



Science, Technology, Engineering and Mathematics

Programming and Software Development



LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
Fundamentals of Computer Science (1)	Computer Science I (1)	Computer Science II (1)	Computer Science III (1)

The **Programming and Software Development** program of study explores the occupations and education opportunities associated with researching, designing, developing, and testing operating systems-level software, compilers, and network distribution software for medical, industrial, military, communications, aerospace, business, scientific, and general computer applications. This program of study may also include exploration into creating, modifying, and testing the codes, forms, and script that allow computer applications to run.

Certifications / Degrees				
HIGH SCHOOL/ INDUSTRY CERTIFICATION	CERTIFICATE/ LICENSE*	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Apple App Development with Swift Certification	Certified Computing Professional	Computer Programming/ Programmer General	Management Information Systems, General	Computer Software Engineer
	Cloud Technology Associate Certification	Computer Software Engineer	Computer Software Engineer	Computer Science
	AEM 6 Developer	Computer Science	Computer Science	Information Science/ Studies
	Certified Software Analyst	Certified Software Analyst	Information Science/ Studies	

Additional industry-based certification information is available on the TEA CTE website. For more information on postsecondary options for this program of study, visit TXCTE.org.

WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES	
Exploration Activities:	Work Based Learning Activities:
Join TSA Participate in coding club at school	Obtain an industry-based certification.

Occupation Outlook			
Occupations	Median Wage	Annual Openings	% Growth
Software Developer, Systems Software	\$103,334	2,985	25%
Software Developers, Applications	\$104,499	6,311	30%
Computer Programmers	\$79,893	1,454	9%



The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing, scientific research and professional and technical services, including laboratory and testing services, and research and development services.

Successful completion of the Programming and Software Development program of study will fulfill requirements of the Business and Industry and STEM endorsement if the math and science requirements are met. Revised - July 202

FOR ADDITIONAL INFORMATION ON THE SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS CAREER CLUSTER, PLEASE CONTACT:

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