CENTRAL TEXAS COLLEGE
IMED 1316
WEB DESIGN I

Semester Hours Credit:  3

INSTRUCTOR: ________________________________

OFFICE HOURS: ________________________________

I. INTRODUCTION

A. This course is designed to provide the student of Computer Science with knowledge in web design and related graphic design issues including mark-up languages, web sites, and browsers. Instruction in web page design specifications includes HTML5, CSS3, and validation as well as the use of browsers and the creation of well-designed, and technically correct websites.

B. This course serves as a required or elective course on various degree plans. Curriculum plans for degrees and certificates, are listed in the current Central Texas College Catalog.

C. The delivery method of this course may be traditional lecture/lab, blended lecture/lab, or online.

D. Prerequisite: ITNW 1337 Introduction to the Internet

II. LEARNING OUTCOMES

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

A. Identify how the Internet functions with specific attention to the World Wide Web, email, and file transfer by designing application architecture and implementing program flow. (C5, C7, C15, C18, C20, F1, F11)

B. Apply design techniques in the creation and optimization of graphics and other embedded elements for implementing and manipulating document structures and objects in a web page. (C3, C5, C7, C8, C9, C15, C18, F1, F9, F10, F13)

C. Demonstrate the use of the World Wide Web Consortium (W3C) formatting and layout standards through the use of Validation. (C3, C5, C7, C8, C9, C15, C18, F1, F9, F10, F13)

D. Create, design, test, maintain, and troubleshoot a web site using JavaScript and CSS3 in applications for the purpose of user experience through the processes of the Software Development Lifecycle (SDLC). (C5, C7, C8, C9, C15, C16, C18, F1, F9, F10, F13)
E. Implement program flow through the use of lists, tables, frames, and forms to create interactive web pages. (C1, C5, C6, C8, C19, C20, F1, F3, F8, F9, F13)
F. Identify the benefits and data security limitations in designing & implementing web security. (C1, C5, C7, C8, C9, C16, C18, F1, F9, F10, F13)

III. INSTRUCTIONAL MATERIALS

A. The instructional materials identified for this course are viewable through www.ctcd.edu/books
B. Lecture Classes also require at least one USB storage device. Online students may use cloud based storage.

IV. COURSE REQUIREMENTS

A. Attend both lecture and lab or in the case of online delivery, be actively engaged in Blackboard and maintain constant progress.
B. Be prepared to participate in discussion, team projects/assignments and take unannounced assessments relating to the lecture materials.
C. Complete all exams/assessments.
D. Submit all assignments on time.

V. ASSESSMENTS

A. Student content mastery will be evaluated in the following areas:
   • Assessments (midterm exam, quizzes, projects, etc.)
   • Final Assessment (final exam and/or semester project, participation)
B. Scheduled and unscheduled assessments will be given at the discretion of the instructor.
C. Exams/assessments may be composed of both subjective and objective questions plus computer output.
D. A student must take all exams/assessments. No make-up exams/assessments will be given. Both online and on campus students who know in advance that they will be absent due to school sponsored trips, military duty or orders, or any other valid reason, must arrange to take an early exam/assessment. Unexpected absences due to illness or other extenuating circumstances will require the
student to see the instructor about make-up work in lieu of the missed exam/assessment.

E. Students with unexcused absences will be given a zero for each missed assignment.

VI. SEMESTER GRADE COMPUTATIONS

<table>
<thead>
<tr>
<th>Course Requirements</th>
<th>Points</th>
<th>Points</th>
<th>Grade</th>
<th>Quality Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignments</td>
<td>300</td>
<td>900-1000</td>
<td>A-Superior</td>
<td>4</td>
</tr>
<tr>
<td>Assessments</td>
<td>300</td>
<td>800-899</td>
<td>B-Above Average</td>
<td>3</td>
</tr>
<tr>
<td>Final Assessment</td>
<td>400</td>
<td>700-799</td>
<td>C-Average</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>600-699</td>
<td>D-Passing but Unsatisfactory</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1000</td>
<td>0-599</td>
<td>F-Failure</td>
<td>0</td>
</tr>
</tbody>
</table>

VII. NOTES AND ADDITIONAL INSTRUCTIONS FROM THE INSTRUCTOR

A. Course Withdrawal: It is the student’s responsibility to officially withdraw from a course if circumstances prevent attendance. Any student who desires to, or must, officially withdraw from a course after the first scheduled class meeting must file a Central Texas College Application for Withdrawal (CTC Form 59). The student must sign the withdrawal form.

CTC Form 59 will be accepted at any time prior to Friday of the 12th week of classes during the 16-week fall and spring semesters. The deadline for sessions of other lengths is:

- 10-week session: Friday of the 8th week
- 8-week session: Friday of the 6th week
- 5-week session: Friday of the 4th week

The equivalent date (75% of the semester) will be used for sessions of other lengths. The specific last day to withdraw is published each semester in the Schedule Bulletin.

For non-GoArmyEd active military students, the effective date of withdrawal is the filing date with the Education Center. For all other students, the effective date of withdrawal is the date that the withdrawal application is received by the Central Texas College representative.

Students who used financial aid, military tuition assistance, VA benefits, or other non-personal funds may be required to repay tuition and fees to the funding agency. For specific repayment requirements, contact the Office of Student Financial Aid or Veterans Services Office before withdrawing. Military tuition
assistance students should visit their military Education Center or Navy College Office.

A student who officially withdraws will be awarded the grade of “W” provided the student’s attendance and academic performance are satisfactory at the time of official withdrawal. Students must file a withdrawal application with the College before they may be considered for withdrawal.

A student may not withdraw from a class for which the instructor has previously issued a grade of “F,” “FI,” “FN,” “IP,” or “XN.”

B. Instructor Initiated Withdrawals: Faculty are authorized to withdraw students who are not making satisfactory course progress to include failure to meet College attendance requirements as outlined in the section of the Catalog entitled “Satisfactory Progress Standards.” The instructor will assign the appropriate grade on CTC Form 59 for submission to the registrar.

Students enrolled in distance learning courses are expected to maintain constant progress throughout the course. Failure to do so may result in the student being administratively withdrawn by the instructor.

Students who have not attended class by the 12th class day of a 16-week course or the 6th class day of an 8-week term may be administratively withdrawn by the instructor with a grade of "W." Students may be administratively withdrawn from any class when their absences reach a total equal to 12.5% of the class hours for the course; and in the opinion of the instructor, the student cannot satisfactorily complete the course. An example: Students attending a 48-hour class during an 8-week period normally meet 180 minutes each session for 16 sessions. Those students accumulating two (2) unexcused absences are subject to Administrative Withdrawal since the total unexcused absences equal 12.5% of class hours for the course. Those students attending a 48 hour class during a 16-week period normally meet 90 minutes each session for 32 sessions. Those students accumulating four (4) unexcused absences are subject to Administrative Withdrawal since the total unexcused absences equals 12.5% of class hours for the course. In a distance learning course the last date of attendance is the last activity by the student in the course.

C. Administrative Withdrawal: A student may be administratively withdrawn by a designated member of the administrative staff of the College when the student has been placed on Academic Suspension or Disciplinary Suspension; the student has an outstanding financial obligation owed to the college; or the student registered for a course without the required prerequisite or departmental permission.

The College is under no obligation to refund tuition and fees, or other costs associated with an administrative or instructor initiated withdrawal.
D. **Incomplete Grade:** The College catalog states, “An incomplete grade may be given in those cases where the student has completed the majority of the coursework but, because of personal illness, death in the immediate family, or military orders, the student is unable to complete the requirements for a course...” Prior approval from the instructor is required before the grade of “IP” for Incomplete is recorded.

E. **Cell Phones and Pagers:** Students will silence cell phones and mobile devices while in the classroom or lab.

F. **Americans with Disabilities Act (ADA):** Disability Support Services provide services to students who have appropriate documentation of a disability. Students requiring accommodations for class are responsible for contacting the Office of Disability Support Services (DSS) located on the central campus. This service is available to all students, regardless of location. Review the website at [www.ctcd.edu/disability-support](http://www.ctcd.edu/disability-support) for further information. Reasonable accommodations will be given in accordance with the federal and state laws through the DSS office.

G. **Instructor Discretion:** The instructor reserves the right of final decision in course requirements and may make changes to the course outline and/or assignments as needed.

H. **Civility:** Individuals are expected to be aware of what a constructive educational experience is and be respectful of those participating in a learning environment. Failure to do so can result in disciplinary action up to and including expulsion.

I. **Degree Progression:** Students who receive a grade of “D” are advised not to enroll in the next course for which this course was a prerequisite.

J. **Failing Grade:** The grade of “F” or “FN” will be given for academic failure, non-attendance or scholastic dishonesty.

K. **Scholastic Honesty:** All students are expected to maintain the highest standards of scholastic honesty in the preparation of all course work and during examinations. The college policy on scholastic honesty, including definitions on plagiarism, collusion, and cheating can be found at the following URL: [http://online.ctcd.edu/plagiarism.cfm](http://online.ctcd.edu/plagiarism.cfm)
VIII. COURSE OUTLINE

A. Lesson One: Introduction to Web Page Development

1. Learning Outcomes: Upon successful completion of this lesson the student will be able to:
   a. Examine the evolution of the World Wide Web
   b. Create the document structure through HTML5 coding
   c. Demonstrate the ability to select and apply industry standard software in design.
   d. Design and demonstrate use of software and techniques in Digital Communication’s practical applications.
   e. Start a portfolio of work that demonstrates proficiency in skills for employment.

2. Learning Activities:
   a. Research and discuss the topics of the Lesson in class and in an online collaborative discussion forum (C7, C8, C9, C15, C18, F1, F9, F10, F13)
   b. Perform skills and functions in the section (C1, C5, C7, C8, C9, C16, C18, F1, F9, F10, F13)

3. Unit Outline:
   a. Introduction
   b. The Internet
   c. The World Wide Web
   d. Hypertext Markup Language
   e. Tools for Creating HTML Documents
   f. Web Development Life Cycle

B. Lesson Two: Building the User Interface and Validating input

1. Learning Outcomes: Upon successful completion of this lesson the student will be able to:
   a. Identify basic HTML5 elements of a Web page including the implementation and manipulation of document structures and objects
   b. Configure tags to display content as part of the application architecture to implement program flow.
   c. Add links to web pages
   d. Publish Web pages
   e. Present a portfolio of work that demonstrates proficiency in skills for employment.

2. Learning Activities:
   a. Research and discuss the topics of the Lesson in class and in an online collaborative discussion forum (C7, C8, C9, C15, C18, F1, F9, F10, F13)
b. Perform skills and functions in the section (C1, C5, C7, C8, C9, C16, C18, F1, F9, F10, F13)

3. Unit Outline:
   a. Introduction
   b. HTML5 Elements of a web page including table and list elements
   c. Web Page Structure to display text and graphics
   d. Web Page Content to play media
   e. Viewing a web page
   f. Improve the Appearance of a web page

C. Lesson Three: HTML5 Extra Markup and Flash Video and Audio

1. Learning Outcomes: Upon successful completion of this lesson the student will be able to:
   a. Understand HTML5 Style
   b. Work with internal and external Video and Audio Files
   c. Validate and View HTML Code

2. Learning Activities:
   a. Research and discuss the topics of the Lesson in class and in an online collaborative discussion forum (C7, C8, C9, C15, C18, F1, F9, F10, F13)
   b. Perform skills and functions in the section (C1, C5, C7, C8, C9, C16, C18, F1, F9, F10, F13)

3. Unit Outline: Follow the sequence of the unit objectives
   a. Introduction
   b. Project Web Site using HTML5 and add video & audio files
   c. Use Links on a Web Page
   d. Create a Web Page
   e. Edit video and audio files within a Web Page

D. Lesson Four: Cascading Style Sheets

1. Learning Outcomes: Upon successful completion of this lesson the student will be able to:
   a. Understand basic Cascading Style Sheets (CSS3) syntax
   b. Work with internal and external style sheets
   c. Set color and background properties
   d. Set text properties
   e. Set font properties
   f. Validate style sheets
   g. Validate and View HTML Code
2. **Learning Activities:**
   a. Research and discuss the topics of the Lesson in class and in an online collaborative discussion forum (C7, C8, C9, C15, C18, F1, F9, F10, F13)
   b. Perform skills and functions in the section (C1, C5, C7, C8, C9, C16, C18, F1, F9, F10, F13)

3. **Unit Outline:** Follow the sequence of the unit objectives
   a. Introduction
   b. Project Web Site using CSS3
   c. Use Links on a Web Page
   d. Create a Home Page
   e. Edit a Second Web Page

**E. Lesson Five: Using CSS3 to Create Web Page Layout**

1. **Learning Outcomes:** Upon successful completion of this lesson the student will be able to:
   a. Manage content flow in Web pages
   b. Work with text-formatting elements
   c. Phrasing elements
   d. Block-level text elements including multi-level columns
   e. Work with quotations
   f. Add special characters to web pages
   g. Create image maps

2. **Learning Activities:**
   a. Research and discuss the topics of the Lesson in class and in an online collaborative discussion forum (C7, C8, C9, C15, C18, F1, F9, F10, F13)
   b. Perform skills and functions in the section (C1, C5, C7, C8, C9, C16, C18, F1, F9, F10, F13)

3. **Unit Outline:**
   a. Introduction
   b. Project Web site
   c. Create Web Pages with multi-level columns
   d. Code text flow
   e. Create a Home Page with a Borderless Table
   f. Create a Second Web Page with text wrapping around images

**F. Lesson Six: Using CSS3 to Manage the Graphical Interface with HTML5**

1. **Learning Outcomes:** Upon successful completion of this lesson the student will be able to:
   a. Create various graphics effects in images
b. Apply 2D and 3D transformations
c. Translate and scale 2D shapes
d. Rotate and skew 2D and 3D shapes
e. Create animation using CSS
f. Use Web Open Font Format (WOFF) for typography on Web Page

2. **Learning Activities:**
   a. Research and discuss the topics of the Lesson in class and in an online collaborative discussion forum (C7, C8, C9, C15, C18, F1, F9, F10, F13)
   b. Perform skills and functions in the section (C1, C5, C7, C8, C9, C16, C18, F1, F9, F10, F13)

3. **Unit Outline:**
   a. Introduction
   b. Project – Web Page with animation
   c. Research Web Page Forms
   d. Validate, View, Test, and Print the Web Page and HTML Code

G. **Lesson Seven:** Creating Interactive Page Navigation

1. **Learning Outcomes:** Upon successful completion of this lesson the student will be able to:
   a. Create a client-side image map
   b. Structure webpage navigation using an image map
   c. Use JavaScript for user interaction

2. **Learning Activities:**
   a. Research and discuss the topics of the Lesson in class and in an online collaborative discussion forum (C7, C8, C9, C15, C18, F1, F9, F10, F13)
   b. Perform skills and functions in the section (C1, C5, C7, C8, C9, C16, C18, F1, F9, F10, F13)

3. **Unit Outline:**
   a. Introduction
   b. Project – Client-side ImageMap
   c. Create an Image Map
   d. Use Paint to Locate x- and Y- Coordinates
   e. Create a Page using ImageMap navigation
   f. Include JavaScript controls in Web Page

H. **Lesson Eight:** JavaScript Essentials for Incorporating Multimedia and Interaction in Web Content
1. **Learning Outcomes:** Upon successful completion of this lesson the student will be able to:
   a. Use the basics JavaScript to create interactive Web Page
   b. Incorporate JQuery into web page development
   c. Add JavaScript elements to a web page
   d. Relate the use of JavaScript coding for the Touch Interface
   e. Add basic JavaScript code to web pages designed for touch interface
   f. Use JavaScript to create a geolocation for a mobile device
   g. Use JavaScript to create a WebSocket

2. **Learning Activities:**
   a. Research and discuss the topics of the Lesson in class and in an online collaborative discussion forum (C7, C8, C9, C15, C18, F1, F9, F10, F13)
   b. Perform skills and functions in the section (C1, C5, C7, C8, C9, C16, C18, F1, F9, F10, F13)

3. **Unit Outline:**
   a. Introduction
   b. Project
   c. Create JavaScript program to provide personalization to Web Page use
   d. Use JavaScript to code an in-browser calculator to Web Page
   e. Create a JavaScript program to validate user text input
   f. Create a JavaScript program to permit user-defined display elements
   g. Using JavaScript for Animations
   h. Using JavaScript for data access
   i. Using JavaScript for validation of form input
   j. JavaScript code for gestures used on touch interface