Hello, and welcome!

Have you ever struggled to navigate a website due to its confusing interface design? This can lead you to seek out other websites that are easier to use. On the other hand, you have probably visited a website with such a seamless interface that you didn't even notice it. **Front-end web development** can lead to two outcomes: frustration or satisfaction. A good front-end web developer aims to create an effortless and clear user interface. The goal is simple: keep the user happy and engaged on your website. This way, they won't look for an alternative. This course provides a comprehensive understanding of front-end web development and its concepts. Having a user-friendly interface is crucial in today's online-driven world. With the skills gained from this course, you can take your career to the next level!

We invite you to take a minute to learn about the course by reviewing the information that follows. This way, you will be better able to understand the expectations of the course as a whole. Then you can determine how to manage your time and efforts as you navigate through it.

You are in the right place. You belong here. You can do this!
Course Description and Competencies

What to Expect

In this course, you will gain an overall understanding of front-end web development and its concepts. You will learn about navigational schemes and user-centered design. You will learn JavaScript. You will explore Hypertext Markup Language (HTML), including formatting text and images and how to create hyperlinks. You will use Cascading Style Sheets (CSS) to create reactive websites. And you will implement data entry and data storage capabilities in web design.

Throughout this course, you will find a variety of interactive elements. These include an interactive textbook, participation activities, and labs. Engaging with these activities reinforces new learning. It also complements the knowledge you bring to this area of study.

Prerequisites: Web Development Foundations (D276) is the recommended prerequisite course.

Once you have engaged with the course material, you can prepare to turn in your two projects. These projects are described on the following pages. You must earn a Competent score on each project to pass the course.

The first step is mastering the content.

- 2 projects  • 3 competency units

By the end of this course, you will be able to:

- Implement navigational schemes in web sites
- Develop reactive user web interfaces using Cascading Style Sheets (CSS)
- Implement data entry and data storage capabilities in a web environment.
- Implement user-centered solutions from multiple perspectives emphasizing usability and functional page layouts
## Course Outline

<table>
<thead>
<tr>
<th>Module</th>
<th>Upon completion of this module, you will be able to:</th>
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| 1. HTML Fundamentals            | A. Create a formatted HTML document  
B. Use an HTML validator  
C. Implement comments in an HTML document  
D. Create lists and tables in HTML  
E. Display images and special characters in HTML  
F. Create hyperlinks in HTML    |
| 2. More HTML                    | A. Use containers to format elements in an HTML document  
B. Implement block and inline elements in an HTML document  
C. Create forms in an HTML document  
D. Add audio and video elements to an HTML document  
E. Use script and style tags to provide interactive functionality and presentational styling to an HTML document  
F. Implement best practices in HTML development |
| 3. CSS Fundamentals             | A. Apply CSS to stylize an HTML document  
B. Apply CSS to stylize text in an HTML document  
C. Implement the box model in an HTML document |
| 4. More CSS                     | A. Implement flexbox containers and items in an HTML document  
B. Implement grid containers and items in an HTML document  
C. Use the CSS position property to place elements in an HTML document  
D. Apply special effects and animate elements in an HTML document  
E. Use Sass to build complex CSS stylesheets |
| 5. Mobile Web Development       | A. Identify the differences between traditional web applications and mobile web application sites  
B. Identify essential responsive web design (RWD) techniques  
C. Use mobile development tools  
D. Design HTML documents for different screen sizes  
E. Create responsive images for an HTML document  
F. Use Bootstrap to create responsive websites |
### 6. JavaScript Basics
- A. Use JavaScript to add interactivity to an HTML document
- B. Use variables and data types in JavaScript
- C. Use comments in JavaScript
- D. Use arithmetic operators to perform a computation in JavaScript
- E. Use conditional statements and loops in JavaScript
- F. Invoke functions, methods, and arrays in JavaScript

### 7. Data Entry & Storage
- A. Validate data received from an HTML form
- B. Store data using the Web Storage API
- C. Set cookies to store user data

### 8. User-Centered Design
- A. Describe the principles of user-centered design
- B. Explain user-centered design processes such as Agile and Waterfall
- C. Explain the benefits of participatory design and scenario-based design
- D. Describe cognitive psychology principles that apply to the design processes
- E. Develop personas, use case approaches, and test to optimize usability
- F. Optimize accessibility for a website

### 9. Website Navigation
- A. Describe principles of navigation
- B. Implement best practices of navigation
- C. Follow website navigation conventions
- D. Differentiate between primary and secondary navigation schemes
- E. Describe a navigation action plan

### 10. React (Optional)
- A. Use React to create an interactive user interface
Technology Requirements

We want to be sure you have the tools to succeed! Review the Computer System and Technology Requirements to learn about the technology you’ll need. If you have questions about your setup, contact support@academy.wgu.edu.

Key Contacts

Your Fellow Learners
Check out the Front-End Web Development Lobby in the course site! In this online community, you can ask questions and explore ideas. You can connect with your fellow learners. When you use this site, you will realize that other learners may have the same questions you have. You can all benefit from learning together!

Technical Support
If you encounter technical issues, be sure to contact the Help Desk. Just submit a Support Request for assistance.

Program Support
Do you have questions about your account? Our Academy Support Team has answers. They can help with billing, switching courses, and other requests. You can contact them at (888) 320-0540 or support@academy.wgu.edu.

Accommodations

WGU Academy provides compliant and accessible learning experiences. If you require accommodation, please contact us at the start of the course. You can email StudentAffairs@academy.wgu.edu or call (888) 320-0540. We are committed to ensuring that all students with disabilities have equal access to WGU Academy's services and materials. We strive to use best practices for accessibility. Our goal is to conform to existing U.S. laws. These include the Americans with Disabilities Act and Section 504 and Section 508 of the Rehabilitation Act. Our learning management system (LMS) platform is Open edX. Open edX's commitment to accessible content is published on their Website Accessibility Policy.