# CALENDAR

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
<th>Week 4</th>
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</thead>
</table>

- **HW – Simple Flash Site**
- **HW – Controlling Movie Clips**
- **HW – Moving Movie Clips w/ Buttons**
- **HW – Moving Movie Clips w/ Math**
- **HW: Flash site to date.**

### Lesson: Intro to Actionscript; Tips; how to build a simple flash site using the timeline

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<th>Week 9</th>
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<th>Week 14</th>
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<tbody>
<tr>
<td>10.21</td>
<td>10.28</td>
<td>11.4</td>
<td>11.11</td>
<td>11.18</td>
<td>11.25</td>
<td>12.2</td>
<td>12.9</td>
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</tbody>
</table>

- **HW: Flash site to date.**
- **NO CLASS - CHRIS ON MAINLAND; HW – final designs due.**
- **NO CLASS - ELECTION DAY; HW - 1st draft of site due.**
- **NO CLASS - VETERAN'S DAY; HW - 2nd draft of site due.**
- **HW - 2nd draft of site due.**

### Lesson: Loading & unloading external files (jogs, swfs); Publishing (swf object)

### Lesson – Flash Site using the timeline

### Lesson – Flash Site w/ nested sub sections; Flash Site w/ advanced transitions

### Lesson – Flash Site w/ advanced features (hi-lite state, scrolling text); Flash Site w/ advanced features

<table>
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<tr>
<th>INTRO DAY</th>
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**Interface Programming 2**
AGENDA

• Introduction to the course
  • In this class we will use Flash's programming language, ActionScript, to learn how to create interactive Flash applications and web sites.
  • During the 1st half of the semester we will work on small interactive Flash applications and mini projects.
  • During the 2nd half of the semester we will create a Flash web site. This project will be the same final project as the Motion Graphic Design final project.
EXAMPLE

• Flash Kit
  • http://www.flashkit.com
EXAMPLES

- Old 2advanced site (v2)
  - http://v2.2a-archive.com/flashindex.htm

- Samsung product showcase flash mini site

- CCA Director’s presentation flash site
LESSON

• What is actionscript?
LESSON

• Glossary:
  • Syntax: the grammatical structure of a particular language, or the set of rules for arranging words and punctuation. These rules determine what is acceptable by the compiler.
  • Compiler: translates code from one language to another.
LESSON

• Introduction to Actionscript
  • Adding an actions layer
  • Working with the actions panel
• How to create a button
• How to control the timeline using actionscript
  • Mouse Events
  • Using frame labels
  • Trace command and the Output window.
LESSON

• ActionScript is Adobe Flash's programming language. It enables you to make your Flash content interactive and provides a more efficient way to do things in Flash, from creating simple animations through designing complex, data-rich, interactive application interfaces.

• The latest version is Actionscript 3.0 which came out recently with the release of Flash player 9 and Flash CS3. Throughout the beginning of the semester I will talk about version 2.0.
LESSON

• Good practices
  • Always indent your code
  • Always try to keep your code in one place
    • Suggestion: keep all actions in one frame on the main time line
      (unless you are working on a large-scale site – you can use classes and other advanced techniques)
    • This makes your code easy to find and easy to debug
    • AVOID ATTACHING CODE TO OBJECTS!
  • Be careful of your use of capitalization. Remember, Flash is case sensitive.
LESSON

• Terminology:
  • Data
  • Variables
  • Statements
  • Actions
  • Expressions
  • Operands and operators
  • Dot syntax
  • Punctuators
  • Constants
  • Keywords
  • Events
  • Event Handlers
LESSON

• Statements and “Actions”
  • Learning ActionScript syntax (Syntax: the grammatical structure of language) and statements is like learning how to put together words to make sentences, which you can then put together into paragraphs. ActionScript can be as simple. For example, in English, a period ends a sentence; in ActionScript, a semicolon ends a statement.
  • A statement is an instruction you give the FLA file to do something, such as to perform a particular action.

  • stop();
  • gotoAndStop(25);
LESSON

• Action parameters
  • The properties and values that go inside of an action.

• gotoAndPlay( frame number or label );
• gotoAndStop( frame number or label );
LESSON

- Expressions
  - Expressions, different from statements, are any legal combination of ActionScript that represent a value. Expressions have values, while values and properties have types. An expression can consist of operators and operands, values, functions, and procedures. The expression follows ActionScript rules of precedence and of association. Typically, Flash Player interprets the expression and then returns a value that you can use in your application.

- \( x = 5; \)
- \( x = (y + 5) / 10; \)
LESSON

• Operands and Operators
  • Operators are characters that specify how to combine, compare, or change values in an expression. An expression is any statement that Flash can evaluate and that returns a value. You can create an expression by combining operators and values or by calling a function.
  • An operand is the part of your code that the operator performs actions on.

• \( x = 5; \)

  • \( x \) and 5 are operands and + is an operator.
LESSON

• Properties
  • values associated with movie clips.

• .x
• .y
• ._xmouse
• ._ymouse
LESSON

• Punctuators
  • Punctuators are the characters that help form your ActionScript code. There are several language punctuators in Flash. The most common type of punctuators are semicolons (;), colons (:), parentheses [()] and braces ({}).
LESSON

• Keywords
  • Keywords in ActionScript are reserved words used to perform specific kinds of actions, so you can't use them as identifiers (such as variable, function, or label names). Examples of some reserved keywords are if, else, this, function, and return. Keywords turn blue in the actions panel.
LESSON

- Events
  - Events are actions that occur while a SWF file is playing. An event such as a mouse click or a keypress is called a user event because it occurs as a result of direct user interaction. An event that Flash Player generates automatically, such as the initial appearance of a movie clip on the Stage, is called a system event because it isn't generated directly by the user.
LESSON

• Event Handlers
  • An event handler method is a method of a class that is invoked when an event occurs on an instance of that class. For example, the MovieClip class defines an onPress event handler that is invoked whenever the mouse is pressed on a movie clip object. Unlike other methods of a class, however, you don't invoke an event handler directly; Flash Player invokes it automatically when the appropriate event occurs.

  • onPress
  • onRelease
  • onRollover
  • onMouseDown
  • onEnterFrame
  • onClipEvent
LESSON

• dot (.) syntax
  • In ActionScript, you use a dot (.) operator (dot syntax) to access properties or methods that belong to an object or instance on the Stage. You also use the dot operator to identify the target path to an instance (such as a movie clip), variable, function, or object.
  • A dot syntax expression begins with the name of the object or movie clip, followed by a dot, and it ends with the element you want to specify.

• noun.action
• movieclip.action
• mc_nestedContent.gotoAndStop("about");
• mc_ball.onPress = function() {
}
LESSON

• Targeting an instance, and nested instances

  • movieclip.nestedmovieclip.action
  
  • movieclip.stop();

  • mc_content.mc_nestedContent.gotoAndStop("about_sub3");
LESSON

• Common actions
  • Button & Mouse events

• myBtn.onRelease = function() {
    //do something
  }

• myBtn.onRollover = function() {
    //do something
  }
LESSON

• Common Event Handler
  • onEnterFrame
    • very useful because Flash will continually repeat the code

  • myMovieClip.onEnterFrame = function() {
    //do something
  }
LESSON

• How to comment code:
  • blocks of text: /* and */
  • one line at a time: //
LESSON

• Script Assist
  • If you are uncomfortable writing ActionScript code or syntax, you might want to try using Script Assist mode in the Actions panel.
  • It can be helpful while learning ActionScript, and it can be a useful resource when you forget how to hand-code something.
ASSIGNMENT

• By using actionscript and simple buttons, create a very simple, working flash file that controls where you are on the timeline.
  • Format: .swf
  • Post this swf on your class web site.

Due: Week 2