Web Design and Development

Course Code: CSC1221

Course Description

This course provides an overview of basic programming and information principles to design and create web-based user-centered experiences. Students will be exposed to the logical elements of programming languages (e.g., HTML, Java Script, JQuery) as well as how to use web and graphics software editors. In addition to developing functional user-centered web sites, students will gain an understanding of the capabilities of accessible and interactive design by examining the history, infrastructure, and future of the Internet. Credits: 3

Course Requirements

There are no prerequisites for this course.

Course Objectives and Goals

The skills focus will be on areas of advanced study strategies, critical thinking, and writing that students need to prepare for upper-division courses. These skills/goals will include:

1. Define and use fundamental terms and concepts related to web development
2. Edit, modify, or transform existing HTML documents and CSS style sheets to produce specified outputs;
3. Correct syntax errors in HTML documents and CSS style sheets;
4. Write syntactically and stylistically correct HTML documents and CSS style sheets;
5. Explain why best coding practices demand the abstraction of presentational instructions from semantic information;
6. Identify and explain situations when HTML and CSS require supplemental technologies to perform specified tasks;
7. Recognize and identify Server Side Includes, JavaScript, and PHP in existing HTML documents

Required Text and Course Materials

Textbooks are supplied by the Sending School or student unless alternative arrangements have been made.

- Carey, Patrick M. New Perspectives on HTML5, CSS3, and JavaScript , 6th Edition. Cengage. ISBN: 978-1-305-50392-2 - https://www.cengage.com/c/new-perspectives-on-html5-css3-and-javascript-6e-carey/9781305503922/

- NetBeans IDE - Note: All software is open source - https://netbeans.apache.org/download/index.html
    - **Here is a link for downloading Java JDK in case you do not have Java downloaded on your computer (you will need this before downloading NetBeans):** https://www.oracle.com/technetwork/java/javase/downloads/index.html
    - **Videos with installation instructions (covers Java JDK and NetBeans)**:
        - Windows OS - https://www.youtube.com/watch?v=vt7_6HwCFOU
        - Mac OS - https://www.youtube.com/watch?v=n7JvUzBMFVc
- Students should have a notebook/binder for this class, with suggested sections for Class Notes, supplementary Readings, completed Homework assignments, Study Guides, and completed Tests.

Technical Requirements and Skills

There are minimum technical recommendations for participating in online classes at Landmark College:

Technical Requirements

A productivity suite such as Microsoft Office, Microsoft Office 365, Google Workspace (formerly G-Suite), or Open Office is recommended and may be required for some Landmark College Online courses. Students also need the ability to access Landmark College's online course content through a web browser running on a desktop or laptop computer with a webcam. An audio headset is recommended, but not required. All popular browsers are supported, but Landmark College recommends Chrome or Firefox.

Landmark College Online Dual Enrollment courses are optimally experienced through a full-featured web browser running on a desktop or laptop computer running Microsoft Windows or Apple Mac OS. Mobile phones and tablets may not be adequate or appropriate for completing certain aspects of your course work. However, when your laptop or desktop equipment is not available you can still access your courses through a mobile web browser such as Chrome or Safari. This allows you to keep up with your assignments, calendar, to-do list, and Inbox even when traveling. (The mobile app called "Canvas Student" is not compatible with our courses and should be avoided.)

If students access courses from school networks that use content filtering systems, which block access to public sites such as YouTube and Vimeo, students may have issues completing their assignments.

Skills for Success

To succeed in an online class, you should have the ability to:

- Navigate the WWW, including downloading and reading files from web sites;
- Download and install software or plug-ins such as Adobe Reader or Flash;
- Use the Learning Management System (Canvas) and be able to upload videos, files, and other materials as necessary. More about Canvas can be found in the Canvas Overview course located on your dashboard;
- Save files in commonly used word processing formats (.doc, .docx, .rtf);
- Copy and paste text and other items on a computer;
- Save and retrieve documents and files on your computer; and
- Locate information on the internet using search engines.

Course Topics

- Unit 1: Introduction (Week 1)
- Unit 2: Layout (Weeks 2-6)
- Unit 3: Structures That Control Flow (Weeks 5-6)
- Unit 4: Functions (Weeks 7-8)
- Unit 5: Processing Data (Weeks 9-11)
- Unit 6: Miscellaneous Topics (Weeks 12-15)

Grading

Discussions and Online Participation – 30 %

Students respond to discussion prompts and reply to peers' posts. Participation also includes orientation assignments and weekly self-evaluations

Homework Assignments – 30%

There are graded exercises and projects which will be assigned at various points in the semester. Each assignment is designed to give you some practice on the material that you learned in the previous weeks. All assignments are available the relevant week.

Final Project – 20%

There will be a project which you will work on towards the end of the semester. This may be done individually or in a group. All project work will be presented online in a virtual poster fair.

Quizzes – 20%

There will be a series of quizzes which will test your knowledge of various topics.

If you feel that you will need extra time on the exam, make arrangements to start the exam early.

Letter Grades

Letter Grades will be assigned as follows:

A	100-93
A-	92-90
B+	89-87
B	86-83
B-	82-80
C+	79-77
C	76-73
C-	72-70
D+	69-67
D	66-63
D-	62-60
F	59 and below

Homework Policy

In the computer industry, late projects are not accepted without some prior agreement with the client as well as some compensation for not meeting the deadline. In the real world, if you are late and don't communicate this with the client, you could get sued.

Therefore, late projects will not be accepted unless you communicate with me, and get approval, 48 hours in advance of the due date. Please note: this may not be accepted if the reason for the project being late is not valid. If the proposal is accepted, we will determine a reasonable new due date as well as the penalty that will be applied.

Accommodations Policy

"Given the unique mission of Landmark College, many academic accommodations that might be customary or required at traditional institutions would not be appropriate at Landmark, because they would alter the College's academic program."

If you need individual accommodations to meet course objectives, please make an appointment with your professor to discuss your needs within the two weeks of the semester.

To view the full accommodations policy for Landmark College please visit: https://www.landmark.edu/student-life/our-community/request-for-accommodations.

Learning Outcomes

Computer Science Program Goal	Course Learning Outcomes (based on Program Goal)
1. Demonstrate fundamental game production skills including animation, 3-D modeling, game design and programming.	a) Design, implement, test and debug programs that use standard conditional and iterative control structures and functions in one programming language. b) Create appropriate algorithms and data structures for solving a given problem. c) Employ object-oriented design and the concepts of encapsulation, abstraction, inheritance, and polymorphism
2. Design, develop, and manage multimedia (script, graphics, sounds, animation, & video) and interactive game projects.	a) Design, prototype, and evaluate an engaging interactive system for entertainment or education b) Create programs that support a graphical user interface c) Identify the range of possibilities for games engines, including their potential and their limitations.
3. Apply Human-computer interaction theory to product development.	a) Evaluate game elements based on the genre of the game b) Criticize product development based on user-centered theory
4. Incorporates gaming industry business practices in project development.	a) Communicate the narratives necessary for compelling game design. b) Describe the societal aspects of gaming.