Cerro Coso College

Course Outline of Record Report

10/14/2021

DMAC119 : Advanced Web Development

General Information

Author:	• Suzanne Ama • Stallings, Michelle • Taton, Vickie
Course Code (CB01) :	DMAC119
Course Title (CB02) :	Advanced Web Development
Department:	Business Information Technolog
Proposal Start:	Spring 2022
TOP Code (CB03) :	(0614.30) Website Design and Development
SAM Code (CB09) :	Clearly Occupational
Distance Education Approved:	Yes
Course Control Number (CB00) :	CCC000534528
Curriculum Committee Approval Date:	11/18/2016
Board of Trustees Approval Date:	03/09/2017
External Review Approval Date:	01/18/2013
Course Description:	This course provides students with the skills to develop content for mobile devices using Hypertext Markup Language 5 (HTML5). Particular emphasis is given to designing for small screens, including interface design, usability, and aesthetic style.
Submission Type:	New Course Materials Mandatory Revision Update for Program Review. This course was assessed in Fall 2020, and there are no impacts for this course revision.
Author:	No value

Faculty Minimum Qualifications

Master Discipline Preferred:	• Computer Science
Alternate Master Discipline Preferred:	No value
Bachelors or Associates Discipline Preferred:	• Computer Information Systems (Computer network installation, microcomputer technology, computer applications) • Multimedia
Additional Bachelors or Associates Discipline Preferred:	No value

Course Development Options

Basic Skills Status (CB08)	Course Special Class Status (CB13)	Grade Options

Course is not a basic skills course.

Course is not a special class.

- Letter Grade Methods
- Pass/No Pass

☐ Allow Students to Gain Credit by Exam/Challenge

Allowed Number of Retakes

0

Course Prior To College Level (CB21)

Not applicable.

Rationale For Credit By Exam/Challenge

No value

Retake Policy Description

Non-Repeatable Credit

☑ Allow Students To Audit Course

Course Support Course Status (CB26)

Course is not a support course

Associated Programs

☑ Course is part of a program (CB24)

Associated Program	Award Type	Active
CC Web Professional	Certificate of Achievement	Summer 2018
CC Web Professional	A.S. Degree Major	Summer 2018
Web Professional Associate of Science (In Development)	A.S. Degree Major	Fall 2022
Web Professional Certificate of Achievement (In Development)	Certificate of Achievement	Fall 2022

Transferability & Gen. Ed. Options

Course General Education Status (CB25)

Y

Transferability

Transferable to CSU only

Transferability Status

Approved

Units and Hours

Summary

Minimum Credit Units (CB07) 3

Maximum Credit Units (CB06) 3

Total Course In-Class (Contact) Hours	90
Total Course Out-of-Class Hours	72
Total Student Learning Hours	162
Faculty Load	0

Credit / Non-Credit Options

Course Credit Status (CB04)

Credit - Degree Applicable

Course Non Credit Category (CB22)

Credit Course.

Non-Credit Characteristic

No Value

Course Classification Status (CB11)

Credit Course.

Funding Agency Category (CB23)

Not Applicable.

☐ Cooperative Work Experience Education Status (CB10)

☐ Variable Credit Course

Weekly Student Hours

	In Class	Out of Classs
Lecture Hours	2	4
Laboratory Hours	3	0
Activity Hours	0	0

Course Student Hours

Course Duration (Weeks)	18
Hours per unit divisor	54
Course In-Class (Contact) Hours	
Lecture	36
Laboratory	54
Activity	0
Total	90
Course Out-of-Class Hours	
Lecture	72
Laboratory	0
Activity	0
Total	72

Time Commitment Notes for Students

No value

Faculty Load

Extra Duties: 0

Faculty Load: 0

Units and Hours - Weekly Specialty Hours

Activity Name	Type	In Class	Out of Class

No Value	No Value	No Value	No Value

Pre-requisites, Co-requisites, Anti-requisites and Advisories

Advisory

DMAC211 - Web Scripting with JavaScript (in-development)

Advanced web development, and mobile development, in particular, requires comprehension of the Document Object Model (DOM). DOM will be taught at the beginning of DMA C119. However, DMA C211 Web Scripting with Javascript also includes this concept, and students would benefit from having that previous exposure to the concept.

AND

Advisory

DMAC111 - Fundamentals of Web Development (in-development)

Development for mobile devides requires a strong appreciation for the need to sparate content (markup) from presentation (stylesheets). Additional HTML and CSS skills are required through the intermediate level to prepare students for advanced markup and the use of HTML5.

Entrance Skills

Entrance Skills	Description
No value	No value

Limitations on Enrollment

Limitations on Enrollment	Description
No value	No value

Specifications

Methods of Instruction

Methods of Instruction	Audiovisual
Rationale	Example: Students watch assigned LinkedIn Learning video on responsive design.
Methods of Instruction	Outside reading
Rationale	Example: Students read assigned textbook chapter on optimizing web layout for devices.

Methods of Instruction	Lecture
Rationale	Example: Students read instructor lecture on drawing with HTML5.

Methods of Instruction	Peer analysis, critique & feedback
Rationale	Example: Students provide feedback on peers' incremental enhancements to a responsive web site.

Assignments

A. Textbook and web readings
Example: Read assigned chapters from the HTML5 Missing Manual.
B. Web site assignments
Example: Students create an HTML5 form that validates.

Methods of Evaluation	Rationale
Homework	A. Web site assignments Example: Students create an HTML5 form that validates.
Tests	B. Quizzes Example: Students complete a quiz relating to the current week’s content.
Participation	C. Discussion assignments Example: Students critique their peers' work according to a rubric.
Distance Education Description: how outcomes are evaluated	Students complete assignments and projects in open source software, and they submit assignments and projects as attachments in Canvas discussion forums where the instructor and peers provide feedback. The assignments are one week in duration, and the projects are two weeks in duration. Instructor formative feedback is provided in the discussions to allow for refinement of the final artifact. A component of evaluation is weekly participation in the discussions. Rubrics are provided for all assignments and projects. A separate rubric is also created for SLO assessment. The activities of grading and assessing are distinct. The evaluation criteria and rigor is identical, regardless of delivery mode.

Equipment

No Value

Textbooks

Author	Title	Publisher	Date	ISBN
Frain, B.	Responsive Web Design with HTML5 and CSS	Packt Publishing	2020	978-1839211560

Other Instructional Materials

No Value

Materials Fee

No

Learning Outcomes and Objectives

Course Objectives

No value

CSLOs

Use valid, semantic Hypertext Markup Language (HTML) to enhance interaction between content, users, and search engines

Expected SLO Performance: 0.75

Business Information Technolog Web Professional Certificate of Achievement	3. Use valid markup, cascading style sheets, semantic encoding, accessibility compliance, and error-free scripting in the creation of Web content. Assessment:This will be assessed and scored with an exam.

Apply advanced Cascading Style Sheets (CSS) techniques including web fonts, gradients, transitions, transforms, and responsive design for multiple devices.

Expected SLO Performance: 0.75

Business Information Technolog Web Professional Certificate of Achievement	3. Use valid markup, cascading style sheets, semantic encoding, accessibility compliance, and error-free scripting in the creation of Web content. Assessment:This will be assessed and scored with an exam.

Use HTML5 application program interfaces (APIs) including canvas, multimedia, geolocation, and others relating to web applications.

Expected SLO Performance: 0.75

Business Information Technolog Web Professional Certificate of Achievement	3. Use valid markup, cascading style sheets, semantic encoding, accessibility compliance, and error-free scripting in the creation of Web content. Assessment:This will be assessed and scored with an exam.

Use the console to reveal and manipulate the Document Object Model of a given document.

Expected SLO Performance: 0.75

Business Information Technolog Web Professional Certificate of Achievement	2. Demonstrate technical and creative mastery of the creation of Web media, such as graphics, motion graphics, and interactive media. Assessment:This will be assessed with a project, scored by a rubric

Demonstrate proficiency in using GitHub as a collaborative tool for version control.

Expected SLO Performance: 0.75

Business Information Technolog Web Professional Certificate of Achievement	2. Demonstrate technical and creative mastery of the creation of Web media, such as graphics, motion graphics, and interactive media. Assessment:This will be assessed with a project, scored by a rubric

Outline

Course Outline

I. HTML
A. Validation
1. Hypertext Markup Language (HTML) Specification History

a. HTML 4.1
b. XHTML 1.0
c. Demise of XHTML 2.0
2. HTML5 specification and Validation Concepts
a. How to Validate
b. Validation vs. Linting
c. Coding Best-Practices
B. Content Model
1. Kinds of Content
a. Metadata Content
b. Flow Content
c. Sectioning Content
d. Heading Content
e. Phrasing Content
f. Embedded Content
g. Interactive Content
2. New Elements
a. nav
b. section
c. article
d. aside
e. footer
f. figure
g. figcaption
h. cite
i. address
j. small
k. mark
3. Semantic Markup and Specifications
a. ARIA
b. Microformats
c. Microdata
d. RDFa
C. Forms
a. Form Elements and Attributes
a. Datalist
b. Progress Bars and Meters
c. Command
d. Menu
e. ContentEditable
f. DesignMode
g. New Input Types
i. Email Addresses
ii. URLs
iii. Search Boxes
iv. Telephone Numbers
v. Sliders
vi. Dates and Times
vii. Colors
b. Form Validation
II. Advanced Cascading Style Sheets (CSS)
A. CSS3
1. Browser Support
2. Rounded Corners
3. Drop Shadows
4. Transparency
5. Gradients
6. Transitions
7. Transformations
8. Web Fonts
B. Responsive Design
1. Principles
2. Techniques
3. Boilerplate
4. Modernizr
5. Media Queries
III. HTML5 APIs

A. Canvas
1. Drawing
a. Straight Lines
b. Curved Lines
c. Paths and Shapes
d. Transforms
e. Transparency
2. Painting; Patterns; and Gradients
a. Shadows
b. Gradients
3. Resizing and Saving
4. Animation
B. Audio and Video
1. Audio
2. Video
3. Source
C. Geolocation
1. Concepts
2. Coordinates
3. Maps
D. Web Workers
IV. Document Object Model
A. What is the DOM?
B. The document tree
C. Choosing and isolating elements
D. Traversing up and down DOM nodes
E. Changing HTML attributes
F. Modifying elements as text
G. Creating and appending nodes
H. Cloning and removing nodes
V. Git and Version Control
A. Define Version Control
B. GitHub
1. Installation
2. Configuration
3. Git Commands
a. Repository checkout
b. Add
c. Commit
d. Push
e. Pull
f. Branch
g. Fork
h. Update
i. Merge
4. Collaboration and Networking

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Lab Outline

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Delivery Methods

Delivery Method: Please list all that apply -Face to face -Online (purely online no face-to-face contact) -Online with some required face-to-face meetings (“Hybrid”) -Online course with on ground testing -iTV – Interactive video = Face to face course with significant required activities in a distance modality -Other

- Face to face
- Online (purely online no face-to-face contact)
- Online with some required face-to-face meetings (“Hybrid”)
- iTV – Interactive video = Face to face course with significant required activities in a distance modality

Rigor Statement: Assignments and evaluations should be of the same rigor as those used in the on-ground course. If they are not the same as those noted in the COR on the Methods of Evaluation and out-of-class assignments pages, indicate what the differences are and why they are being used. For instance, if labs, field trips, or site visits are required in the face to face section of this course, how will these requirements be met with the same rigor in the Distance Education section? Describe the ways in which instructor-student contact and student-student contact will be facilitated in the distance ed environments.

All assignments in distance education course sections of DMA C119 are of the same rigor as those in the on-ground section, except that students in purely online sections will submit all of their assignments virtually. Instructor evaluation of student work in distance education course sections is the same as in the on-ground course section, except that evaluation of student work in the online version is presented virtually. Instead of onsite lectures, hybrid and online courses use a variety of methods including, but not limited to videos, and written lecture notes. Students will interact with the instructor and other students via discussion forums or similar methods.

Good practice requires both asynchronous and synchronous contact for effective contact. List the methods expected of all instructors teaching the course. -Learning Management System -Discussion Forums -Message -Other Contact -Chat/Instant Messaging -E-mail -Face-to-face meeting(s) -Newsgroup/Discussion Board -Proctored Exam -Telephone -iTV - Interactive Video -Other

- Discussion Forums
- Message
- Chat/Instant Messaging
- E-mail

Software and Equipment: What additional software or hardware, if any, is required for this course purely because of its delivery mode? How is technical support to be provided?

Only open source software is required, which is specified in the syllabus and course. Technical support will be provided by the instructor.

Accessibility: Section 508 of the Rehabilitation Act requires access to the Federal government's electronic and information technology. The law covers all types of electronic and information technology in the Federal sector and is not limited to assistive technologies used by people with disabilities. It applies to all Federal agencies when they develop, procure, maintain, or use such technology. Federal agencies must ensure that this technology is accessible to employees and the public to the extent it does not pose an "undue burden". I am using -iTV—Interactive Video only -Learning management system -Publisher course with learning management system interface.

- Learning management system

Class Size: Good practice is that section size should be no greater in distance ed modes than in regular face-to-face versions of the course. Will the recommended section size be lower than in on-ground sections? If so, explain why.

Class size will not be lower than on-ground sections.

Emergency Distance Education Options The course will operate in remote delivery mode when all or part of the college service area is under an officially declared city, county, state, or federal state of emergency, including (check all that apply) - Online including all labs/activity hours - Hybrid with online lecture and onsite lab/activity hours - Correspondence education in high school and prison facilities - None. This course will be cancelled or paused if it cannot be held fully onsite.

- Online including all labs/activity hours