

Advanced Web Animation

Course Outcome Summary

Course Information

Organization	Madison Area Technical College
Developers	Teresa Sprecher
Development Date	4/21/2003
Revised Date	6/24/2003
Course Number	10-206-190
Instructional Level	Advanced Technical Certificate
Potential Hours of Instruction	102
Total Credits	3

Description

Takes the student through the basics of two-dimensional animation and interactivity for the web. Software applications, such as Macromedia Flash, are used to create interactive webpages. Techniques in 2D animation creation, scripting, design concepts, site organization, file optimization and uploading, and working with sound files are covered.

Target Population

Any person seeking Advanced Web Page Design Certificate.

Types of Instruction

Instruction Type	Contact Hours	Credits
Classroom Presentation	102	3

Textbooks

Russell Chun. *Macromedia Flash MX Advanced Visual Quickpro Guide*. Peachpit Press. 2002. **Pages:** 611. **ISBN:** 0201758466.

Kymerlee Weil. *Lynda Weinman's Macromedia Flash MX HOT (Hands-On-Training)*. Peachpit Press. 2003. **Pages:** 803. **ISBN:** 0321112725.

Learner Supplies

Burnable CDs or Firewire Drive. **Manufacturer:** ---.

Prerequisites

Enrolled in the Advanced Technical Certificate - Web Page Design
Completed 10-201-181 Introduction to Computer Graphics (3 credits)
Completed 10-201-177 Webpage Design 1 (3 credits)

Exit Learning Outcomes

Core Abilities

- A. Critical Thinking.
- B. Develop a sense of personal, social, professional, and work ethics.
- C. Communicate Effectively.

Competencies

Unit 1. Web Animation Basics

A. Create and manipulate graphics and text for use in animation

Linked Core Abilities

Critical Thinking.

Competence will be demonstrated:

1. by production of graphics and text for use in preloader animation

Criteria - Performance will be satisfactory when:

1. learner creates shapes and images using drawing and painting tools
2. learner modifies shapes via color, line thickness and size
3. learner creates text using text property options

B. Create and use layers to assign hierarchy to graphics in animation

Linked Core Abilities

Critical Thinking.

Competence will be demonstrated:

1. by production of preloader animation

Criteria - Performance will be satisfactory when:

1. learner creates layers to separate graphic elements
2. learner establishes visual hierarchy for graphic elements

C. Create basic animation using symbols and instances, keyframes, and tweening techniques

Linked Core Abilities

Critical Thinking.

Competence will be demonstrated:

1. by submitting animated preloader project
2. by submitting tools exercise using tweening, symbols and instances, and keyframes

Criteria - Performance will be satisfactory when:

1. learner creates basic animation using shape and motion tweening
2. animation demonstrates use of keyframes
3. animation demonstrates use of symbols and instances
4. animation demonstrates use of symbol properties (button, movie clip, graphic)Tab

D. Publish optimized animation swf and html files

Linked Core Abilities

Critical Thinking.

Competence will be demonstrated:

1. by submitting animated preloader project that demonstrates use of appropriate file size for viewing on the web

Criteria - Performance will be satisfactory when:

1. animation is optimized for web loading speed and file size appropriate for web application

2. animation is exported as a swf file with a html document

Unit 2. Button Techniques

A. Create basic button with sound clip

Linked Core Abilities

Critical Thinking.

Competence will be demonstrated:

1. by production of basic button with 4 states
2. by assignment of proper behavior to buttonTab
3. by activating sound file within button state with mouse action
4. by completion of button assignment

Criteria - Performance will be satisfactory when:

1. learner creates symbol with button property
2. learner creates graphics for 4 states of a button
3. learner assigns button behavior to button instance
4. learner inserts sound file into button state
5. learner attaches behavior to button

B. Create button with movie clip inserted in over or down state of button

Linked Core Abilities

Critical Thinking.

Competence will be demonstrated:

1. by creation of symbol with movie clip property
2. by creation of simple animation in movie clip symbol
3. by assignment of proper behavior to buttonTab
4. by completion of button assignmentTab

Criteria - Performance will be satisfactory when:

1. learner creates symbol with movie clip property
2. learner creates simple animation in movie clip symbol
3. learner inserts movie clip in over or down state of the button
4. learner assigns button property to button symbol
5. learner attaches behavior to button

C. Use frame actions and frame labels to navigate within movie

Linked Core Abilities

Critical Thinking.

Competence will be demonstrated:

1. by creation of movie using buttons and frames with actions
2. by creation frame labels
3. by inserting keyframes to duplicate buttons along the timeline
4. by completion of button assignment

Criteria - Performance will be satisfactory when:

1. learner creates "actions" layer and create frame labels along animation timeline
2. learner creates buttons instances in timeline using insert keyframe
3. learner uses object and frame actions
4. learner demonstrates navigation via frame and objects actions

D. Use "with" action in a button to control the start and stop of a movie clip

Linked Core Abilities

Critical Thinking.

Competence will be demonstrated:

1. by creation of movie clip symbol
2. by naming and creation of frame labels
3. by inserting keyframes to duplicate buttons along the timeline
4. by completion of button assignment

Criteria - Performance will be satisfactory when:

1. learner creates movie clip symbol
2. learner creates start and stop buttons
3. learner uses "with" action in button to control start and stop of movie clip
4. movie demonstrates control of movie clip with buttons

E. Create drop down menu with links

Linked Core Abilities

Critical Thinking.

Competence will be demonstrated:

1. by creation of movie clip symbol
2. by naming and creation of frame labels
3. by functioning URL and e-mail links
4. by completion of button assignment

Criteria - Performance will be satisfactory when:

1. learner creates movie clip symbol
2. learner creates and inserts buttons into movie clip symbol
3. learner creates and inserts frame labels and action layer
4. movie demonstrates functionality of multiple buttons within a movie clip
5. learner assigns URL addresses and e-mail links in drop down menu

Unit 3. ActionScript Basics

A. Create movie using start/stop drag ActionScripting commands to control a movie clip

Linked Core Abilities

Critical Thinking.

Competence will be demonstrated:

1. by use of ActionScript to drag and drop movie clips on the movie stage
2. by use of ActionScript in a button to place movie clip to exact location
3. by completion of Potatohead Drag and Drop Exercise
4. by use of masking technique

Criteria - Performance will be satisfactory when:

1. learner creates blinking eye movie clip using masking technique
2. learner uses ActionScripting to drag movie clips and "drop" them into place on stage
3. learner uses ActionScripting in a button to place a movie clip to an exact location on stage

B. Create simple form with input textfield boxes using ActionScripting

Linked Core Abilities

Critical Thinking.

Competence will be demonstrated:

1. by use of ActionScript to concatenate data and send to an output textfield box
2. by use of ActionScript to create variables with values
3. by completion of Data Entry Form Exercise

Criteria - Performance will be satisfactory when:

1. learner creates textfield input boxes
2. learner names textfield instances
3. learner uses Action Panel to create variables and assign values to them
4. learner creates submit and reset buttons with ActionScript to input and clear data

C. Create quiz with conditionals and operators using ActionScripting

Linked Core Abilities

Critical Thinking.

Competence will be demonstrated:

1. by textfield box displaying quote information
2. by user receiving correct or incorrect answer response
3. by user viewing final score at quiz completion
4. by completion of Quiz Exercise

Criteria - Performance will be satisfactory when:

1. learner creates textfield input box
2. learner creates buttons with if/else scripting
3. learner creates variables and assigns values
4. learner names instance of textfield input box

D. Manipulate movie clip by changing properties with ActionScripting

Linked Core Abilities

Critical Thinking.

Competence will be demonstrated:

1. by changing x and y position of movie clip
2. by changing x and y scale of movie clip
3. by changing alpha of movie clip
4. by changing visibility of movie clip
5. by rotating movie clip
6. by creating and movie clip
7. by creating multiple scenes
8. by completion of Property Exercise

Criteria - Performance will be satisfactory when:

1. learner creates movie clips
2. learner creates invisible buttons
3. learner uses multiple scenes

E. Create main movie by loading and unloading submovies into levels with ActionScripting

Linked Core Abilities

Critical Thinking.

Competence will be demonstrated:

1. by creation of frame, movie1, movie2, movie3, and levels movie files

2. by use load/unload movie scripting
3. by exporting swf and html files
4. by completion of Levels Exercise

Criteria - Performance will be satisfactory when:

1. learner designates level for movie to load/unload
2. learner uses ActionScript to load/unload external movies
3. learner uses frame labels to navigate within a movie clip
4. learner uses multiple submovies to create main movie

F. Create scrolling text box with dynamically loaded content text

Linked Core Abilities

Critical Thinking.

Competence will be demonstrated:

1. by creation of functioning scroll bar using ActionScripting
2. by import of dynamic text
3. by creation of html text
4. by completion of Scrolling Text Exercise

Criteria - Performance will be satisfactory when:

1. learner creates dynamic textfield box
2. learner creates movie clip and buttons
3. learner uses functions in ActionScripting
4. learner uses onClipEvents, if/else statements, variables and values to construct scroll bar
5. learner contains range of movie clips with ActionScripting

Unit 4. Instructional Animation

A. Create storyboard and flow diagram

Linked Core Abilities

Critical Thinking.

Develop a sense of personal, social, professional, and work ethics.
Communicate Effectively.

Competence will be demonstrated:

1. by submitting completed storyboard
2. by submitting completed flow diagram

Criteria - Performance will be satisfactory when:

1. learner storyboards content and navigation for instructional site
2. learner researches subject of interestTab
3. learner prioritizes key points of information
4. learner creates a information flow diagram for site

B. Use of Typography and Graphics

Linked Core Abilities

Critical Thinking.

Develop a sense of personal, social, professional, and work ethics.
Communicate Effectively.

Competence will be demonstrated:

1. by use of typography to show steps of instruction

2. by use of readable and legible typography
3. by use of graphics to illustrate steps of instruction
4. by completion of Instructional Site

Criteria - Performance will be satisfactory when:

1. learner uses typography in Instructional Movie
2. learner uses drawing and painting tools to create graphics

C. Import and prepare external graphics

Linked Core Abilities

Critical Thinking.

Competence will be demonstrated:

1. by importing graphic files into Flash movie
2. by importing bitmap files into Flash movie
3. by completion of Instructional Site Assignment

Criteria - Performance will be satisfactory when:

1. learner imports Adobe Illustrator and/or Macromedia Fireworks graphics in proper formats
2. learner demonstrates use of trace bitmap techniques
3. learner demonstrates use of breaking apart a bitmap file
4. learner uses file optimization settings with imported bitmap images

D. Apply sound to a movie

Linked Core Abilities

Critical Thinking.

Competence will be demonstrated:

1. by use of sound files in Instructional Assignment
2. by use of sound on/off button in movieTab

Criteria - Performance will be satisfactory when:

1. learner imports sound file into movie
2. learner uses compression to optimize sound file size
3. learner controls sound flow to match movie

E. Create Instructional Movie

Linked Core Abilities

Critical Thinking.

Develop a sense of personal, social, professional, and work ethics.

Communicate Effectively.

Competence will be demonstrated:

1. by use of scenes and/or levels to show steps of instruction
2. by consistent navigation through out movie
3. by use of appropriate sound files for movie
4. by use of typographic and graphic elements appropriate to subject matter
5. by file size and loadability of files on the web
6. by completion of Instructional Site

Criteria - Performance will be satisfactory when:

1. learner uses consistent navigation throughout movie
2. movie directions or instructions are easy to follow

3. learner navigates throughout the movie at their own pace and can repeat steps in needed
4. learner exports file(s) to swf and html
5. learner optimizes file size(s) for the web

Unit 5. Components and Forms

A. Create form using UI Components feature in Macromedia Flash

Linked Core Abilities

Critical Thinking.

Develop a sense of personal, social, professional, and work ethics.

Communicate Effectively.

Competence will be demonstrated:

1. by assignment of properties to components
2. by creation of submit button
3. by submitting completed form

Criteria - Performance will be satisfactory when:

1. learner uses Flash UI Component - CheckBox
2. learner uses Flash UI Component - ListBox
3. learner uses Flash UI Component - RadioButton
4. learner uses Flash UI Component - ScrolPane
5. learner uses Flash UI Component - ComboBox
6. learner uses Flash UI Component - PushButton
7. learner uses Flash UI Component - ScrollBar

B. Modify skin components

Linked Core Abilities

Critical Thinking.

Competence will be demonstrated:

1. by modified color components in final formTab

Criteria - Performance will be satisfactory when:

1. learner modifies standard component skins
2. learner adjusts color of default components

Unit 6. Working with Video

A. Import video into Flash Movie

Linked Core Abilities

Critical Thinking.

Competence will be demonstrated:

1. by video imported from an avi, dv, mpeg, move wmv, asf or flv file
2. by use of Sorensen Squeeze for video compression
3. by Import Video Settings used for import
4. by keyframe interval rate appropriate for playback
5. by completion of Video Exercise

Criteria - Performance will be satisfactory when:

1. learner imports video source into movie
2. learner selects appropriate video quality
3. learner selects keyframe intervals

4. learner selects percent of video scale

B. Control Video playback

Linked Core Abilities

Critical Thinking.

Competence will be demonstrated:

1. by use of frame labels to target key frames for video playback
2. by use of named anchor points to specific points in the video
3. by "Flash with Named Anchors playback" setting used to Publish file
4. by completion of Video ExerciseTab

Criteria - Performance will be satisfactory when:

1. learner controls playback of video with start and stop buttons
2. learner controls playback of video with use of named anchors

C. Apply Effects to Video

Linked Core Abilities

Critical Thinking.

Competence will be demonstrated:

1. by appearance of movie (change in tint, brightness, opacity, or position)
2. by completion of Video Exercise

Criteria - Performance will be satisfactory when:

1. learner adjusts movie properties with the Property Panel
2. learner rotates or skews video with free transform tool

Unit 7. Create Personal Web Portfolio

A. Create Personal Web Portfolio

Linked Core Abilities

Critical Thinking.

Develop a sense of personal, social, professional, and work ethics.

Communicate Effectively.

Competence will be demonstrated:

1. by use of scenes and/or levels to show sections of site
2. by consistent navigation throughout movie
3. by use of typographic and graphic elements
4. file size and loadability of files on the web
5. use of preloader if needed
6. by completion of Personal Web Portfolio Site which includes biographical information, web illustration samples, link to Instructional Site, links to web sites, and class exercises

Criteria - Performance will be satisfactory when:

1. learner creates web portfolio highlighting samples of their graphic/web work
2. movie includes biographical information, web illustration samples, link to Instructional Site, links to web sites, and class exercises
3. learner creates storyboard and flow diagram for movie
4. learner identifies sections to movie
5. learner uses consistent navigation throughout movie
6. learner navigates throughout the movie at their own pace and can repeat steps in needed

7. learner exports file(s) to swf and html
8. learner optimizes file size(s) for the web

B. Web Accessibility in Flash

Linked Core Abilities

Critical Thinking.

Develop a sense of personal, social, professional, and work ethics.

Communicate Effectively.

Competence will be demonstrated:

1. by creation of movie clips using Accessibility Dialog Box Options
2. by naming each accessible object
3. by including a description for each accessible object
4. by using movie clips as accessible objects

Criteria - Performance will be satisfactory when:

1. learner uses Accessibility Dialog Options Box
2. learner names each accessible object
3. learner includes a description for each accessible object
4. learner uses movie clips as accessible objects

C. Printing Flash Files

Linked Core Abilities

Critical Thinking.

Competence will be demonstrated:

1. by printing a movie from the native flash (fla) file
2. by printing from the Flash player
3. by creation of print button
4. by use of #p frame label

Criteria - Performance will be satisfactory when:

1. learner prints movie from native flash (fla) file
2. learner prints from the Flash player
3. learner uses #p frame label to print specific keyframes
4. learner creates print button with ActionScripting