

Web Development Endorsement

Specifications, Competencies & Requirements

PURPOSE

This endorsement is meant for certified teachers interested in teaching **Web Development** courses. It is attached to a current Utah Educator License with a concentration in **Secondary** and **CTE** Education.

Upon attachment of this endorsement to a Utah educator license, educators will be approved to teach the following USBE courses:

A/R & V/R	Intro to Python 1
3D Print Technology	Intro to Python 2
Computer Science Investigations Computer Programming 1	UX/UI and Quality Assurances
Computer Science Principles Database Development	Web Development 1
Digital Literacy	Web Development 2
Exploring Computer Science Introduction to Information Technology	Web Development Advanced
Mobile Development Fundamentals	Web Development Projects
	Cloud Computing 1
	Cloud Computing 2
	Data Analytics

ENDORSEMENT TYPES

Prerequisite

Demonstrate an understanding of Career and Technical Education (CTE) basics.

CTE Knowledge

Associate Level Requirements

Applicants must complete **TWO** of the following competency requirements. The associate-level endorsement is valid for up to 3 school years before it expires. Associate-level endorsements are non-renewable.

Programming Language	Digital Literacy
Web Development Asset Creation	CTSO Knowledge
UI/UX Development	

Professional Level Requirements

The applicant must meet **ALL** the competency areas listed above.

COMPETENCY DETAILS & DESCRIPTIONS

Prerequisite

1. CTE Knowledge

Demonstrate an understanding of CTE basics:

- Explain how CTE links learning to specific Utah industries and what its main goals are.
- Know the licenses and endorsements needed to teach specific CTE courses.
- Describe how CTE is organized into clusters and pathways at the state, district (LEA), and school levels, and how this helps students succeed after graduation.
- Locate and use the state's strands and standards in lesson plans.
- Explore CTE student organizations (CTSOs) and professional groups and explain how they support students and teachers.
- Explain how advisory boards, with industry members, make sure programs meet job market needs and maintain safe learning environments.
- Understand the basics of securing funding, planning for the future of the program, and participating in the state Program of Quality Review (PQR) to ensure program excellence.

Select one of the following options:

- USBE Course: [CTE Orientation](#)
- Complete THREE years of full-time CTE Teaching in Utah
- Currently hold a professional-level CTE endorsement

Endorsement Competencies

2. Programming Language

Demonstrate understanding of basic programming language. Demonstrate competency in writing syntactically correct, well-documented "language" code that will logically solve a given problem, correctly use data types supported by the chosen language, and use common libraries to write a program that solves a complex problem. Common competencies in various languages: data types, structures, data analysis, sequences, operators, flow, code documentation, debugging, scripts, variables, expressions, strings, etc.

Select one of the following options:

- Bachelor's Degree or higher in Web Development:

Examples:

Utah Tech University: Web Design & Development Emphasis BS

Utah Valley University: Computer Science BS

- NOCTI: Take and pass the [NOCTI Web Design #5934](#) Exam
- **Industry Certification:** Take and pass ONE Programming Industry Certification in a specific language:
 - C#: [Knowledge Pillars C# Coding Specialist](#)
 - Python: [Certiport ITS Python](#)
 - Python: [Knowledge Pillars Python Coding Specialist](#)

- Java: [Certiport ITS Java](#)
- Java: [Knowledge Pillars Java Coding Specialist](#)
- JavaScript: [Certiport ITS JavaScript](#)
- JavaScript: [Knowledge Pillars JavaScript Coding Specialist](#)
- **University Courses:** Credit from an accredited university, passing with a C or higher grade in a course similar to: UVU - CS 1400 - Fundamentals of Programming OR USU - CS 1400 - Intro to Computer Science OR WSU - CS1030 - Foundations of Computing

3. Web Development Asset Creation

Demonstrate understanding of web development asset creation and the use of our statewide contract with Adobe. Demonstrate understanding of image editing techniques, retouching, and compositing to enhance and manipulate photographs. Have a strong understanding of layers, layer masks, and adjustment layers to non-destructively edit images. Show skills in using selection tools. Show knowledge of color correction. Understand the importance of exporting settings.

*Select **one** of the following options:*

- **Bachelor's Degree or higher in Web Design:** Examples:
 - Utah Tech University: Web Design & Development BS
 - Utah Valley University: Web Design & Development
- **NOCTI:** Take and pass the [NOCTI Web Design #5934](#) Exam
- **Industry Certification:** Take and pass the [Adobe Photoshop](#) Industry Exam
- **USBE Microcredential:** Photoshop Image Editing
- **University Courses:** Credit from an accredited university, passing with a C or higher grade in a course similar to: UVU - DWDD 1600 - Web Essentials OR WEB 1400 - Web Design and Usability
- **Coursera:** [Meta Front-End Developer Professional](#)
- **Harvard EdX:** [CS50W](#)

4. UI/UX Development

Demonstrate understanding of interactive design. This includes:

- User Experience Design (UXD) and Human-Centered Design (HCD)
- An understanding of how design can influence user behavior and the impact of UX design on the overall user experience
- The stages of design thinking and apply them to solve user-centered design problems

*Select **one** of the following options:*

- **Bachelor's Degree or higher in Web Design:** Examples:
 - Utah Tech University: Web Design & Development BS
 - Utah Valley University: Web Design & Development
- **NOCTI:** Take and pass the [NOCTI Web Design #5934](#) Exam
- **University Courses:** Credit from an accredited university, passing with a C or higher grade in a course similar to: DWDD 1410 - Interaction Design Essentials OR WSU - WEB 2500 - User Experience Design.
- **Coursera:** [Microsoft Fundamentals of UI/UX Design Modules](#)

- [ed2go: UI/UX Design](#) OR [ed2go: Front-End Web Developer](#)

4. CTSO Knowledge

Demonstrate Career and Technical Student Organization (CTSO) knowledge:

- **Help students lead:** Give students opportunities to build their leadership abilities and take charge.
- **Mentor students:** Offer guidance to help students set goals and overcome difficulties as they grow.
- **Manage the organization:** Coordinate meetings, events, and budgets, and handle administrative tasks smoothly.
- **Create helpful programs:** Develop activities that match the CTSO's goals of building leadership, exploring careers, and developing skills.
- **Communicate effectively:** Clearly talk with students, school leaders, and community members, and promote the CTSO.
- **Work with others:** Partner with teachers, businesses, and other organizations to create opportunities like internships and community service.
- **Advocate for CTE:** Promote Career and Technical Education and work to get the resources and recognition it needs.
- **Keep learning:** Stay up to date on CTSO management and trends in CTE.
- **Focus on student success:** Support students' interests and celebrate their accomplishments.

Select one of the following options:

- **Attend a CTSO Fall Leadership Conference.** Reflected on MIDAS transcript.
- **SkillsUSA New Advisor Training Canvas Course**
- **USBE Microcredential:** Career & Technical Student Organizations.