Course Information Form (CIF)

Course Code: CSC 155

Course Title: Systems Development

Department: Business/Computer Science and Technologies
PCS Code: 1.2 - Occupational/Technical Instruction
CIP Code: 11.0201
Repeatability: 0

Effective Date: Summer 2026

Credit Hours

Catalog Notation: 2-2-3
Credit Hour Distribution:

Lecture: 2	Lab: 2	Clinical: 0	**Total: 3**

General Course Information

Catalog Description

Introduction to developing software systems integrated with databases, file systems, and the internet.

General Course Objectives

To become proficient in the use of server side technologies that are an integral part of the internet.

Minimum Placement Levels

English	Reading	Math
None	None	None

Prerequisites

Credit in CIS 122 and CSC 118
Basic knowledge of HTML

Methods of Evaluation

Weekly programming problems, labs and quizzes, a midterm exam, and a final exam.

Instructional Materials and Additional Supplies

Online open-source wikibook: PHP Programming, https://en.wikibooks.org/wiki/PHP_Programming
https://www.w3schools.com/

Course Content

General Learning Outcomes (GLOs)

- Technology: Students will demonstrate the ability to evaluate, select, and appropriately use current and emerging tools.

Course Segments and Student Learning Outcomes

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Unix Account Management and Remote Access	1. Demonstrate logging into a remote Linux account via ssh. 2. Demonstrate logging into a remote Linux account via scp. 3. Construct a simple web page, update it, and access it remotely. 4. Demonstrate moving files from local machines to remote machines.	2	2	0
HTML Tags	1. Demonstrate a link in a webpage and access it over the internet. 2. Classify links as relative or absolute. 3. Demonstrate an image in a webpage, update it, and access it over the internet. 4. Demonstrate a 2-dimensional table in a webpage, update it, and access it over the internet.	2	2	0
HTTP and Programming	1. Demonstrate a dynamic webpage, update it, and access it over the internet. 2. Explain the difference between an HTTP request and response. 3. Identify the parts of an HTTP message: Header, Blank Line, and Body. 4. Demonstrate programming concepts of variables, conditionals, looping, and arrays.	2	2	0
Git and GitHub	1. Demonstrate logging into GitHub. 2. Demonstrate moving a project from GitHub to a remote Linux machine using Git.	1	0	0
HTML Forms	1. Demonstrate using an HTML form to send data to a program. 2. Demonstrate the use of multiple submit buttons. 3. Demonstrate the use of radio buttons. 4. Demonstrate the use of checkboxes. 5. Demonstrate the use of drop down menus. 6. Demonstrate the use of hidden fields and persistent data.	2	2	0
PHP	1. Demonstrate a dynamic webpage using PHP, update it, and access it over the internet. 2. Demonstrate programming concepts of variables, conditionals, looping, and arrays in PHP. 3. Demonstrate functions in PHP. 4. Differentiate between PHP and HTML in the same file and demonstrate the interaction.	2	2	0
PHP and HTML Forms	1. Demonstrate using an HTML form to send data to a PHP program with superglobals. 2. Identify the use of $_POST and $_GET in PHP. 3. Demonstrate the use of isset() in PHP. 4. Demonstrate an HTML injection security issue. 5. Demonstrate the use of htmlspecialchars() in PHP to prevent HTML injections. 6. Demonstrate using an internal HTML form to send data back to the same PHP program. 7. Demonstrate the use of redirection in a PHP Program. 8. Demonstrate the use of libraries in a PHP Program with require().	2	2	0

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
PHP and Sessions	1. Illustrate a website with a user session. 2. Demonstrate the use of the PHP superglobal $_SESSION. 3. Demonstrate the use of both PHP $_SESSION and redirection to 'bounce' to a login page. 4. Describe the relationship between HTTP cookies and PHP $_SESSION. 5. Demonstrate the proper use of session_start() and session_destroy().	2	2	0
MySQL Database	1. Demonstrate logging into a remote SQL database. 2. Demonstrate creating a table in a remote SQL database. 3. Demonstrate adding data to a table in a remote SQL database using INSERT. 4. Demonstrate displaying data from a table in a remote SQL database using SELECT. 5. Identify data definition, data administration, and data manipulation commands.	2	2	0
PHP and SQL INSERT	1. Demonstrate a PHP program that connects to a remote database. 2. Demonstrate a PHP program that inserts data into a database. 3. Demonstrate a PHP program that reads data from an HTML form and inserts that data into a database. 4. Demonstrate an SQL injection security issue. 5. Demonstrate the use of bind() and prepare() to prevent SQL injection security issues.	2	2	0
PHP and SQL SELECT	1. Demonstrate a PHP program that displays data from a database using HTML form tags. 2. Demonstrate a PHP program that displays data using prepare() and bind() to search for data while preventing SQL injections.	2	2	0
PHP and SQL UPDATE / DELETE	1. Demonstrate a PHP program that displays data from a database in an editable HTML form. 2. Demonstrate multiple PHP programs that work together to display data from a database using a hidden field to pass information. 3. Demonstrate multiple PHP programs that work together to delete data from a database using a hidden field to pass information.	2	2	0
PHP and User Authentication	1. Demonstrate the use of crypt() on a plaintext password. 2. Identify the salt in the result crypt() on a plaintext password. 3. Demonstrate using crypt() (or similar functions) to determine if a plaintext password matches an encrypted password. 4. Demonstrate a PHP program that stores an encrypted password in a database from an HTML form that creates an account and a password with a password confirmation.	2	2	0
PHP and Multipage Websites	1. Demonstrate creating PHP page templates. 2. Demonstrate creating a PHP library with headers and footers to build the look and feel of a website.	2	0	0
Semester Project	1. Plan and develop a multiple page PHP website with user authentication, secure area, and a shopping cart.	1	6	0
XML, JSON and Inter-Server Communication	1. Demonstrate XML output pulled from a database. 2. Identify parts of the 'three tier' internet model. 3. Demonstrate JSON output from a database.	2	0	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
30	30	0