yes prep
PUBLIC SCHOOLS

CAREER AND TECHNICAL EDUCATION

WHAT IS CTE?

CTE (Career and Technical Education) is a subject area, like Math, Science, or English, with courses for high school credit.

CTE classes, which begin in 8th grade, pair academic and technical skills connected to a career, and students learn by doing - using professional tools & software and working on real-world projects. Through CTE, students explore careers while building skills they can use in college and beyond.

THROUGH CTE STUDENTS...

- **Explore career interests**
- **Develop practical, job-ready skills**
- **Take AP courses and earn college credit**
- **Create real projects & portfolios using professional tools & software**
- **Earn certifications recognized by colleges & employers**
- **Connect to local business and industries**

YES PREP CTE PATHWAYS

A CTE pathway is a sequence of related courses in one career area that students take throughout high school so they can build advanced skills over time. YES Prep offers focused pathways aligned to student interest, high wage careers, and real-world demand.

PROGRAMMING & CYBERSECURITY	VISUAL TECHNOLOGY	WEB & GAME DEVELOPMENT	BUSINESS	WELDING
Fundamentals of Computer Science	Digital Media	Fundamentals of Computer Science	AP Business + Personal Finance	Intro to Welding
AP Computer Science Principles*	Graphic Design and Illustration I*	Digital Media	Digital Design and Media Production*	Welding I
AP Computer Science A*	Yearbook Design & Production **OR** Digital Design and Production	Web Game Development*	Social Media Marketing + Advertising	Welding II
	Digital Design & Development Capstone	Digital Design & Development Capstone	Practicum in Entrepreneurship *	*Results in a Level I Welding Certificate**
				HCC Dual Credit Program

*Course ends in an Industry Based Certification exam

Each YES Prep campus has a unique set of offerings with full or partial pathways in at least 1 area.

WHERE COLLEGE READINESS MEETS CAREER CONFIDENCE

CTE and traditional classes work together.

CTE adds hands-on experience and career exploration, while traditional classes build the academic foundation students need for lifelong success.

YES Prep students graduate with options—and a plan.

INDUSTRY-BASED CERTIFICATIONS (IBCS) & CERTIFICATES

An Industry-Based Certification (IBC) is a credential created by industry—not schools—that shows a student has real, job-ready skills.

Every YES Prep CTE pathway includes at least one IBC opportunity.

Why they matter:



Recognized by employers and colleges as proof of professional-level skill



Strengthens resumes and applications



Shows students can use professional tools, not just learn about them

CTE DISTINCTIONS

Students in CTE pathways can earn multiple Texas-recognized distinctions during high school.







CTE Concentrator	Endorsement ("CTE Completer")	Career Reading Graduate
Earn at least 2 credits from 2+ courses in a CTE pathway	**Advanced Program Achievement** **Earn 4+ credits in a CTE pathway, including** • **3+ courses from one pathway** • **1 advanced CTE course**	**Highest Level of Achievement** **Earn:** • **CTE Completer status** • **an IBC**

Why it matters:

This designation: • Signals intentional course selection & growing interest • Shows preparation and knowledge beyond a single elective • Supports readiness for advanced learning	This distinction: • Appears on the high school transcript and is recognized statewide by Texas colleges and universities • Signals focus and persistence to colleges and employers • Reflects advanced coursework	This distinction: • Reflects proof of professional-level skills • Demonstrates career readiness



Think of these achievements like a college minor or area of focus. Students don't just try one class— they go deeper, build advanced skills, and show sustained commitment.

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PROGRAMMING & CYBERSECURITY PATHWAY

Code Your Future

This pathway is for students who enjoy **problem-solving, technology, and understanding how computers work**. Students learn how to think logically, write code, and protect digital systems while building skills that are used in today's tech careers. Through hands-on coding projects, students grow from basic computer fluency to real programming and cybersecurity skills. By the end of the pathway, students are prepared for college computer science programs, certifications, and careers in programming, cybersecurity, and other technology fields.

WHAT STUDENTS GAIN

- Experiences that help students make informed college and career decisions
- Mastery of real-world programming languages, platforms, and cybersecurity concepts
- Opportunity to earn 2 industry-recognized certifications
- Portfolio of projects that showcase coding and system thinking
- Critical thinking, collaboration, and problem-solving skills

CLASSES YOU CAN TAKE

Level I	• **Principles of Information Technology** • **Fundamentals of Computer Science**
Level II	• **AP Computer Science Principles***
Level III (Advanced)	• **AP Computer Science A*** • **AP Seminar** (if research aligns to this pathway)

INDUSTRY-BASED CERTIFICATIONS (IBCS)

Earning an Industry-Based Certifications (IBC) or Certificates means has a student has learn specific skills and passes an exam or requirement that meets professional, industry standards. IBCs aligned to this pathway are:

* **PCEP™ – Certified Entry-Level Python Programmer**
* **Information Technology Specialist: Java**

CAREER-CONNECTED LEARNING EXPERIENCES

Work-Based Learning Activities	• Intern at a local IT company to develop skills in programming and coding • Shadow a software developer to learn how they create and improve software to support efficient processes at their company
Expanded Learning Opportunities	• Join a computer coding club • Attend a youth STEM conference • Participate in a coding hackathon or competition

Texas CTE Career Cluster: Information Technology

Texas CTE Programs of Study: Programming and Software Development, Cybersecurity

Endorsement: Successful completion will fulfill the requirements of the STEM endorsement if the math and science requirements are met or the Business and Industry endorsement.

EXAMPLE POSTSECONDARY OPPORTUNITIES

Associate Degrees
- Computer Programming
- Computer & Information Systems Security

Bachelor's Degrees
- Computer Science
- Data Science
- Computer Engineering

Master's, Doctoral, and Professional Degrees
- Management Science
- Computer Software Engineering
- Data Analytics

Additional Stackable IBCs/License
- Certified Ethical Hacker

- **Houston City College (HCC)** — Associates of Applied Science in Cybersecurity
- **University of Houston Downtown** — Bachelor of Science in Computer Science
- **Sam Houston State University** — Bachelor of Science in Computing Science

EXAMPLE CAREERS

Computer User Support Specialists
Median Wage: $58,621
Annual Openings: 6,387
10-Year Growth: 23%

Software Developers
Median Wage: $133,282
Annual Openings: 12,350
10-Year Growth: 47%

Computer Systems Analyst
Median Wage: $114,354
Annual Openings: 4,559
10-Year Growth: 30%

Computer Programmers
Median Wage: $99,177
Annual Openings: 657
10-Year Growth: 3%

Information Security Analysts
Median Wage: $115,042
Annual Openings: 1,760
10-Year Growth: 49%

Other Computer Occupations
Median Wage: $113,248
Annual Openings: 5,280
10-Year Growth: 29%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 1/25/2026

COURSE DESCRIPTIONS

COURSE	DESCRIPTION	PREREQUISITES
Principles of Information Technology J6010 (.5 credit)	Students build essentialtechnology skills in digital citizenship, file management, keyboarding, and productivity tools such as Word and PowerPoint. Daily practice builds fluency and prepares students for advanced programming and cybersecurity. • **Big idea:** Technology skills are transferable.	none
Fundamentals of Computer Science J5628 (1 credit)	Students learn core computer science and cybersecurity concepts by exploring online safety, coding, and problem-solving. Using Python, students learn to write and debug code using variables, conditionals, loops. Brief exposure to web languages like JavaScript, HTML, and CSS highlight how programming logic transfers. Students learn to think like a programmer, building skills that span various tech careers. • **Big idea:** Programming is about thinking logically.	Recommended: Algebra I
AP Computer Science Principles J5016 (1 credit)	Students build on their Python coding skills while learning how computer science impacts the world around them. Using Python, they work with data, write programs, use algorithms, understand abstraction, and solve real-world problems while exploring topics like ethics and responsible technology use. This course prepares students for advanced coursework, while strengthening confidence in coding and problem-solving. • **Big idea:** Programmers solve meaningful problems. • **IBC:** PCEP™ – Certified Entry-Level Python Programmer	Algebra I Fundamentals of Computer Science
AP Computer Science A Y9026 + Y9016 (2 credits) offered via YPOP	Students take on college-level computer science by designing and debugging Java programs using object-oriented principles, data structures, and structured problem-solving techniques. Students learn how to build efficient code that can grow and adapt. This course prepares students for advanced study in computer science, engineering, and other technology fields. • **Big idea:** Strong programmers design systems—not just code solutions. • **IBC:** Information Technology Specialist: Java • This course can count as 4th math credit if college-ready in math	Fundamentals of Computer Science, AP Computer Science Principles
AP Seminar J9015 (1 credit) *CTE Credit for enrollment SY25-26 and beyond*	This course is driven by student research, as students investigate complex issues, analyze sources, and communicate evidence-based arguments. Pathway credit is earned when projects align to programming, cybersecurity, and technology topics. • **Big idea:** Research informs solutions.	at least 1 credit in the pathway

PLAN YOUR PATH

	8th Grade	9th Grade	10th Grade	11th Grade	12th Grade
Example 1	**Principles of Info Tech** Algebra I	**Fundamentals of Computer Science**	**AP Computer Science Principles**	**AP Computer Science A**	
Example 2	**Principles of Info Tech**	Algebra I	**Fundamentals of Computer Science**	**AP Computer Science Principles**	**AP Computer Science A**

Taking Algebra I in 8th grade opens elective space in 9th grade, letting students begin their pathway earlier.

More Than One Way To Engage Students can take 1–2 courses to explore the pathway or go deeper by committing to a 2-4 year sequence and earning a distinction.

EARN CTE DISTINCTIONS

CONCENTRATOR

Earn at least 2 credits from 2+ courses in this pathway

ENDORSEMENT ("CTE COMPLETER")

Earn at least 4 total credits in the pathway by taking
- 3+ pathway courses
- 1+ advanced course

CAREER-READY GRADUATE

Earn:
- CTE Completer status (Endorsement)
- an IBC

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VISUAL TECHNOLOGY PATHWAY

Turn Ideas into Impact

This pathway is for students who enjoy creating, designing, and using technology to communicate ideas. Students learn how visuals are used to tell stories, build brands, and solve real-world problems across digital platforms. Through hands-on projects, students develop skills in digital design and media creation using professional software. They create original work, earn industry-recognized certifications, and build a portfolio for college and career opportunities. The pathway connects to careers in marketing, business, entrepreneurship, and information technology, giving students flexible options for the future.

WHAT STUDENTS GAIN

- Experiences that help students make informed college and career decisions
- Expertise using industry-standard design software
- Opportunity to earn an Adobe industry-recognized certifications
- A portfolio of projects showcasing their skillset
- Skills that support entrepreneurship

CLASSES YOU CAN TAKE

Level I	• **Digital Media**
Level II	• **Graphic Design and Illustration I*** • **Yearbook Design and Production**
Level IV (Advanced)	• **Digital Design and Development Capstone**

INDUSTRY-BASED CERTIFICATIONS (IBCS)

Earning an Industry-Based Certification (IBC) or a certificate means has a student has learn specific skills and passes an exam or requirement that meets professional, industry standards. IBCs aligned to this pathway are:

***Adobe Certified Professional in Visual Design Using Adobe Photoshop**

CAREER-CONNECTED LEARNING EXPERIENCES

Work-Based Learning Activities	• Shadow an art director at a branding firm • Intern in the marketing and communications department of a technology company
Expanded Learning Opportunities	• Join a related co-curricular or extracurricular club such as web development, coding, or business • Showcase your work an exhibitions and submit to design competitions

Texas CTE Career Cluster: Arts, Audio Visual Technology and Communications

Texas CTE Program of Study: Graphic Design and Interactive Media

Endorsement: Successful completion will fulfill the requirements of the Business and Industry endorsement.

EXAMPLE POSTSECONDARY OPPORTUNITIES

Associate Degrees
- Graphic Design
- Digital Arts

Bachelor's Degrees
- Web Page, Digital/Multimedia and Information Resources Design
- Design and Visual Communications

Master's, Doctoral, and Professional Degrees
- Game and Interactive Media Design
- Animation, Interactive Technology, Video Graphics, and Special Effects

Additional Stackable IBCs/License
- Certified Textile Designer

- **Lone Star College System** – *Associate of Applied Science (AAS) in Visual Communication*
- **University of Houston** – *Bachelor of Science in Digital Media*
- **Texas A&M -** *Bachelor of Science in Visualization*
- **Texas Tech University** — *Bachelor of Arts in Digital Media & Professional Communication*

EXAMPLE CAREERS

Software Developers
Median Wage: $133,282
Annual Openings: 12,350
10-Year Growth: 47%

Graphic Designers
Median Wage: $60,247
Annual Openings: 1,758
10-Year Growth: 16%

Other Computer Occupations
Median Wage: $113,248
Annual Openings: 5,280
10-Year Growth: 29%

Art Directors
Median Wage: $94,993
Annual Openings: 1,025
10-Year Growth: 19%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 1/25/2026



COURSE DESCRIPTIONS

COURSE	DESCRIPTION	PREREQUISITES
Digital Media J5608 (1 credit)	**Foundational Design Course** Students explore the basics of visual design and digital media. They learn how images, color, text, and layout work together to communicate ideas. Using Adobe Photoshop, students create eye-catching projects like ads, posters, and digital graphics while building strong design habits. • **Big idea:** Good design is intentional—every choice matters.	none
Graphic Design & Illustration I J5638 (1 credit)	**Design Skills + Certification Prep** Students take their design skills to the next level. They create more advanced projects using Adobe Photoshop and begin developing their own design style. With more independence and creative choice, students start thinking like designers—not just following steps. • **Big idea:** Designers make purposeful choices. • **Industry Based Certification (IBC):** Adobe Certified Professional in Visual Design Using Adobe Photoshop	Digital Media
Yearbook Design and Production J5000 (1 credit)	**Real-World Design** Students apply their design skills to real publishing projects. They design and produce the school yearbook and create media such as social graphics, videos, and promotional materials using tools like Canva. The course emphasizes teamwork, deadlines, and designing for a real audience. • **Big idea:** Design tells stories and builds community.	none (can be taken at any time in the course sequence)
Digital Design & Development Capstone J5006 (1 credit) *Honors GPA Weight*	**Portfolio + Professional Practice** This student-driven course allows students to plan, create, and showcase a portfolio of original work. Students work independently, manage projects, and present their designs like professionals. The course prepares students for college, careers, and creative opportunities beyond high school. • **Big idea:** Designers communicate ideas through visuals, writing, and presentation.	3 courses from the list above, including Digital Media

PLAN YOUR PATH

	8th Grade	9th Grade	10th Grade	11th Grade	12th Grade
Example 1	Algebra I	**Yearbook Design & Production**	**Digital Media**	**Graphic Design & Illustration I**	**Digital Design & Development Capstone**
Example 2		Algebra I	**Digital Media AND Yearbook Design & Production**	**Graphic Design & Illustration I**	**Digital Design & Development Capstone**

Taking Algebra I in 8th grade opens elective space in 9th grade, letting students begin their pathway earlier.

More Than One Way To Engage Students can take 1–2 courses to explore the pathway or go deeper by committing to a 2-4 year sequence and earning a distinction.

EARN CTE DISTINCTIONS

CONCENTRATOR

Earn at least 2 credits from 2+ courses in this pathway

ENDORSEMENT ("CTE COMPLETER")

Earn at least 4 total credits in the pathway by taking
- 3+ pathway courses
- 1+ advanced course

CAREER-READY GRADUATE

Earn:
- CTE Completer status (Endorsement)
- an IBC

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WEB & GAME DEVELOPMENT PATHWAY

Build What the World Sees

This pathway focuses on the design and development of interactive digital products, including graphics, websites, and web-based games and develops technical and creative skills. Students ultimately use foundational coding concepts—such as variables, conditionals, loops, and functions—to modify and extend interactive experiences. Students design games by adjusting player movement, modifying game rules and scoring logic, adding timers, changing win/lose conditions, and incorporating simple animations or effects.

WHAT STUDENTS GAIN

- Experiences that help students make informed college and career decisions
- Experience using real-world programming languages and design and programming software
- Opportunity to earn an industry-recognized certification
- A portfolio of projects showcasing coding, problem-solving, system thinking, creativity and design

CLASSES YOU CAN TAKE

Level I	• **Principles of Information Technology** • **Fundamentals of Computer Science**
Level II	• **Digital Media**
Level III (Advanced)	• **Web Game Development***
Level IV (Advanced)	• **Digital Design and Development Capstone** • **AP Seminar**

INDUSTRY-BASED CERTIFICATIONS (IBCS)

Earning an Industry-Based Certifications (IBC) or Certificates means has a student has learn specific skills and passes an exam or requirement that meets professional, industry standards. The IBC aligned to this pathway is:

* **Certified Entry-Level JavaScript Programmer**

CAREER-CONNECTED LEARNING EXPERIENCES

Work-Based Learning Activities	• Intern at a nonprofit or small business to support developing or updating their website and digital media • Shadow a software developer to learn how they create and improve software to support efficient processes at their company
Expanded Learning Opportunities	• Create a website • Join a related co-curricular or extracurricular club such as web development or computer coding

Texas CTE Career Cluster: Information Technology

Texas CTE Program of Study: Web Development

Endorsement: Successful completion of the program of study will fulfill the requirements of the STEM endorsement if the math and science requirements are met or the Business and Industry endorsement.

EXAMPLE POSTSECONDARY OPPORTUNITIES

Associate Degrees
- Web Publishing
- Mobile & Web Application Development
- 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/License
- HTML Developer

- **University of Houston–** Bachelor of Science in Digital Media, Bachelor of Science in Computer Science – Web & Application Development
- **Houston City College –** Associates of Applied Science in Digital Communication & Web Design
- **University of Texas Dallas -** Bachelor of Arts in Animation and Games

EXAMPLE CAREERS

Web & Digital Interface Designers
Median Wage: $99,934
Annual Openings: 971
10-Year Growth: 27%

Web Developers
Median Wage: $101,508
Annual Openings: 602
10-Year Growth: 33%

Computer and Information System Managers
Median Wage: $174,8546
Annual Openings: 5781
10-Year Growth: 38%

Other Computer Occupations
Median Wage: $113,248
Annual Openings: 5,280
10-Year Growth: 29%

Software Developers
Median Wage: $133,282
Annual Openings: 12,350
10-Year Growth: 47%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 1/25/2026

COURSE DESCRIPTIONS

COURSE	DESCRIPTION	PREREQUISITES
Principles of Information Technology J6010 (1 credit)	Students build essential technology skills in digital citizenship, file management, keyboarding, and productivity tools such as Word and PowerPoint. Daily practice builds fluency and prepares students for advanced programming and cybersecurity. • **Big idea:** Technology skills are transferable.	none
Fundamentals of Computer Science J5628 (1 credit)	Students learn core computer science and cybersecurity concepts by exploring online safety, coding, and problem-solving. Using Python, students learn to write and debug code using variables, conditionals, loops. Brief exposure to web languages like JavaScript, HTML, and CSS highlight how programming logic transfers. Students learn to think like a programmer, building skills that span various tech careers. • **Big idea:** Programming is about thinking logically.	Recommended: Algebra I (Digital Media and FCS can be taken in either order)
Digital Media J5608 (1 credit)	Students explore the basics of visual design and digital media. They learn how images, color, text, and layout work together to communicate ideas. Using Adobe Photoshop, students create eye-catching projects like ads, posters, and digital graphics while building strong design habits. • **Big idea:** Good design is intentional—every choice matters.	none (Digital Media and FCS can be taken in either order)
Web & Game Development J5020 (1 credit) *Honors GPA Weight*	Students design and build web-based games by combining graphics, storytelling, and JavaScript programming. Coding logic controls gameplay, interactions, and outcomes in creative, interactive projects. • **Big idea:** Creativity and coding work better together. • **IBC:** Certified Entry-Level JavaScript Programmer	Fundamentals of Computer Science Digital Media
Digital Design & Development Capstone J5006 (1 credit) *Honors GPA Weight*	This student-driven course allows students to plan, create, and present a portfolio of original projects. Students think and work like creative technology professionals—developing concepts, managing projects, documenting their design process, and clearly communicating decisions through code, visuals, writing, and presentation. • **Big idea:** Developers communicate through code, visuals, writing, and presentation.	3 courses from the list above, including Digital Media

PLAN YOUR PATH

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Example 1	**Principles of Info Tech** Algebra I	**Digital Media**	**Fundamentals of Computer Science**	**Web & Game Development**	**Digital Design & Development Capstone**
Example 2	**Principles of Info Tech**	Algebra I	**Fundamentals of Computer Science AND Digital Media**	**Web & Game Development**	**Digital Design & Development Capstone**

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- an IBC