Web Design I (IMED 1316)

Credit: 3 semester credit hours (2 hours lecture, 2 hours lab)

Course Description
Instruction in web design and related graphic design including mark-up languages, and browsers issues.

Required Textbook and Materials
1. *HTML 5 and CSS3 Complete* by Sasha Vodnik, 2nd. Cengage Learning Publishers.
   a. ISBN number is 13: 978 1 305 39404 9

Course Objectives
 Upon completion of this course, the student will be able to:
1. Identify how the Internet functions
2. Apply design techniques in the creation and optimization of graphics and other elements
3. Demonstrate the use of World Wide Web Consortium (W3C) formatting and layout standards
4. Design and build a web site.

Course Outline

A. Getting started with HTML. Introduction of faculty and students
   1. Create Wireframes and a Storyboard.
   2. Create an HTML Document.
   3. Set Up the Document Head and Body.
   4. Add Text and Comment to a Web Page.
   5. Preview Your Web Page on a Desktop Computer and Mobile Devices.
   6. Configure Web Server Software.
B. Structuring content in a web document.
   1. Evaluate Web Accessibility Standards.
   2. Incorporate Attributes.
   3. Implement the div Element.
   4. Add HTML5 Semantic Elements.
   5. Use Special Characters.
   6. Specify the Viewpoint.
   7. Debug Your HTML Code.
   8. Validate Your HTML Code.
   9. Create an XHTML Document.
C. Getting started with CSS.
   1. Assess Style Rules.
   2. Create an Embedded Style Sheet.
   3. Implement an ID Selector.
   4. Implement a Class Selector.
   5. Use Multiple Selectors.
   6. Create an External Style Sheet.
   7. Link to an External Style Sheet.
   8. Add a Comment to a Style Sheet.
   9. Debug and Validate CSS Code. .
D. Laying out elements with CSS
   1. Assess the CSS Box Model.
   2. Set Element Width and Borders.
   3. Set Margins and Padding.
   4. Align Elements with float.
   5. Control Page Flow with clear.
   6. Implement Fixed Positioning.
   7. Implement Relative Positioning.
   8. Control Stacking Order.
   9. Implement Absolute Positioning
E. Formatting text with CSS.
   1. Assess Web Fonts.
   2. Declare a Font Family.
   3. Use a Custom Font.
   4. Declare Font Size and Line Height.
   5. Implement Bold and Italics.
   6. Style Pseudo-Elements.
   7. Specify Hex and RGB Colors.
   8. Add Shadows.
   9. Create a Media Query.
F. Inserting and working with links.
   1. Understand Links.
   2. Create Relative Links.

3. Create Absolute Links.
4. Change CSS Display Type.
5. Style Links with Pseudo-Classes.
6. Style Multiple Link States.
7. Open Links in New Tabs.
8. Create a Link within a Document.
9. Add Navigational Accessibility.

G. Inserting and working with images.
1. Evaluate Image File Types.
2. Insert Images.
3. Insert a Background Image.
4. Mark Images as Figures.
5. Create a Figure Caption.
6. Use Images as Links. Create an Image Map.
7. Define Additional Hotspots.
8. Insert a Favicon and Touch Icons.

H. Organizing content with lists and tables.
1. Create an Ordered List.
2. Create an Unordered List.
3. Create a Description List.
4. Create a Nav Bar Bar Using a List.
5. Insert a Table. Debug Tables.
6. Span Columns and Rows. Format a Table with CSS.
7. Apply a Table-Like Structure to Other Elements.

I. Implementing responsive design.
1. Assess Responsive Design.
2. Construct a Multipart Media Query.
3. Test Layouts with an Emulator.
4. Add a Column with a Media Query.
5. Create a Widescreen Layout.
6. Create a Responsive Navigation.
7. Implement Adaptive Content.
8. Use Progressive Enhancement.

J. Creating and processing web forms.
1. Design a Form.
2. Create a Form.
3. Create Text Fields.
4. Customize Text Fields.
5. Create Check Boxes.
6. Create Option Buttons.
7. Create a Drop-Down Menu.
8. Enable Form Submission.

K. Creating visual effects and animation.
1. Add Generated Content.
2. Add Visual Form Feedback.
3. Create a Gradient.
4. Create a CSS Shape.

5. Apply Styles Based on Feature Detection.
6. Apply a Transform.
7. Create a Transition.
8. Animate Content.

L. Incorporating video and audio.
1. Assess Web Video and Audio.
2. Use the Video Element.
3. Control Playback.
4. Incorporate the Source Element.
5. Add Video Support for Older Browsers.
6. Provide Poster and Fallback Images.
7. Make Videos Accessible.
8. Implement the audio Element.

M. Programming web pages with JavaScript.
1. Explore the Document Object Model.
2. Access Elements and Properties Using JavaScript.
3. Create Statements.
4. Store and Access Data in Variables.
5. Create a Function.
6. Add an Event Listener.
7. Change CSS with JavaScript.
8. Create an if Statement.

N. Integrating social media
1. Evaluate Social Media.
2. Add a Facebook Like Button.
3. Add a Twitter Tweet Button.
4. Embed a Tweet.
5. Embed a YouTube Video.
6. Embed an Instagram Image.
7. Integrate a Twitter Account Feed.
8. Add a Twitter Hash Tag Feed

O. Optimizing your website for search engines.
1. Understand Search Engine Optimization (SEO).
2. Write Indexable Content.
3. Add a Description with the Meta Element.
4. Incorporate Microdata.
5. Create a Sitemap File.
6. Create a robots.txt File.
7. Preview and Finalize Your Site.
8. Submit Your Site.

P. Testing and improving performance.
1. Assess Performance.
2. Plan Usability Tests.
3. Perform Browser Test.
4. Test Pager Loading Speed.

5. Incorporate a Spritesheet.
6. Optimize Images.
7. Reduce the Size of CSS Files.
8. Customize modernizr.js

Grade Scale

90 – 100	A
80 – 89	B
70 – 79	C
60 – 69	D
0 – 59	F

Course Evaluation
Final grades will be calculated according to the following criteria:

1. Assignments	40%
2. Discussions	10%
3. Quiz	20%
4. Finals	30%

Course Policies
1. You must log onto Blackboard and access this course a minimum of three times per week.
2. Cheating of any kind will <u>not</u> be tolerated.
3. If you wish to drop a course, the student is responsible for initiating and completing the drop process. If you stop coming to class and fail to drop the course, you will earn an 'F' in the course.
4. Internet Usage – Students are expected to use proper net etiquette while participating in course emails, assignment submissions, and online discussions.

Technical Requirements
The latest technical requirements, including hardware, compatible browsers, operating systems, software, Java, etc. can be found online at:
https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support/Browser_Checker
A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of the online technology and resources.

Disabilities Statement
The Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. LIT provides reasonable accommodations as defined in the Rehabilitation Act of 1973, Section 504 and the Americans with Disabilities Act of 1990, to students with a diagnosed disability. The Special Populations Office is located in the Eagles' Nest Room 129 and helps foster a supportive and inclusive educational environment by maintaining partnerships with faculty and staff, as well as promoting awareness among all members of the Lamar Institute of Technology community. If you believe you have a disability requiring an accommodation, please contact the

Special Populations Coordinator at (409)839-2018. You may also visit the online resource at Special Populations - Lamar Institute of Technology (lit.edu).

Student Code of Conduct Statement

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at www.lit.edu or obtained in print upon request at the Student Services Office.

Starfish

LIT utilizes an early alert system called Starfish. Throughout the semester, you may receive emails from Starfish regarding your course grades, attendance, or academic performance. Faculty members record student attendance, raise flags and kudos to express concern or give praise, and you can make an appointment with faculty and staff all through the Starfish home page. You can also login to Blackboard or MyLIT and click on the Starfish link to view academic alerts and detailed information. It is the responsibility of the student to pay attention to these emails and information in Starfish and consider taking the recommended actions. Starfish is used to help you be a successful student at LIT.

Certification Requirement

CIS majors are required to earn certification in one of the following areas prior to graduation.

- CompTIA ITF+ Certification
- CompTIA Security+ Certification
- CompTIA Linux+ Certification
- Oracle Java Foundations Certification
- Certified Associate in Python Programming