

Montgomery County Community College
 CIS 241
 Server-Side Web Development
 3-2-2

COURSE DESCRIPTION:

This course will teach students how to develop dynamic web sites using server-side technologies. Gaining hands-on experience with back end or server-side development used within web-based applications that process data, access files on a server, and interact with a database. Students will learn the capabilities of appropriate development frameworks for web-based applications and services.

PRE-REQUISITE:

- CIS 140 Client-Side Web Development with a "C" or better

CO-REQUISITE:

- CIS 246 – Data Integration for Web Applications with a "C" or better OR
- CIS 245 – Database Management Systems using SQL with a "C" or better

LEARNING OUTCOMES Upon successful completion of this course, the student will be able to:	LEARNING ACTIVITIES	EVALUATION METHODS
1. Use a modern web-based development framework to develop web-based systems.	Assigned Readings Lecture/Discussion Demonstration and Practice	Discussion Hands-On Activities Assignments Projects
2. Articulate how web-based systems work and the differences between server-side and client-side development.	Assigned Readings Lecture/Discussion Demonstration and Practice	Discussion Hands-On Activities Assignments Projects
3. Explain the HTTP protocol in transferring information.	Assigned Readings Lecture/Discussion Demonstration and Practice	Discussion Hands-On Activities Assignments Projects

LEARNING OUTCOMES	LEARNING ACTIVITIES	EVALUATION METHODS
4. Articulate the server infrastructure of web-based systems.	Assigned Readings Lecture/Discussion Demonstration and Practice	Discussion Hands-On Activities Assignments Projects
5. Demonstrate the correct methods for structuring web-based applications.	Assigned Readings Lecture/Discussion Demonstration and Practice	Discussion Hands-On Activities Assignments Projects

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 Director of Educational Effectiveness. The benchmark for each learning outcome is that *70% of students will meet or exceed outcome criteria.*

SEQUENCE OF TOPICS:

1. An Overview of web-based systems
2. Client vs. Server-Side programming
3. Server infrastructure of Web based systems
4. Use a modern web-based development framework.
5. Object Oriented Programming Basics
6. Program Variables
7. Application Structure
8. Conditional Execution
9. Managing input
10. Iterative Execution
11. Interface design
12. Exception handling
13. Session management
14. Page Templates
15. Data Readers and databases
16. Web Services

LEARNING MATERIALS:

Open Source Resources

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: Frank Stepanski	Date: 5/2001
Revised by: Sergio Carbone	Date: 4/24/2013
VPAA/Provost or designee Compliance Verification: Victoria L. Bastecki-Perez, Ed.D.	Date: 8/7/2013
Revised by: Pat Rahmlow	Date: 1/11/2018
VPAA/Provost or designee Compliance Verification: Victoria L. Bastecki-Perez, Ed.D.	Date: 1/30/2018
Revised by: Marie Hartlein and Matt Krause	Date: 10/1/2019
Interim VPAA or designee Compliance Verification: Gloria Oikelome, Ed.D.	Date: 2/26/2020
Revised by: Marie Hartlein	Date: 10/22/2022
VPAA or designee Compliance Verification:	Date: 2/22/2023



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