CS M16PH: SERVER-SIDE DEVELOPMENT USING PHP

Originator
Loay Alnaji

College
Moorpark College

Attach Support Documentation (as needed)
CS M16PH_Computer Programming_Moorpark_Analysis_Report.pdf
CS M16PH_SurveyedDataReport (1).docx
CS M16PH_SantaMonicaCatalog.pdf
CS M16PH_Minutes_1st CS Advisory Meeting_ 4-16-18_Esmaail Nikjeh (5).docx
CS M116PH_state approval letter_CCC000608537.pdf

Discipline (CB01A)
CS - Computer Science

Course Number (CB01B)
M16PH

Course Title (CB02)
Server-Side Development using PHP

Banner/Short Title
Server-Side Dev. using PHP

Credit Type
Credit

Honors
No

Start Term
Spring 2020

Catalog Course Description
Applies best coding practices using Personal Home Page (PHP) language. Introduces different techniques to connect client side code hypertext markup language (HTML) with databases using queries. Performs different input/output (I/O) operations to manipulate data. Enables students to manage sessions and track user activities among different pages using sessions, cookies and database queries.

Taxonomy of Programs (TOP) Code (CB03)
0707.10 - *Computer Programming

Course Credit Status (CB04)
D (Credit - Degree Applicable)

Course Transfer Status (CB05) (select one only)
B (Transferable to CSU only)

Course Basic Skills Status (CB08)
N - The Course is Not a Basic Skills Course

SAM Priority Code (CB09)
C - Clearly Occupational

Course Cooperative Work Experience Education Status (CB10)
N - Is Not Part of a Cooperative Work Experience Education Program

Course Classification Status (CB11)
Y - Credit Course

Educational Assistance Class Instruction (Approved Special Class) (CB13)
N - The Course is Not an Approved Special Class

Course Prior to Transfer Level (CB21)
Y - Not Applicable

Course Noncredit Category (CB22)
Y - Credit Course

Funding Agency Category (CB23)
Y - Not Applicable (Funding Not Used)

Course Program Status (CB24)
1 - Program Applicable

General Education Status (CB25)
Y - Not Applicable

Support Course Status (CB26)
N - Course is not a support course

Field trips
Will not be required

Grading method
Student Option- Letter/Pass

Does this course require an instructional materials fee?
No

Repeatable for Credit
No

Units and Hours

Carnegie Unit Override
No

In-Class

Lecture
Minimum Contact/In-Class Lecture Hours
35
Maximum Contact/In-Class Lecture Hours
35

Activity

Laboratory
Minimum Contact/In-Class Laboratory Hours
52.5
Maximum Contact/In-Class Laboratory Hours
52.5

Total in-Class

Total in-Class
Total Minimum Contact/In-Class Hours
87.5
Total Maximum Contact/In-Class Hours
87.5

Outside-of-Class

Internship/Cooperative Work Experience

Paid

Unpaid

Total Outside-of-Class

Total Outside-of-Class
Minimum Outside-of-Class Hours
70
Maximum Outside-of-Class Hours
70

Total Student Learning

Total Student Learning
Total Minimum Student Learning Hours
157.5
Total Maximum Student Learning Hours
157.5

Minimum Units (CB07)
3
Maximum Units (CB06)
3

Student Learning Outcomes (CSLOs)

	Upon satisfactory completion of the course, students will be able to:
1	write proper PHP code to connect client side code (front-end) to database (back-end).
2	evaluate different data retrieval methods running on the server.
3	apply proper SQL and HTML code to generate dynamic content
4	explain the different tiers a program consists of

Course Objectives

	Upon satisfactory completion of the course, students will be able to:
1	analyze a given problem and create the proper Entity Relationship Diagram to meet the requirements.
2	create basic Structured Query Language (SQL) instructions to retrieve, update, and delete data from the database.
3	create the proper PHP code based on a given complex problem that requires database access.
4	interact with client code to receive data from and send data to in order to provide users with a dynamic complete (client/server) experience.

Course Content

Lecture/Course Content

- **5% - HTML, Cascading Style Sheets (CSS), and client side development tools**
- **15% - Coding with PHP. declaring variables, and solving business problems**
- **10% - Using Forms to interact with PHP code**
- **15% - Writing basic SQL queries**
- **15% - Create advanced complex queries using views and JOIN**
- **5% - State Management (Handling Cookies, Session and Application Tracking)**
- **10% - Regular Expressions (Regex) and Validation**
- **10% - Designing and implementing a midsize dynamic website based on a given database architecture**
- **5% - Writing secure code**
- **10% - Given an Entity Relationship Diagram create the proper relational database**

Laboratory or Activity Content

- **10% - Given a scenario, identify the attributes necessary to build a database**
- **10% - Using PHP, write a program to display user's information**
- **10% - Using PHP, link to a database and display data on the screen**
- **25% - Write proper SQL queries to retrieve, update or delete data from database**
- **15% - Write complex SQL queries using JOIN**
- **10% - Receive data from a client webpage, process it and pass it to the database for storage**
- **10% - Use PHP to write code to fully manage user sessions over multiple webpages**
- **10% - Use PHP embedded with HTML to provide user with different look and feel based on user credentials/roles retrieved from the database**

Methods of Evaluation

Which of these methods will students use to demonstrate proficiency in the subject matter of this course? (Check all that apply):

Problem solving exercises
Skills demonstrations

Methods of Evaluation may include, but are not limited to, the following typical classroom assessment techniques/required assignments (check as many as are deemed appropriate):

Individual projects
Journals
Objective exams
Other (specify)
Skills demonstrations

Other

•Code writing
•Code review
•Participation
•Classroom discussion

Instructional Methodology

Specify the methods of instruction that may be employed in this course

Collaborative group work
Class activities
Class discussions
Distance Education
Internet research
Laboratory activities
Lecture
Other (specify)

Specify other method of instruction

•Videos
•Interactive multimedia

Describe specific examples of the methods the instructor will use:

Instructor will explain lecture using powerpoint and sample code. Customized video tutorials will be used to demonstrate how to setup and work with databases. Students will work on solving problems by solving assigned homework. Students will also search the net for specific information such as security and ethical issues dealing with database and PHP.

Representative Course Assignments

Writing Assignments

1. Create a PHP page to display static content.

2. Write the proper PHP code to display browser information and create the proper SQL instruction to retrieve the faculty names from employees table.

3. Control user content by reading data from user and modifying database content
based on user selection.

4. Develop a website using PHP programming and other tools to maintain a list of user accounts with different rights, roles, and privileges.

Critical Thinking Assignments

1. Apply knowledge gained in classroom to analyze and synthesize best development practices such as to write code to securely encrypt and decrypt data exchange between client and a database.

2. Write code to track user progress on a website by keeping track of his/her activities and storing/update that information in the database.

3. Create a web page to use a PHP program which prints the current time in various formats and colors depending on the query string. The PHP program is intended to interpret a simple query string which controls how the time is displayed, and load the page title with correct background and text colors. The query string has three fields separated by colons. The first is the time format, the second is the text color, and the third is the background color.

4. Write a PHP program to produce an on-line hangman game. The game chooses a word of at least five characters at random, and the player tries to figure out what word has been chosen by guessing letters. The player must find the word with no more than six incorrect guesses.

Reading Assignments

1. Read hand-outs provided by the instructor regarding server-side programming styles in PHP and the role of good programming style in creating secure code.
2. Read and study selected chapters from the textbook and the accompanying lecture notes, then write code to solve problems assigned by the instructor.

Outside Assignments

Representative Outside Assignments

1. Use the library resources to create a report describing security weaknesses that might exist in using PHP as a server side programming language.

2. Research the internet for best (and worst) programming practices in PHP. Discuss the most difficult practices to implement and why?

3. Develop a website using PHP programming and other tools to have the features listed below. Maintain a list of items for bidding.

    a. Each item is an auction. It has an owner, a closing date, and a collection of bids.
    b. Any logged-in user may add an item. Require the user to enter a description and closing date, and set the list of bids initially empty.
    c. Any logged-in user may delete any of his own items; an item may be deleted only by its owner.
    d. Present a list of items currently available. For each one, show

Articulation

Equivalent Courses at other CCCs

College	Course ID	Course Title	Units
Mission College	CIS 086	Web Development with PHP and MySQL	3
Mt. San Jacinto College	CSIS 116D	PHP Web Development	3
Los Angeles Trade Technical College	CO INFO 742	Web Development Using PHP-MYSQL	3
Glendale Community College	CS/IS 261	Web Development with PHP and MySQL	3
Cerro Coso Community College	DMA C213	Web Development with PHP and MYSQL	3
Santa Monica College	CS 85	PHP Programming	3

District General Education

A. Natural Sciences

B. Social and Behavioral Sciences

C. Humanities

D. Language and Rationality

E. Health and Physical Education/Kinesiology

F. Ethnic Studies/Gender Studies

Course is CSU transferable
Yes

CSU GE-Breadth

Area A: English Language Communication and Critical Thinking

Area B: Scientific Inquiry and Quantitative Reasoning

Area C: Arts and Humanities

Area D: Social Sciences

Area E: Lifelong Learning and Self-Development

CSU Graduation Requirement in U.S. History, Constitution and American Ideals:

IGETC

Area 1: English Communication

Area 2A: Mathematical Concepts & Quantitative Reasoning

Area 3: Arts and Humanities

Area 4: Social and Behavioral Sciences

Area 5: Physical and Biological Sciences

Area 6: Languages Other than English (LOTE)

Textbooks and Lab Manuals

Resource Type
Textbook

Classic Textbook
Yes

Description
Murach, Joel, and Ray Harris. Murach's PHP and MySQL. 3rd ed. Mike Murach and Associates, 2017.

Resource Type
Textbook

Classic Textbook
Yes

Description

Caya, Andrew. Mastering the Faster Web with PHP, MySQL, and JavaScript: Develop State of the Art Web Applications Using the Latest Web Technologies. Packt, 2018.

Resource Type

Other Resource Type

Description

MySQL. Microsoft, 1st ed.
MySQL is a database software provided by Microsoft. The software will be used in the course to teach students to create tables, run queries and create dynamic websites by providing websites with dynamic data.

Library Resources

Assignments requiring library resources

Using the Library's print and online resources, research best PHP coding practices. Identify best practices from the following points of view: 1) Programming, and 2) Security

Sufficient Library Resources exist

Yes

Distance Education Addendum

Definitions

Distance Education Modalities

Hybrid (51–99% online)
Hybrid (1–50% online)
100% Online

Faculty Certifications

Faculty assigned to teach Hybrid or Fully Online sections of this course will receive training in how to satisfy the Federal and state regulations governing regular effective/substantive contact for distance education. The training will include common elements in the district-supported learning management system (LMS), online teaching methods, regular effective/substantive contact, and best practices.

Yes

Faculty assigned to teach Hybrid or Fully Online sections of this course will meet with the EAC Alternate Media Specialist to ensure that the course content meets the required Federal and state accessibility standards for access by students with disabilities. Common areas for discussion include accessibility of PDF files, images, captioning of videos, Power Point presentations, math and scientific notation, and ensuring the use of style mark-up in Word documents.

Yes

Regular Effective/Substantive Contact

Hybrid (1%–50% online) Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Other DE (e.g., recorded lectures)	Instructor may provide students with recorded lectures that explain the topic of the week.
E-mail	Instructor will use email communication to help guide students who have questions about the system.

Hybrid (51%–99% online) Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Other DE (e.g., recorded lectures)	Instructor may provide students with recorded lectures that explain the topic of the week.

E-mail	Instructor will use email communication to help guide students who have questions about the system.
Synchronous Dialog (e.g., online chat)	Instructor may be available on a certain day or days for an hour or more to meet with students online to chat with them about the course topic.
Telephone	Instructor may provide his/her phone number to students where they can leave a voicemail and expect a call back with in 24 hour.

100% online Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Asynchronous Dialog (e.g., discussion board)	Instructor will use a learning tool like CANVAS to create a Question and Answer thread to answer any questions related to the course and will post a Question every week in the discussion threads for students to answer and discuss.
E-mail	Instructor will use email communication to help guide students who have questions about the system.
Synchronous Dialog (e.g., online chat)	Instructor may be available on a certain day or days for an hour or more to meet with students online to chat with them about the course topic.
Telephone	Instructor may provide his/her phone number to students where they can leave a voicemail and expect a call back with in 24 hour.
Other DE (e.g., recorded lectures)	Instructor may provide students with recorded lectures that explain the topic of the week.

Examinations

Hybrid (1%–50% online) Modality
Online
On campus

Hybrid (51%–99% online) Modality
Online
On campus

Primary Minimum Qualification
COMPUTER SCIENCE

Review and Approval Dates

Department Chair
01/10/2019

Dean
11/29/2018

Technical Review
01/31/2019

Curriculum Committee
02/05/2019

DTRW-I
09/12/2019

Curriculum Committee
MM/DD/YYYY

Board
10/08/2019

CCCCO
10/12/2019

Control Number
CCC000608537

DOE/accreditation approval date
MM/DD/YYYY