Web Application Development 2023-2024 Catal

[ARCHIVED CATALOG]

SDEV 255 - Web Application Development

PREREQUISITES: SDEV 153 - Website Development and DBMS 110 - Introduction to Data Analytics and SDEV 120 - Computing Logic
PROGRAM: Software Development
CREDIT HOURS MIN: 3
LECTURE HOURS MIN: 2
LAB HOURS MIN: 2
DATE OF LAST REVISION: Fall, 2020

Students will learn how to use and apply client and server-side scripting and application programming interfaces to build web-based applications which interact with a data source including XML and JSON. Students will prepare both front and back end content using techniques including, Hyper Text Markup Language and JavaScript to create dynamic data-driven web interfaces. The course builds on the Web Site Development course, emphasizing full stack implementation.

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

1. Explain the differences in the capabilities of a server-side scripting language and a client-side scripting language.
2. Manipulate data using objects, properties, and methods, and apply object models which enforce data security.
3. Create data entry forms, reports, and searches with validation which retrieve, input and update data stored in SQL and CSV formats and a database system to generate HTML documents that validate to the current HTML standard.
4. Utilize existing libraries to create dynamic and progressive client-side enhancements and server-side integration with application programming interface (API).
5. Utilize data types, operators, variables, arrays, control structures, and functions (built- in and user-defined).
6. Design and develop a relational data system to store supporting data for a dynamic Web application, user or membership data, a shopping cart scenario, or other data- driven application.
7. Integrate CRUD (CREATE, READ, UPDATE, DESTROY) methods SQL queries, including INSERT, UPDATE, DELETE, SELECT, and JOIN, into server-side code.
8. Construct Implement encryption for user login information stored in a database using MD5 and password salting (or other proven methods).
9. Apply testing and debugging techniques to client/server side code.
10. Manipulate and manage sessions and cookies with client and server side code.
11. Interpret customer user design needs for functional implementation.

COURSE CONTENT: Topical areas of study include -

- Scripting
- Client vs. Server side
- RWD
- PHP
- HTML
- SQL
- REGEX
- JSON
- AJAX
- UX/UI

- Source Control
- GitHub
- Debugging tools
- Relational databases
- Operators
- Variables
- Arrays
- Control structures
- Functions
- DOM
- JavaScript
- CRUD
- Frameworks
- MVC

Course Addendum - Syllabus (Click to expand)
