit Credit Earned <input type="checkbox"/>	<b>World Language Pathways</b>  **Two credits are required for admissions to University System Institutions. For a listing of world language courses offered at your high school, please check with your advisor, counselor, or local course description catalog. A world language pathway may be followed in any of the world language areas included in the state list of approved courses. Upon graduation, students earn a world language pathway when they complete three credits in one language. The third course may reflect an AP, IB or <a href="#">Dual Enrollment</a> designation. <a href="#">Georgia Virtual School</a> and ACCEL courses may be available.
	11 American Literature/Composition or AP English Language & Composition/American Lit or Approved Dual Enrollment Course 1 credit Credit Earned <input type="checkbox"/>	1 CCGPS Adv Algebra 2 CCGPS Pre-Calculus 3 CCGPS Accel Pre-Cal 4 CCGPS Cal or AP Cal  1 credit * Credit Earned <input type="checkbox"/>	Chemistry or Environmental Science or Earth Systems or AP/IB Approved Dual Enrollment Course  1 credit * Credit Earned <input type="checkbox"/>	United States History or AP US History or IB History of the Americas or Approved Dual Enrollment  1 credit Credit Earned <input type="checkbox"/>	11.47100 Computer Science Principles or Approved Dual Enrollment Course  1 credit Credit Earned <input type="checkbox"/>	<b>Fine Arts/Performing Arts Pathways</b> Visual Arts, Dance, Music, Journalism, Theatre  A fine arts pathway may be followed in any one of the five areas listed above. Upon graduation, students complete a fine arts/performing arts pathway when three courses have been successfully completed in any one of the five areas. A student should consult a counselor or advisor for related coursework. AP, <a href="#">Dual Enrollment</a> and <a href="#">Georgia Virtual School</a> courses may be available.
	<b>At the end of the 11<sup>th</sup> grade, students planning to enter a University System of Georgia Institution or Technical College System of Georgia Institution should take the appropriate admissions test (SAT, ACT, Compass).</b>					
12 Advanced Composition or British Literature or AP/IB English Literature & Composition or Approved Dual Enrollment Course 1 credit Credit Earned <input type="checkbox"/>	CCGPS Pre-Cal or Calculus or AP Cal or AP Stats or IB Math or Approved Dual Enrollment Course 1 credit * Credit Earned <input type="checkbox"/>	Any other of the previous courses or AP Computer Science or Approved Dual Enrollment Course 1 credit * Credit Earned <input type="checkbox"/>	Econ/Business/Free Enterprise or AP Macro Econ or AP Micro Econ or IB Econ or Approved Dual Enrollment Course ½ credit Credit Earned <input type="checkbox"/>	11.01600 AP Computer Science or Approved Dual Enrollment Course  1 credit Credit Earned <input type="checkbox"/>		
Sample Elective Courses <b>Other English Elective Courses:</b> Literary Types/Composition Journalism Oral/Written Communication Speech	<b>Other Math Elective Courses:</b> Adv Math Decision Making Math of Ind. & Govern. Math of Finance	<b>Other Science Elective Courses:</b> Astronomy or AP/IB Science	<b>Other Social Studies Elective Courses:</b> Technology & Society Psychology or AP/IB Social Studies or Sociology	<b>Other CTAE Elective Courses:</b> Other CTAE courses are available to complete a related pathway	NOTE: Local systems may offer core courses in a different sequence; not all local systems offer every pathway. Students should explore all credit possibilities including <a href="#">Georgia's Virtual School Program</a> , <a href="#">Dual Enrollment</a> , Advanced Placement (AP), International Baccalaureate (IB) and Work-Based Learning (WBL) to reach their educational and career goals.	

SAMPLE Pathway OCCUPATIONS			
See * <a href="#">Georgia's HOT Careers to 2020</a> for more information on high-skilled, high-wage and high-demand occupations.			
Occupation Specialties	Entry Level of Education Needed	2012 Annual Wage	Annual Openings 2012-2020
Computer Programmers	Bachelor's Degree	\$75,400	230
*Computer System Analysts	Bachelor's Degree	\$73,800	810
Software Developers, Application	Bachelor's Degree	\$86,300	340

Source: Georgia Department of Labor/ONET

For more information about your education and career planning, including valuable financial aid information that includes grants and scholarships, see your school counselor.			
*** <a href="#">Current Georgia Graduation Rule</a>			
Coursework	Credits	Coursework	Credits
I. English/Language Arts	4	V. Health & Physical Education	1
II. Math	4	VI. **Career, Technical & Agricultural Education and/or ***World Languages, and/or Fine Arts	3
III. *Science	4	VII. Electives	4
IV. Social Studies	3	<b>TOTAL</b>	<b>23</b>

\*Selected [4th Science](#) courses may be used to meet both the required science and required elective in a CTAE sequence of courses.  
 \*\*Students must complete three credits to complete a CTAE pathway and take the end of pathway assessment.  
 \*\*\*Students must complete two credits of the same world language for admission to Georgia Board of Regents colleges/universities.  
 \*\*\*\* Current graduation requirements should be met in all content areas.  
 NOTE: This plan represents minimum graduation requirements. Local systems may require additional coursework.

Postsecondary Transition:
<ul style="list-style-type: none"> <li>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. (<a href="http://www.usg.edu/student_affairs/documents/Staying_on_Course.pdf">www.usg.edu/student_affairs/documents/Staying_on_Course.pdf</a> )</li> <li>Students who will continue their education in a Program of Study at one of the Technical College System of Georgia institutions should prepare to take the COMPASS test for admissions.</li> <li>Students who will continue their education and training in the US Military should take the ASVAB assessment.</li> <li>Students should utilize electronic college and career databases to select the most appropriate postsecondary opportunities to match their selected career field, including registered apprenticeships.</li> <li>Georgia's dual-credit programs have been combined into one program entitled Move on When Ready, in which high school students may earn their high school course credits while taking college courses.</li> </ul>

Possible Student Pathway Credentialing Opportunities:
Students completing a pathway are eligible to take a Credentialing/End of Pathway Assessment (EOPA) upon successful completion of the three required courses in the pathway. For specific assessment information, refer to <a href="http://www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/Pages/CTAE-Georgia-Assessments.aspx">http://www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/Pages/CTAE-Georgia-Assessments.aspx</a> .

*Related Pathway Occupations:	Other Related Information
Software Engineers Computer Programmers Computer & Information Systems Managers Computer Hardware Engineers Computer Network Architects Computer System Analysts Database Administrators	<b>Technology Occupations:</b> Information Security Analysts Network & Computer Systems Administrators Video Game Designers Game Designers  *ONET Online

Computer Science
<p>Careers in Computer Science lead individuals to create, modify, and test codes; all while inventing and designing new approaches to computing technology and finding innovative uses for existing technology. Career area focus requires solving complex problems in computing for business, medicine, science, and other fields.</p> <p>To work as a computer programmer, one must have a bachelor's degree, generally in computer science, mathematics, or information systems. Some computer programmers take coursework in computer science while earning their degrees in accounting, finance and business. Some of those working as computer programmers earn an associate's degree or certificate.</p> <p>Programming skills and experience are highly valued in this field, particularly knowledge of object-oriented languages and tools. In addition, working computer programmers must constantly update their skills to keep up with changing technology. Specialized knowledge and experience with a language or operating system can lead to a computer programmer becoming a computer software engineer.</p> <p>Employment of computer programmers is expected to increase 12 percent from 2010 to 2020, about as fast as the average for all occupations. The advances in computer technology require programmers to constantly look for more effective and efficient processes to expedite their ability to spend more time writing new programs.</p>