Washtenaw Community College Comprehensive Report

CPS 276 Web Programming Using PHP and MySQL
Effective Term: Winter 2025

Course Cover

College: Business and Computer Technologies
Division: Business and Computer Technologies
Department: Computer Science & Information Technology
Discipline: Computer Science
Course Number: 276
Org Number: 13410
Full Course Title: Web Programming Using PHP and MySQL
Transcript Title: Web Program using PHP & MySQL
Is Consultation with other department(s) required: No
Publish in the Following: College Catalog , Time Schedule , Web Page
Reason for Submission: Course Change
Change Information:
Consultation with all departments affected by this course is required.
Course description
Pre-requisite, co-requisite, or enrollment restrictions
Outcomes/Assessment
Objectives/Evaluation
Rationale: For Canvas updates
Proposed Start Semester: Winter 2025
Course Description: In this course, students will build dynamic database-driven Web applications using PHP: Hypertext Preprocessor and MySQL (structured query language). Application output will be displayed in a browser. Students will be working on a Linux VM (virtual machine) server. In addition, students will be introduced to some basic HTML (Hypertext Markup Language) and limited CSS (Cascading Style Sheets). Students who have not taken the prerequisite courses, but have equivalent programming experience in any language, should request an override from the instructor or department chair. HTML knowledge is helpful.

Course Credit Hours

Variable hours: No
Credits: 4
Lecture Hours: Instructor: 60 **Student:** 60
Lab: Instructor: 0 **Student:** 0
Clinical: Instructor: 0 **Student:** 0

Total Contact Hours: Instructor: 60 **Student:** 60
Repeatable for Credit: NO
Grading Methods: Letter Grades
Audit
Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing

College-level Reading & Writing

College-Level Math

Requisites

Prerequisite
CPS 161 minimum grade "C"
or
Prerequisite
CPS 171 minimum grade "C"

General Education

General Education Area 7 - Computer and Information Literacy
Assoc in Arts - Comp Lit
Assoc in Applied Sci - Comp Lit
Assoc in Science - Comp Lit

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Demonstrate the appropriate use of PHP programming basics.
   Assessment 1
   Assessment Tool: Outcome-related portfolio project
   Assessment Date: Fall 2025
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: All
   How the assessment will be scored: Departmentally-developed rubric
   Standard of success to be used for this assessment: 70% of students will score 70% or higher.
   Who will score and analyze the data: Departmental faculty

2. Apply relational database design and MySQL database server fundamentals.
   Assessment 1
   Assessment Tool: Outcome-related portfolio project
   Assessment Date: Fall 2025
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: All
   How the assessment will be scored: Departmentally-developed rubric
   Standard of success to be used for this assessment: 70% of students will score 70% or higher.
   Who will score and analyze the data: Departmental faculty

3. Utilize appropriate techniques for accessing MySQL from the PHP programming language.
   Assessment 1
   Assessment Tool: Outcome-related portfolio project
   Assessment Date: Fall 2025
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: All
   How the assessment will be scored: Departmentally-developed rubric
   Standard of success to be used for this assessment: 70% of students will score 70% or higher.
   Who will score and analyze the data: Departmental faculty

4. Demonstrate sound software engineering techniques used in developing Web applications.
   Assessment 1
   Assessment Tool: Outcome-related portfolio project

Assessment Date: Fall 2025
Assessment Cycle: Every Three Years
Course section(s)/other population: All
Number students to be assessed: All
How the assessment will be scored: Departmentally-developed rubric
Standard of success to be used for this assessment: 70% of students will score 70% or higher.
Who will score and analyze the data: Departmental faculty

Course Objectives

1. Develop basic HTML elements (input, text boxes and forms).
2. Develop basic PHP code (logic, arrays, loops, operators, post and get statements, variables and functions).
3. Develop database SQL code in MySQL (select, input, update and delete).
4. Demonstrate accessing a MySQL database from PHP code using PDO (PHP Data Objects).
5. Demonstrate sound software engineering techniques in developing a working web database driven application which is scalable.
6. Demonstrate correct PHP syntax.
7. Demonstrate how to create PHP classes.
8. Demonstrate how to use PHP objects
9. Demonstrate using MySQL for data storage.
10. Demonstrate writing SQL for relational databases.
11. Demonstrate writing PHP applications that are modular.
12. Demonstrate writing PHP applications that follow MVC (model-view-controller) architecture.

New Resources for Course

Course Textbooks/Resources

Textbooks
Manuals
Periodicals
Software

Equipment/Facilities

Level III classroom

Reviewer	Action	Date
Faculty Preparer:		
Scott Shaper	*Faculty Preparer*	*Jan 22, 2024*
Department Chair/Area Director:		
Scott Shaper	*Recommend Approval*	*Jan 22, 2024*
Dean:		
Eva Samulski	*Recommend Approval*	*Jan 23, 2024*
Curriculum Committee Chair:		
Randy Van Wagnen	*Recommend Approval*	*May 06, 2024*
Assessment Committee Chair:		
Jessica Hale	*Recommend Approval*	*May 08, 2024*
Vice President for Instruction:		
Brandon Tucker	*Approve*	*May 20, 2024*

Washtenaw Community College Comprehensive Report

CPS 276 Web Programming Using PHP and MySQL
Effective Term: Fall 2020

Course Cover

Division: Business and Computer Technologies
Department: Computer Science & Information Technology
Discipline: Computer Science
Course Number: 276
Org Number: 13410
Full Course Title: Web Programming Using PHP and MySQL
Transcript Title: Web Program using PHP & MySQL
Is Consultation with other department(s) required: Yes
Please Explain:
Met with WEB faculty to discuss changes.
Publish in the Following: College Catalog , Time Schedule , Web Page
Reason for Submission: Course Change
Change Information:
Course description
Pre-requisite, co-requisite, or enrollment restrictions
Rationale: We are allowing students who took WEB210 to be allowed to take CPS276. The reason is they would have been able to take WEB250, but that class was removed and replaced with CPS276 because they were the same class.
Proposed Start Semester: Fall 2020
Course Description: In this course, students will build dynamic database-driven Web applications using PHP and MySQL. Application output will be displayed in a browser. Students will be working on a Linux VM server with root privileges. In addition, students will be introduced to some basic HTML and limited CSS. Students who have not taken the prerequisite courses, but have equivalent programming experience in any language, should request an override from the instructor or department chair. HTML knowledge is helpful. The title of this course was previously Web Programming Using Apache, MySQL, and PHP.

Course Credit Hours

Variable hours: No
Credits: 4
Lecture Hours: Instructor: 60 **Student:** 60
Lab: Instructor: 0 **Student:** 0
Clinical: Instructor: 0 **Student:** 0

Total Contact Hours: Instructor: 60 **Student:** 60
Repeatable for Credit: NO
Grading Methods: Letter Grades
Audit
Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing

College-level Reading & Writing

College-Level Math

Requisites

Prerequisite
CPS 161 minimum grade "C"
or
Prerequisite
CPS 171 minimum grade "C"
or
Prerequisite
WEB 210 minimum grade "C"

General Education

General Education Area 7 - Computer and Information Literacy
Assoc in Arts - Comp Lit
Assoc in Applied Sci - Comp Lit
Assoc in Science - Comp Lit

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Recognize appropriate use of PHP programming basics.
   Assessment 1
   Assessment Tool: Outcome-related multiple-choice and short answer questions on a departmental exam
   Assessment Date: Fall 2023
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: All
   How the assessment will be scored: The multiple choice and short answer questions have well-defined answers that can be objectively scored as correct or incorrect.
   Standard of success to be used for this assessment: The standard for success will be that 70% of the students will score better than 70% or higher on the outcome-related questions.
   Who will score and analyze the data: Instructors teaching CPS 276 will analyze the data.

2. Identify relational database design and MySQL database server fundamentals.
   Assessment 1
   Assessment Tool: Outcome-related multiple-choice and short answer questions on a departmental exam
   Assessment Date: Fall 2023
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: All
   How the assessment will be scored: The multiple-choice and short answer questions have well-defined answers that can be objectively scored as correct or incorrect.
   Standard of success to be used for this assessment: The standard for success will be that 70% of the students will score better than 70% or higher on the outcome-related questions.
   Who will score and analyze the data: Instructors teaching CPS 276 will analyze the data.

3. Identify appropriate techniques for accessing MySQL from the PHP programming language.
   Assessment 1
   Assessment Tool: Outcome-related multiple-choice and short answer questions on a departmental exam

Assessment Date: Fall 2023
Assessment Cycle: Every Three Years
Course section(s)/other population: All
Number students to be assessed: All
How the assessment will be scored: The multiple-choice and short answer questions have well-defined answers that can be objectively scored as correct or incorrect.
Standard of success to be used for this assessment: The standard for success will be that 70% of the students will score better than 70% or higher on the outcome-related questions.
Who will score and analyze the data: Instructors teaching CPS 276 will analyze the data.

4. Apply sound software engineering techniques in developing a working software project.
   Assessment 1
   Assessment Tool: A portfolio of software programs submitted by the students
   Assessment Date: Fall 2023
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: All
   How the assessment will be scored: Departmentally-developed rubric
   Standard of success to be used for this assessment: The standard for success will be that 70% of students will score 70% or higher on the rubric.
   Who will score and analyze the data: Instructors teaching CPS 276 will analyze the data.

Course Objectives

1. Develop basic HTML elements (input, text boxes and forms).
2. Develop basic PHP code (logic, arrays, loops, operators, post and get statements, variables and functions).
3. Develop database SQL code in MySQL (select, input, update and delete).
4. Access a MySQL database from PHP code using PDO.
5. Demonstrate sound software engineering techniques in developing a working web database driven application which is robust and maintainable.
6. Identify the differences of PHP over other server-side scripting languages.
7. Recognize and use correct PHP syntax.
8. Demonstrate how to create PHP classes.
9. Properly use PHP objects
10. Recognize and correctly apply loops for getting recordset data.
11. Use MySQL for data storage and manipulation.
12. Differentiate between SQL for relational databases and PHP.

New Resources for Course

Course Textbooks/Resources

Textbooks
Manuals
Periodicals
Software

Equipment/Facilities

Level III classroom

Reviewer	Action	Date
Faculty Preparer:		
Scott Shaper	*Faculty Preparer*	*May 06, 2020*
Department Chair/Area Director:		

Cyndi Millns	*Recommend Approval*	*May 07, 2020*
Dean:		
Eva Samulski	*Recommend Approval*	*May 08, 2020*
Curriculum Committee Chair:		
Lisa Veasey	*Recommend Approval*	*Jul 15, 2020*
Assessment Committee Chair:		
Shawn Deron	*Recommend Approval*	*Jul 21, 2020*
Vice President for Instruction:		
Kimberly Hurns	*Approve*	*Jul 28, 2020*