

Flash CS3: ActionScript 3

Course Description:

Flash CS3 ActionScript 3 offers significant leaps over its predecessor, ActionScript 2. With the new version of ActionScript, developers will find a faster runtime environment, better debugging, a consistent method for handling events, and an improved framework of classes for development.

In this course we will explore best practices when developing rich Flash applications, review important concepts such as syntax, object oriented programming, animating with ActionScript, and controlling objects using the keyboard.

We will also take a detailed look at several classes in the ActionScript 3 class library. Each of these classes will allow us to quickly add rich and robust functionality to our Flash applications. Once you complete the class you'll have a strong understanding of ActionScript 3 and develop a Flash version of the popular game Asteroids.

Delivery Method:

Instructor led, group-paced, classroom-delivery learning model with structured hands-on activities.

Performance-Based Objectives:

After completing this course, you should be able to:

- Create variables
- Manipulate Symbols
- Organize your code using Object Oriented paradigms
- Manipulate the Flash Document Object Model
- Write event handlers that react to keyboard and mouse movement
- Enhance your applications through the use of ActionScript class libraries
- Read and parse XML
- Programmatically animate objects on screen using a physics model

Course Content:

Lesson 1: Introducing the Course

Topic 1A: Unit Objectives and Topics

Topic 1B: About the Course

Topic 1C: About the Author

Topic 1D: Installation Instructions

Topic 1E: Course Overview and Objectives

Topic 1F: Prerequisites

Topic 1G: Course Format

Topic 1H: Why Flash

Topic 1I: Walkthrough 1-1: Reviewing the Finished Application

Lesson 2: ActionScript 3 Fundamentals

Topic 2A: Unit Objectives and Topics

Topic 2B: Getting Started with Coding

Topic 2C: ActionScript Basics

Topic 2D: Walkthrough 2-1: Declaring and Using Variables

Topic 2E: Operators and Expressions

Topic 2F: Walkthrough 2-2: Converting Data Types and Operators

Topic 2G: Using Functions

Topic 2H: Walkthrough 2-3: Using Functions and Methods

Topic 2I: Unit Summary

Topic 2J: Unit Review
Topic 2K: Lab 2: Instantiating Variables

Lesson 3: Manipulating Symbols with ActionScript

Topic 3A: Unit Objectives and Topics
Topic 3B: Introducing Symbols
Topic 3C: Walkthrough 3-1: Using a MovieClip and Button's Properties
Topic 3D: Working with MovieClip Methods
Topic 3E: Walkthrough 3-2: Using Methods within a MovieClip
Topic 3F: Working with TextFields
Topic 3G: Walkthrough 3-3: Using TextField Properties
Topic 3H: Dynamically Adding Symbols to the Stage
Topic 3I: Walkthrough 3-4: Adding Symbols to the Stage at Run-Time
Topic 3J: Loading Content Dynamically Into a MovieClip
Topic 3K: Walkthrough 3-5: Loading External Images
Topic 3L: Lab 3: Making a Space Rock
Topic 3M: Unit Summary
Topic 3N: Unit Review

Lesson 4: Object Oriented Programming

Topic 4A: Unit Objectives and Topics
Topic 4B: Introducing Object Oriented Programming
Topic 4C: Walkthrough 4-1: Creating a Custom Class
Topic 4D: Declaring Class Properties
Topic 4E: Walkthrough 4-2: Adding Properties to a Class
Topic 4F: Declaring Methods
Topic 4G: Walkthrough 4-3: Adding Methods to a Class
Topic 4H: Creating Visual Classes Through Inheritance
Topic 4I: Walkthrough 4-4: Creating a Visual Class
Topic 4J: Making the Stage a Class
Topic 4K: Walkthrough 4-5: Making the Stage a Class and Dynamically Adding Instances
Topic 4L: Lab 4: Create an Asteroid and Collectable Class
Topic 4M: Unit Summary
Topic 4N: Unit Review

Lesson 5: ActionScript 3 Events

Topic 5A: Unit Objectives and Topics
Topic 5B: ActionScript Events
Topic 5C: Walkthrough 5-1: Handling Events
Topic 5D: ActionScript Event Types
Topic 5E: Walkthrough 5-2: Using the MouseEvent
Topic 5F: Walkthrough 5-3: Using the Keyboard and Enter Frame Events
Topic 5G: Dispatching A Custom Event
Topic 5H: Walkthrough 5-4: Dispatching A Custom Crash Event
Topic 5I: Working with Timers
Topic 5J: Lab 5: Display the TimerEvent and the EnterFrame Event
Topic 5K: Unit Summary
Topic 5L: Unit Review

Lesson 6: Loops and Conditional Logic

Topic 6A: Unit Objectives and Topics
Topic 6B: Types of Conditional Statements
Topic 6C: Walkthrough 6-1: Controlling the SpaceShip
Topic 6D: Determine When Objects Overlap or Hit
Topic 6E: Walkthrough 6-2: Determine when the SpaceShip Crashes
Topic 6F: Types of Loops
Topic 6G: Walkthrough 6-3: Adding Asteroids to the Screen
Topic 6H: Unit Summary
Topic 6I: Unit Review
Topic 6J: Lab 6: Keeping Your Asteroids and Collectables on the Stage and collecting items

Lesson 7: Exploring the ActionScript Class Library

Topic 7A: Unit Objectives and Topics
Topic 7B: The ActionScript Class Library
Topic 7C: The ActionScript Class Library
Topic 7D: Using the Sound Class
Topic 7E: Walkthrough 7-1: Adding Sound Effects to the SpaceShip
Topic 7F: Programmatically Formatting Text
Topic 7G: Walkthrough 7-2: Formatting the Player Score TextField
Topic 7H: Getting a Date with ActionScript
Topic 7I: Walkthrough 7-3: Determine your Current Age
Topic 7J: Arrays
Topic 7K: Static Methods and Properties
Topic 7L: Walkthrough 7-4: Use Cos and Sin to maneuver the Space Ship and Create Random Asteroids
Topic 7M: Unit Summary
Topic 7N: Unit Review
Topic 7O: Lab 7: Adding Sound and Random Speed and Locations to the Collectable Class

Lesson 8: XML with E4X

Topic 8A: Unit Objectives and Topics
Topic 8B: What is XML
Topic 8C: Walkthrough 8-1: Creating a High Score List
Topic 8D: Using the E4X Operators
Topic 8E: Demonstration 8-1: Using E4X Operators
Topic 8F: Accessing External XML Documents
Topic 8G: Walkthrough 8-2: Loading External XML Files and Filtering Books
Topic 8H: Unit Summary
Topic 8I: Unit Review
Topic 8J: Lab 8-1: Displaying High Scores with e4x

Lesson 9: Animating with ActionScript

Topic 9A: Unit Objectives and Topics
Topic 9B: Using the Enter Frame Event
Topic 9C: Walkthrough 9-1: Copy and Paste Tweens
Topic 9D: Using the Tween Class
Topic 9E: Walkthrough 9-2: Tweening the Warp Animation
Topic 9F: Unit Summary
Topic 9G: Unit Review