Note:

Course content may be changed, term to term, without notice. The information below is provided as a guide for course selection and is not binding in any form, and should <u>not</u> be used to purchase course materials.

LIBERTY UNIVERSITY

COURSE SYLLABUS

CSIS 310

WEB ARCHITECTURE AND DEVELOPMENT

COURSE DESCRIPTION

Provides students with thorough knowledge of the foundations of web architecture, current technologies utilized in the development of a web site, and criteria for assessing the usability of web sites. (Formerly CSCI 310)

RATIONALE

Today's business world is becoming increasingly dependent on the speed, accuracy, and capacity of technology to provide the necessary infrastructure for growth and a competitive edge in the marketplace. This course provides an understanding of the architecture that is essential to a successful web application.

I. PREREQUISITE

For information regarding prerequisites for this course, please refer to the Academic Course Catalog.

II. REQUIRED RESOURCE PURCHASE

Click on the following link to view the required resource(s) for the term in which you are registered: http://bookstore.mbsdirect.net/liberty.htm

III. RECOMMENDED RESOURCE

American Psychological Association. *Publication manual of the American Psychological Association* (Current ed.). Washington, DC: Author.

IV. ADDITIONAL MATERIALS FOR LEARNING

A. Computer with basic audio/video output equipment

B. Internet access (broadband recommended)

C. Blackboard recommended browsers

D. Microsoft Word

E. Brackets (http://www.brackets.io)

F. FileZilla (https://filezilla-project.org/)

G. W3Schools (http://www.w3schools.com/html/)

V. MEASURABLE LEARNING OUTCOMES

Upon successful completion of this course, the student will be able to:

A. Analyze the history, protocols, and architecture of the Internet and World Wide Web.

B. Use client-side markup languages to manage the presentation of information in a variety of browsers.

C. Compare the structure and presentation of mobile-use websites versus traditional web presentation.

D. Use client-side languages to support dynamic, interactive information presentation or webpages in a browser.

E. Assess the moral and ethical considerations of the use of intellectual property and how the web designer can incorporate a Christian worldview into World Wide Web communications.

F. Demonstrate proficiency in client-side web technologies by designing and constructing a website or web application.

G. Assess the technical and usability strengths and weaknesses of commercial websites.

H. Evaluate emerging standards in web markup languages.

VI. COURSE REQUIREMENTS AND ASSIGNMENTS

A. Textbook readings and lecture presentations

B. Course Requirements Checklist

After reading the Course Syllabus and Student Expectations, the student will complete the related checklist found in Module/Week 1.

C. Discussion Board Forums (3)

Discussion boards are collaborative learning experiences. Therefore, the student is required to create a thread in response to the provided prompt for each forum. Each thread must be at least 250 words, demonstrate course-related knowledge, and be properly supported with at least 1 scholarly source. In addition to the thread, the student is required to reply to 2 classmates' threads. Each reply must be at least 100 words. All sources used in the thread and replies must have been published within the last 5 years and must be cited in current APA format.

D. Assignments (4)

The student will complete 4 web design assignments:

Assignment 1

Assignment 1 consists of several steps, with the end result being an established website with some basic HTML5 semantic elements demonstrated. The first step will be setting up a domain and web hosting. The second step will be showing knowledge of HTML5 elements.

Assignment 2

Assignment 2 will consist of creating a form and an accompanying table. The form will be the main component and will consist of the table and several selectable items. The form will be submitted using a PHP script.

Assignment 3

Assignment 3 will assess the student's programming abilities in CSS. The project will require the completion of a page using basic and advanced CSS. The project will also test knowledge of design flow.

Assignment 4

Assignment 4 will assess the student's programming abilities in JavaScript. The project will require coding of a JavaScript file that will interact with HTML elements. The result will be a page that calls the JavaScript file to add visual effect to the page itself.

E. Final Project

The Final Project will demonstrate the ability to program the Backbone CSS framework across multiple pages. The ability to read online documentation and then make use of that documentation will also be a key part of this project. The end result will several pages, creating a site, that implement key classes of the Backbone framework.

F. Exams (2)

The student will take a Midterm Exam and a Final Exam. The Midterm Exam will cover the Reading & Study material for Modules/Weeks 1–4, and the Final Exam will cover the Reading & Study material for Modules/Weeks 5–8. Each exam will be open-book/open-notes, contain 25 multiple-choice and true/false questions and 5 short-answer questions, and have a time limit of 1 hour and 30 minutes.

VII. COURSE GRADING AND POLICIES

A. Points

Course Requirements Checklist			10
Discussion Board Forums (3 at 50 pts ea)			150
Assignments (4 at 75 pts ea)			300
Final Project			150
Midterm Exam	(Modules 1–4)		200
Final Exam	(Modules 5–8)		200
		Total	1010

B. Scale

A = 900–1010 B = 800–899 C = 700–799 D = 600–699 F = 0–599

C. Quizzes/Tests/Exams

For timed quizzes/tests/exams, the student is required to complete the quiz/test/exam within the assigned time. Points will not be granted for questions completed after the time limit.

D. Disability Assistance

Students with a documented disability may contact Liberty University Online's Office of Disability Academic Support (ODAS) at LUOODAS@liberty.edu to make arrangements for academic accommodations. Further information can be found at www.liberty.edu/disabilitysupport.

COURSE SCHEDULE

CSIS 310

Textbook: Connolly & Hoar, *Fundamentals of Web Development* (2018).

MODULE/ WEEK	READING & STUDY	ASSIGNMENTS	POINTS
1	Connolly & Hoar: ch. 2 1 presentation	Course Requirements Checklist DB Forum 1	10 50
2	Connolly & Hoar: ch. 3 1 presentation	Assignment 1	75
3	Connolly & Hoar: ch. 4 1 presentation	DB Forum 2	50
4	Connolly & Hoar: ch. 5 1 presentation	Assignment 2 Midterm Exam	75 200
5	Connolly & Hoar: ch. 7 1 presentation	Assignment 3	75
6	Connolly & Hoar: ch. 8 1 presentation	DB Forum 3	50
7	Connolly & Hoar: ch. 6 1 presentation	Assignment 4	75
8	Connolly & Hoar: chs. 9–10 1 presentation	Final Project Final Exam	150 200
		TOTAL	**1010**

DB = Discussion Board

NOTE: Each course module/week (except Module/Week 1) begins on Tuesday morning at 12:00 a.m. (ET) and ends on Monday night at 11:59 p.m. (ET). The final module/week ends at 11:59 p.m. (ET) on **Friday**.