



Science,
Technology,
Engineering &
Mathematics

2021-2022

Computer Science & Cybersecurity

Business and Industry Endorsement

Program of Study: Programming and Software Development

South Grand Prairie High School

Grade	ELA	Math	Science	Social Studies	Required CTE Courses		Potential Certification Opportunities
9th	English 1	Algebra 1	Biology	World Geography or AP Human Geography	Principles of Information Technology (1 Credit) *Fundamentals of Computer Science (1 Credit) *Applicable to incoming freshman 2020-2021 only Digital Communications in the 21 st Century (1 Credit)* *Only applicable to incoming students from Truman Middle School		<ul style="list-style-type: none"> OSHA General Cyber Safety Career Essentials: Customer Service Career Safe: Employability
10th	English 2	Geometry	Chemistry or OnRamps Chemistry	World History, AP World History, or Political Science	Fundamentals of Computer Science and Cybersecurity (1 Credit)		<ul style="list-style-type: none"> CompTIA IT Fundamentals+ Certified Internet Webmaster IC3
11th	English 3	Algebra II	Physics, AP Physics, AP Chemistry, or OnRamps Physics	U.S. History, AP US History, or OnRamps US History	Computer Science Computer Science 1 (1 Credit) Mobile App Development (1 Credit)	Cybersecurity Foundations of Cybersecurity (1 Credit) Networking Technology (1 Credit)	<ul style="list-style-type: none"> CISCO CompTIA A+ MTA WOW, IC3 C-Tech-Broadband, Copper, Fiber Optic, Telp1 and VoIP, Audio/Video Systems Pc Pro Network Pro
12th	Business English, or Approved CTE 4 th year English	Financial Mathematics, or Approved CTE 4 th year Math	Principles of Technology, or Approved CTE 4 th year Science	Government Economics	Practicum in Science, Technology, Engineering, Mathematics (2 Credits)	Practicum in Science, Technology, Engineering, Mathematics (2 Credits)	<ul style="list-style-type: none"> Career Essentials: Computer Maintenance Tech C-Tech BICSI Level I Network Technician

Student Organizations	Additional Required Electives
Business Professionals of America SkillsUSA DECA TSA Robotics ESports	Fine Arts Health Foreign Language: A programming language may count towards this requirement
Dual Credit Offerings	Additional Recommended Electives
English 4 Government Statistics Computer Science U.S. History Economics Pre-Calculus	AP Computer Science Principles (LOTE) AP Computer Science A (1 Credit) (LOTE) Computer Science II (1 Credit) (LOTE) Computer Science III (1 Credit) Discrete Mathematics for Computer Science (1 Credit) Cyber Security Capstone (1 Credit)

Sample Career Opportunities	High School	On the Job Training	Certificate	Associates Degree	Bachelor's Degree	Advanced College Degree	Average Annual Salary	Possible Majors for this Pathway
Web Developer		X	X	X	X		\$73,760—\$142,080	<ul style="list-style-type: none"> Computer Programming Mobile App Development Networking Technology Industrial Maintenance Web Development Electronics Technology Cyber Security Computer Science Computer Networking Digital Information Technology
Computer Programmer		X	X	X	X		\$84,280—\$134,630	
Computer & Information Systems Manager					X		\$142,530—\$208,000	
Computer Hardware Engineer					X		\$114,600—\$172,630	
Computer Network Support Specialists		X	X	X	X		\$63,460—\$106,420	
Computer User Support Specialists		X	X	X	X		\$52,270—\$88,470	
Computer Network Architect/Administrator				X	X		\$109,020—\$164,280	
Computer Systems Analysts					X		\$88,740—\$142,220	
Network & Computer Software Developer		X	X	X	X		\$103,620—\$161,290	
Computer & Information Research Scientists					X		\$118,370—\$183,820	
Information Security Analysts				X	X		\$98,350—\$156,580	