



Information Technology Career Cluster

The Information Technology (IT) career cluster focuses on the design, development, support, and management of hardware, software, multimedia, and systems integration services. This career cluster includes occupations ranging from Software Developer and Programmer to Cybersecurity Specialists and Network Analysts.

Statewide Program of Study: Web Development

The Web Development program of study focuses on occupational and educational opportunities associated with designing, creating, and modifying websites. It includes integration of websites with other computer applications and conversion of written, graphic, audio, and video components to compatible web formats using software designed to facilitate the creation of web and multimedia content.



Secondary Courses for High School Credit

- Level 1**
 - Principles of Information Technology
 - Fundamentals of Computer Science
 - Digital Media
 - Web Communications

- Level 2**
 - Computer Science I
 - Foundations of User Experience (UX)
 - Entrepreneurship I

- Level 3**
 - Web Design
 - Web Game Development
 - Advanced User Experience Design

- Level 4**
 - Independent Study in Technology Applications
 - Independent Study in Evolving/Emerging Technologies
 - Practicum in Entrepreneurship
 - Practicum in Information Technology
 - Practicum in Information Technology + Extended Practicum in Information Technology
 - Career Preparation for Programs of Study
 - Career Preparation for Programs of Study + Extended Career Preparation
 - Career and Technical Education Project-Based Capstone

Aligned Advanced Academic Courses

AP or IB	AP Computer Science A	IB Computer Science SL
	AP Computer Science Principles	IB Computer Science HL
Dual Credit	Dual credit offerings will vary by Local Education Agency.	

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards Concentrator/Completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none"> • Intern at a nonprofit or small business to support developing or updating their website and digital media • Interview a web designer to learn about how they developed their digital design skills and what factors they consider when developing a website.
Expanded Learning Opportunities	<ul style="list-style-type: none"> • Create a website • Participate in TSA or SkillsUSA

Aligned Industry-Based Certifications

- Certified Web and Mobile App Developer Apprentice
- Certified Web Animator Associate
- CodeHS Python Level I Certification
- CodeHS Web Design Level I Certification
- Information Technology Specialist: HTML and CSS
- Information Technology Specialist: HTML5 Application Development
- Information Technology Specialist: JavaScript
- Microsoft Azure Data Fundamentals
- Oracle Certified Associate Java SE 8 Programmer
- Web Design - Job Ready



Example Postsecondary Opportunities

- Associate Degrees**
 - Web Page, Digital/Multimedia and Information Resources Design
 - Web/Multimedia Management
- Bachelor's Degrees**
 - Computer and Information Sciences
 - Information Technology
- Master's, Doctoral, and Professional Degrees**
 - Computer and Information Sciences
 - Computer Software Engineering
- Additional Stackable IBCs/Licensures**
 - HTML Developer



Example Aligned Occupations

Web Developers

Median Wage: \$77,712
Annual Openings: 1,170
10-Year Growth: 24%

Software Developers

Median Wage: \$111,705
Annual Openings: 15,324
10-Year Growth: 36%

Computer and Information Systems Managers

Median Wage: \$155,593
Annual Openings: 3,064
10-Year Growth: 26%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/8/2024.



For more information visit:
<https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources>



Information Technology Career Cluster

Statewide Program of Study: Web Development

Course Information

Level 1

Course	Prerequisites Corequisites	Career Clusters
Principles of Information Technology* 13027200 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	
Fundamentals of Computer Science* 03580140 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	
Digital Media 13027800 (1 credit)	Prerequisites: None Corequisites: Networking Recommended Prerequisites: Principles of Information Technology, Computer Maintenance, and Computer Maintenance Lab Recommended Corequisites: None	
Web Communications 03580810 (0.5 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	

Level 2

Course	Prerequisites Corequisites	Career Clusters
Computer Science I* 03580200 (1 credit)	Prerequisites: Algebra I or Corequisites: Algebra I Recommended Prerequisites: None Recommended Corequisites: None	
Foundations of User Experience (UX) N1302809 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	
Entrepreneurship I 13011101 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: Principles of Business, Marketing and Finance Recommended Corequisites: None	

Level 3

Course	Prerequisites Corequisites	Career Clusters
Web Design 03580820 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	
Web Game Development 03580830 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	
Advanced User Experience Design N1302814 (1 credit)	Prerequisites: Foundations of User Experience Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	

* Indicates course is included in more than one program of study.

For additional information on the **Information Technology** career cluster, contact cte@tea.texas.gov or visit <https://tea.texas.gov/cte>



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Statewide Program of Study: Web Development

Course Information

Level 4

Course	Prerequisites Corequisites	Career Clusters
Independent Study in Technology Applications First Time Taken 03580900 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: minimum of one credit from the courses in the Information Technology Career Cluster Recommended Corequisites: None	 
Independent Study in Evolving/Emerging Technologies First Time Taken 03581500 (1 credit) Second Time Taken: 03581000 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: minimum of one credit from the courses in the Information Technology Career Cluster Recommended Corequisites: None	 
Practicum in Entrepreneurship First Time Taken: 13011111 (2 credits)	Prerequisites: None Corequisites: None Recommended Prerequisites: entrepreneurship I and Entrepreneurship II or successful completion of at least two courses in a career and technical education (CTE) program of study. Recommended Corequisites: None	         
Practicum in Information Technology* First Time Taken: 13028000 (2 credits) Second Time Taken: 13028010 (2 credits)	Prerequisites: A minimum of two high school information technology (IT) courses Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	
Practicum in Information Technology + Extended Practicum in Information Technology* First Time Taken: 13028005 (3 credits) Second Time Taken: 13028015 (3 credits)	Prerequisites: Minimum of two high school information technology (IT) courses Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	

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Course Information

Level 4

Course	Prerequisites Corequisites	Career Clusters
Career Preparation for Programs of Study First Time Taken: 12701121 (2 credits)	Prerequisites: at least one Level 2 or higher Career and Technical Education course Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	
Career Preparation for Programs of Study + Extended Career Preparation First Time Taken: 12701141 (3 credits)	Prerequisites: : at least one Level 2 or higher Career and Technical Education course Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	
Career and Technical Education Project-Based Capstone First Time Taken: 12701101 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	

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