Server-Side Scripting Languages and Tools 2023-2024 Catal

[ARCHIVED CATALOG]

SDEV 253 - Server-Side Scripting Languages and Tools

PREREQUISITES: SDEV 153 - Website Development and DBMS 110 - Introduction to Data Analytics.
PROGRAM: Software Development
CREDIT HOURS MIN: 3
LECTURE HOURS MIN: 2
LAB HOURS MIN: 2
DATE OF LAST REVISION: Fall, 2020

Students will learn basic to intermediate server-side scripting aspects including the use of PHP: hypertext preprocessor and other scripting tools. Students will prepare server-side scripts that work hand-in-hand with front-end Web languages such as Hyper Text Markup Language and JavaScript. Server-side scripts will be used to create dynamic web interfaces. Builds on the Web Development course, emphasizing server-side scripting with database integration and serves as a natural complement to the Client-Side Scripting Languages and Tools course.

MAJOR COURSE LEARNING OBJECTIVES: Upon successful completion of this course the student will be expected to:

1. Understand the differences in the capabilities of a server-side scripting language and a client-side scripting language.
2. Understand the importance of Mobile First, responsive Web design (RWD), and progressive enhancement (PE) using the latest HTML standards and semantic elements.
3. Understand and use the basic programming syntax of PHP for server-side scripting and SQL for database integration to develop Web applications.
4. Use PHP to generate HTML documents that validate to the current HTML standard.
5. Use operators, variables, arrays, control structures, and functions (built-in and user- defined).
6. Code HTML forms for data input and update for data stored in a MySQL database.
7. Design and develop a relational database with multiple tables to store supporting data for a dynamic Web application, user or membership data, a shopping cart scenario, or other data-driven application.
8. Integrate SQL queries, including INSERT, UPDATE, DELETE, SELECT, and JOIN, into PHP scripts.
9. Understand and demonstrate the different uses for GET and POST requests and queries.
10. Implement encryption for user login information stored in a database using MD5 and password salting (or other proven methods).
11. Use debugging tools to test and debug PHP and SQL code.
12. Use PHP to manipulate and manage sessions and cookies.
13. Upload Web pages and sites to a server using file transfer protocol (FTP) or secure shell (SSH).
14. Import and export data to and from a MySQL database using a variety of formats including, but not limited to, CSV and SQL.

COURSE CONTENT: Topical areas of study include -

- Scripting
- Client vs. Server side
- RWD
- PE
- PHP
- HTML
- SQL

- Queries
- Debugging tools
- Relational databases
- Operators
- Variables
- Arrays
- Control structures
- Functions

Course Addendum - Syllabus (Click to expand)
