

Montgomery County Community College  
 CIS 114  
 Web Design and Development  
 3-2-2

**COURSE DESCRIPTION:**

This hands-on course introduces students to the fundamental skills required to build a modern and standards compliant Web site. A specific focus is placed on usability design and the use of HTML and CSS standards to create positive user experiences across a variety of devices and browsers. Students will learn the tools and skills necessary to build, organize, and maintain Web sites while following industry best practices in interface design and usability.

**REQUISITE(S):***Previous Course Requirements*

- \* ENG 011 or ESL 011 Basic Writing II
- \* REA 011 Fundamentals of College Reading or REA 017 Vocabulary & Reading Comprehension Development II

*Concurrent Course Requirements*

None

| LEARNING OUTCOMES<br>Upon successful completion of this course, the student will be able to:  | LEARNING ACTIVITIES  | EVALUATION METHODS |
|---|--|--------------------|
| 1. Design and develop Web sites using Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS) that adhere to modern industry development standards.       | Assigned Readings<br>Demonstration and Practice<br>Lecture/Discussion<br>Hands-On Labs | Projects           |
| 2. Plan and develop Web sites that provide a positive user experience through the application of information architecture, usability testing, and interface design. | Assigned Readings<br>Demonstration and Practice<br>Lecture/Discussion<br>Hands-On Labs | Projects           |

| LEARNING OUTCOMES  | LEARNING ACTIVITIES  | EVALUATION METHODS |
|--|--|--------------------|
| 3. Build Web pages utilizing basic multimedia and interactive elements that demonstrate an understanding of legal, accessibility, and usability concerns.                    | Assigned Readings<br>Demonstration and Practice<br>Lecture/Discussion<br>Hands-On Labs | Projects           |
| 4. Describe the technologies and protocols that make the Internet and World Wide Web possible as well as the processes necessary to publish Web sites on the World Wide Web. | Assigned Readings<br>Lecture/Discussion  | Examinations       |

At the conclusion of each semester/session, assessment of the learning outcomes will be completed by course faculty using the listed evaluation method(s). Aggregated results will be submitted to the Associate Vice President of Academic Affairs. The benchmark for each learning outcome is that *70% of students will meet or exceed outcome criteria.*

#### SEQUENCE OF TOPICS:

1. The Internet, World Wide Web, and HTTP
2. File Management
  - a. Folder organization
  - b. File extensions
  - c. Paths
  - d. File management – Copy, move, rename and delete
  - e. File compression
3. Web Standards and Validation Tools
4. HTML Basics
5. CSS for Formatting
6. Graphics
  - a. File format types and considerations
  - b. Format conversions
  - c. Basic editing
7. Web Design and Information Architecture
8. Accessibility, Usability, and Interface Design
  - a. Writing for the Web
  - b. Navigation Design
  - c. Home Page Design
  - d. Designing Accessibility
  - e. Testing Web Site Usability
9. Design Considerations for Mobile and “Non-Standard” Web Browsing Devices
  - a. Responsive web design

10. CSS Page Layout
11. Advanced Features of HTML
12. Tables
13. Forms
14. The Web Site Development Process
  - a. Capstone project
15. Content Management Systems
16. Multimedia & Interactivity
17. Domains, Hosting, and Site Promotion
18. Javascript Introduction

#### LEARNING MATERIALS:

Carey, P. (2021) *New Perspectives on HTML5 and CSS: Comprehensive 8<sup>th</sup> edition with MindTap*. Course Technology. ISBN: ISBN 9780357013052

Krug, S. (2014) *Don't Make Me Think: A Common Sense Approach to Web Usability (3<sup>rd</sup> Ed)*. New Riders. 9780321965516

Other learning materials may be required and made available directly to the student and/or via the College's Libraries and/or course management system.

#### COURSE APPROVAL:

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| Prepared by: Alan Evans                                      | Date: 1/2002    |
| Revised by: Pat Rahmlow                                      | Date: 3/2009    |
| VPAA/Provost Compliance Verification: Dr. John C. Flynn, Jr. | Date: 9/11/2009 |

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| Revised by: Jason Wertz   | Date: 2/2010    |
| Revised by: Patricia S. Rahmlow   | Date: 3/2013    |
| VPAA/Provost or designee Compliance Verification:<br>Victoria Bastecki-Perez, Ed.D. | Date: 7/11/2013 |

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| Revised by: Patricia S. Rahmlow  | Date: 5/2017    |
| VPAA/Provost or designee Compliance Verification:<br>Victoria L. Bastecki-Perez, Ed.D. | Date: 8/21/2017 |

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| Revised by: Marie Hartlein                | Date: 4/26/2021 |
| VPAA or designee Compliance Verification: | Date: 4/27/2021 |



*This course is consistent with Montgomery County Community College's mission. It was developed, approved and will be delivered in full compliance with the policies and procedures established by the College.*