

Montgomery County Community College
 CIS 140
 Client-Side Web Development
 3-2-2

COURSE DESCRIPTION:

Students will learn the JavaScript programming language and how to use JavaScript to build dynamic web sites that take advantage of modern Web browser features. Topics will include the Document Object Model (DOM), XML and JSON data formats, Hypertext Transfer Protocol (HTTP) and the XMLHttpRequest object. Students will learn how to combine these and other technologies to build Ajax applications.

REQUISITES:*Previous Course Requirements*

- * CIS 111B Computer Science II: Object-Oriented Programming
- * CIS 114 Web Design and Development

Concurrent Course Requirements

None

LEARNING OUTCOMES Upon successful completion of this course, the student will be able to:	LEARNING ACTIVITIES	EVALUATION METHODS
1. Design and develop interactive Web pages utilizing the JavaScript programming language.	Assigned Readings Demonstration and Practice Lecture/Discussion Hands-On Labs	Final Project Student Presentations Written Examinations Hands-On Labs
2. Design and develop dynamic, useable, and engaging Web sites that combine and leverage the unique features of JavaScript, the Document Object Model (DOM), and Cascading Style Sheets (CSS).	Assigned Readings Demonstration and Practice Lecture/Discussion Hands-On Labs	Final Project Student Presentations Examinations Hands-On Labs

LEARNING OUTCOMES	LEARNING ACTIVITIES	EVALUATION METHODS
3. Build interactive, browser-based, Web applications that exchange information with a Web server using the XMLHttpRequest object and demonstrate Ajax development techniques.	Assigned Readings Demonstration and Practice Lecture/Discussion Hands-On Labs	Final Project Student Presentations Examinations Hands-On Labs
4. Build complex browser-based applications that utilize popular Web services and Ajax frameworks.	Assigned Readings Demonstration and Practice Lecture/Discussion Hands-On Labs	Final Project Student Presentations Hands-On Labs

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. JavaScript's role in Web development.
2. Language fundamentals
 - a. Variables
 - b. Operators and expressions
 - c. Conditionals
 - d. Loops
 - e. Arrays
 - f. Functions
 - g. Objects
 - h. Events
3. Document Object Model
4. Forms
5. Cookies
6. Images
7. Browser specific concerns
8. Cascading Style Sheets
9. Error Handling
10. Popular JavaScript design patterns
11. Hypertext Transfer Protocol
12. Ajax applications and XMLHttpRequest
13. The XML and JSON data formats
14. Web services
15. Ajax frameworks.

LEARNING MATERIALS:

Vodnik & Gosselin. (2014) JavaScript: The Web Warrior Series. Cengage, 6th edition, Cengage Learning, ISBN: 978-13050784444

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:

Prepared by: Alan Evans	Date: January, 2001
Revised by: Jason Wertz	Date: February, 2010
Revised by: Kathleen Kelly	Date: 7/14/2012
VPAA/Provost or designee Compliance Verification: Victoria Bastecki-Perez, Ed.D.	Date: 9/10/2013
Revised by: Patricia S. Rahmlow	Date: 5/2017
VPAA/Provost or designee Compliance Verification: Victoria L. Bastecki-Perez, Ed.D.	Date: 8/21/2017
Revised by: Marie Hartlein	Date: 10/1/2019
VPAA/Provost or designee Compliance Verification:	Date: 2/12/2020



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.