

COURSE SYLLABUS

LAST REVIEW	Spring 2021
COURSE TITLE	Server-side Programming using PHP
COURSE NUMBER	CIST-0272
DIVISION	Career and Technical Education
DEPARTMENT	CIST
CIP CODE	11.0801
CREDIT HOURS	3
CONTACT HOURS/WEEK	Class: 3 Lab: 0
PREREQUISITES	CIST-0137: HTML Web Page Development
COREQUISITES	None

COURSE DESCRIPTION

This course covers the fundamentals of PHP scripting in a web environment to produce dynamic web pages. Students learn how to create on-demand, server-based HTML; write and process fill-out forms; write responses to form submissions back to the client browser; store and process cookies; handle file uploads securely; create, read, and write to text databases; attach JavaScript and cascading style sheets to created-on-demand web documents; and to maintain state through multi-page forms. Modules include conditional logic, form validation, file handling and manipulation of external data sources (XML). Students are not required to have previous PHP programming experience, although a thorough knowledge of HTML is necessary.

PROGRAM ALIGNMENT

This course is part of a program aligned through the Kansas Board of Regents and Technical Education Authority. For more information, please visit:

https://kansasregents.org/workforce_development/program-alignment

PROGRAM LEARNING OUTCOMES

1. Back end: Develop a complete functional back-end website.

INSTITUTIONAL LEARNING OUTCOMES

- Communication
- Computation and Financial Literacy
- Critical Reasoning
- Technology and Information Literacy
- Community and Civic Responsibility
- Personal and Interpersonal Skills

TEXTBOOKS

<http://kckccbookstore.com/>

METHOD OF INSTRUCTION

A variety of instructional methods may be used depending on content area. These include but are not limited to lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom.

Methodology will be selected to best meet student needs.

COURSE OUTLINE

- I. Overview of PHP
 - A. Static vs. Dynamic Web Sites
 - B. Dynamic Content from Databases
 - C. Developing Dynamic Internet Applications
 - D. Client-Side Scripting vs. Server-Side Scripting
 - E. Overview of PHP Advantages and Capabilities
- II. PHP Basic Scripting
 - A. PHP Scripting Fundamentals
 - B. Print Statement
 - C. Code Blocks
 - D. Primitive Data Types
 - E. Defining Constants and Variables.
- III. PHP Operators
 - A. Logical, Relational and Bitwise Operators.
- IV. Conditional & Loop Constructs
 - A. True and False Expressions
 - B. If, else and elseif
 - C. Switch/case Statement
 - D. The? (Ternary) Operator
 - E. Looping Constructs: while, do... while, for loops
 - F. Exit & break
- V. PHP Functions and Arrays
 - A. Introduction to Functions and Scope
 - B. Passing Arguments to Functions and Returning Values from a Function
 - C. Predefined PHP Functions
 - D. What are Arrays and Array Indexing?
 - E. Initializing Arrays
 - F. Operating on Arrays
 - G. One-Dimensional Arrays & Multi-Dimensional Arrays
 - H. Associative Arrays
 - I. Array Functions
 - J. Forms and Arrays

- VI. Working with Data Files in PHP
 - A. Searching File Contents with Regular Expressions
 - B. Changing and Editing File Contents
 - C. String Functions
 - D. Regular Expression Functions
 - E. Reading, Writing and Deleting Files
 - F. Handling File Permissions
 - G. Creating and Deleting Directories and Reading Directory Contents
- VII. Introduction to the Apache Web Server
 - A. Configuring Apache for PHP
- VIII. Working with Databases and Forms
 - A. Configuring PHP for Database Support
 - B. PHP's Database APIs
 - C. PHP's SQL API
 - D. Database Drivers
 - E. Database Driver Class Wrappers
 - F. Simple SQL Queries via PHP
 - G. Tracking Visitors with Session IDs
 - H. Populating Forms
 - I. Retrieving Data from Forms
- IX. Using Cookies with PHP
 - A. Purpose of Cookies and Cookie Myths
 - B. Setting, Retrieving, Expiring and Deleting Cookies
- X. Using Cookies with PHP
 - A. Error Logging
 - B. Session Management and Maintaining State
 - C. Web Application Architecture
 - D. Using Environment Variables
 - E. Changing Execution by Redirecting to Other URLs
 - F. Using the HTTP Protocols to Pass Data
 - G. Showing Different Content to Different Browsers
 - H. Getting IP Addresses from Visitors

COURSE LEARNING OUTCOMES AND COMPETENCIES

Upon completion of the course, the student will:

- A. Explain PHP scripting.
 1. Explain static & dynamic web Sites.
 2. Develop dynamic internet applications.
 3. Define PHP advantages and capabilities.
- B. Define PHP Basics.
 4. Explain PHP scripting fundamentals
 5. Explain code blocks

6. Define primitive data types
 7. Define constants and variables.
- C. Explain PHP Operators.
8. Explain logical operators.
 9. Explain relational operators.
 10. Explain bitwise operators.
- D. Define Conditional & Loop Constructs.
11. Explain True and False expressions.
 12. Define if, else and elseif statements.
 13. Explain switch/case statement.
 14. Explain Ternary operator.
 15. Explain looping constructs.
 16. Define exit & break statements.
- E. Explain PHP Functions and Arrays.
17. Explain functions and scope.
 18. Explain predefined PHP functions.
 19. Define arrays and array indexing.
 20. Explain operating on arrays.
 21. Explain associative arrays.
- F. Work with Data Files in PHP.
22. Search file contents with regular expressions.
 23. Explain string functions.
 24. Define regular expression functions.
 25. Handle file permissions.
 26. Create and delete directories and read directory contents.
- G. Explain the Apache Web Server.
27. Configure Apache for PHP.
- H. Use Cookies with PHP.
28. Explain the purpose of cookies and cookie myths.
 29. Set, retrieve, expire, and delete cookies.
- I. Explain miscellaneous PHP Tasks.
30. Explain error logging.
 31. Explain web application architecture.
 32. Explain using environment variables.
 33. Use the HTTP protocols to pass data.
 34. Get IP addresses from visitors.
 35. Change execution by redirecting to other URLs.

ASSESSMENT OF COURSE LEARNING OUTCOMES AND COMPETENCIES

Student progress is evaluated through both formative and summative assessment methods. Specific details may be found in the instructor's course information document.

COLLEGE POLICIES AND PROCEDURES

Student Handbook

<https://www.kckcc.edu/files/docs/student-resources/student-handbook-and-code-of-conduct.pdf>

College Catalog

<https://www.kckcc.edu/academics/catalog/index.html>

College Policies and Statements

<https://www.kckcc.edu/about/policies-statements/index.html>

Accessibility and Accommodations

<https://www.kckcc.edu/academics/resources/student-accessibility-support-services/index.html>.