

## FLORIDA STATE COLLEGE AT JACKSONVILLE

## COLLEGE CREDIT COURSE OUTLINE

COURSE NUMBER:	CAP 2024
COURSE TITLE:	Advanced Game Programming
PREREQUISITE(S):	CAP 2023 and DIG 2000
COREQUISITE(S):	None
CREDIT HOURS:	3
CONTACT HOURS/WEEK:	4
CONTACT HOUR BREAKDOWN:	
Lecture/Discussion:	
Laboratory:	
Other Lecture/Lab Combination:	4
FACULTY WORKLOAD POINTS:	3.7
STANDARDIZED CLASS SIZE ALLOCATION:	24
CATALOG COURSE DESCRIPTION:	
	This course builds upon COP 2110 Introduction to Game Programming. Design and development of interactive, web-based computer games using the ActionScript programming language is the objective of this course. ActionScript programming will be used for accepting user input, button and mouse objects, text fields, game control, motion control, collision detection and resolution, control of movie clips, and component development.
SUGGESTED TEXT(S):	<u>Understanding Macromedia Flash 8 ActionScript 2: Basic Techniques for Creatives</u> , by Andrew Rapo and Alex Mitchael, Focal Press: latest edition
IMPLEMENTATION DATE:	Spring, 2004 (20042)
REVIEW OR MODIFICATION DATE:	Fall Term, 2008 (20091) - Outline Review 2007

COURSE TOPICS	<u>CONTACT HOURS PER TOPIC</u>
I. Flash Game Elements Flash Interface, Buttons, Text, Imported Media	3
II. Organizing your Movie The Library, Frames, Layers, Scenes, Off-Stage Area, Publishing.	3
III. Introduction to ActionScript Frame Scripts, Button Scripts, Movie Clip Scripts Using the Actions Panel ActionScript Programs	3
IV. ActionScript Controls Buttons for user control, Control of animation, Control of movie clips.	3
V. Button and Mouse Objects	3
VI. Text Field and Selection Objects	3
VII. ActionScript Commands Using variables, performing operations, conditional statements, Loops, text and strings, functions, arrays	3
VIII. ActionScript Movie Clip Operations Playback, Properties, Drag and drop, Movie clips and levels, Controlling multiple movie clips	3
IX. ActionScript Collision Detection	3
X. ActionScript Keyboard Input	3
XI. ActionScript and Sounds	3
XII. ActionScript Components	3
XIII. ActionScript Design Effects	3
XIV. Game Creation Process Loading the screen, Splash screen, Instructions, Backgrounds, Game over screen.	3
XV. How to Program Effectively Breaking down problems, Good programming practices, Debugging code, Programming pitfalls	3
XVI. Game Programming Projects	15

PROGRAM TITLE: Computer Programming and Analysis  
COURSE TITLE: Advanced Game Programming  
CIP NUMBER: 1507.030500 (AS)/ 0507.030500 (AAS)

LIST PERFORMANCE STANDARD ADDRESSED:

NUMBER(S): TITLES(S):

01.0 PERFORM DATA FILE ACTIVITIES -- The student will be able to:

01.02 Identify security procedures to maintain integrity of files.

02.0 PERFORM ANALYSIS ACTIVITIES --The student will be able to:

- 02.01 Communicate with users.
- 02.02 Define requirements.
- 02.03 Analyze user requirements.
- 02.04 Evaluate alternatives.
- 02.05 Analyze system requirements.
- 02.06 Create a plan for design.
- 02.07 Develop a timeline.
- 02.08 Communicate the plan.
- 02.09 Develop systems specifications.
- 02.10 Develop systems documentation.
- 02.11 Evaluate System

03.0 PERFORM PROGRAM DESIGN ACTIVITIES -- The student will be able to:

- 03.01 Demonstrate knowledge of computer concepts and terminology
- 03.02 Identify basic computer components and their functions.
- 03.03 Develop design specifications.
- 03.04 Select development.
- 03.05 Validate design specifications.
- 03.06 Document design.
- 03.07 Communicate design specifications
- 03.08 Develop prototype.

04.0 PERFORM CODING ACTIVITIES -- The student will be able to:

- 04.01 Identify modules.
- 04.02 Design module.
- 04.03 Code module.
- 04.04 Document module.
- 04.05 Test module.
- 04.06 Debugging code.
- 04.07 Revise module code.

LIST PERFORMANCE STANDARD ADDRESSED: (CONTINUED)

NUMBER(S):            TITLES(S):

04.08 Assemble modules.

04.09 Demonstrate proficient use of programming development tools.

05.0 PERFORM TESTING ACTIVITIES -- The student will be able to:

05.01 Develop test plan.

05.02 Develop test data.

05.03 Validate input(s).

05.04 Perform test(s).

05.05 Validate expected outcomes.

05.06 Determine system boundaries.

05.07 Load test the system.

05.08 Revise program code.

05.09 Document results.

7.0 PERFORM IMPLEMENTATION ACTIVITIES -- The student will be able to:

07.01 Develop an implementation plan.

07.02 Install system.

07.03 Validate system.

07.04 Troubleshooting methodologies.

07.05 Document implementation.

09.0 PERFORM EVALUATION ACTIVITIES -- The student will be able to:

09.01 Review project plans

09.02 Assess quality.

09.03 Identify improvements.

09.04 Assist in revisions and enhancements.

09.05 Assist in project evaluation.

09.06 Recommend improvements.

09.07 Provide feedback.

10.0 DEMONSTRATE PROFESSIONAL DEVELOPMENT SKILLS -- The student will be able to:

10.02 Read industry journals and magazines.

10.05 Develop insights and skills through structured experimentation

10.06 Anticipate future industry trends.

12.0 DEMONSTRATE GENERAL ORGANIZATIONAL COMPUTING WORKPLACE COMPETENCIES -

The student will be able to:

12.01 Follow oral and written instructions.

12.02 Prepare, outline, and deliver a short oral presentation.

LIST PERFORMANCE STANDARD ADDRESSED: (CONTINUED)

NUMBER(S):            TITLES(S):

- 12.03 Participate in group discussion as a member and as a leader.
- 12.04 Obtain appropriate information from graphics, maps, or signs.
- 12.05 Prepare visual material to support an oral presentation.
- 12.06 Demonstrate self-motivation and responsibility to complete an assigned task.
- 12.09 Identify and discuss issues contained within professional codes of conduct.
- 12.10 Identify and discuss software licensing issues.
- 12.11 Identify and discuss property rights and licensing issues.
- 12.12 Identify and discuss privacy issues.
- 12.13 Identify and discuss encryption issues.
- 12.14 Identify legal liability issues.



NOTE: Use either the Tab key or mouse click to move from field to field. The box will expand to accommodate your entry.

<b>Section 1</b>	
<b>COURSE PREFIX AND NUMBER:</b> <u>CAP 2024</u>	<b>SEMESTER CREDIT HOURS (CC):</b> <u>3</u> <b>CONTACT HOURS (NCC):</b> _____
<b>COURSE TITLE:</b> <u>Advanced Game Programming</u>	

**Section 2**

**TYPE OF COURSE: (Click on the box to check all that apply)**

<input type="checkbox"/> AA Elective	<input checked="" type="checkbox"/> AS Required Professional Course	<input type="checkbox"/> College Prep
<input checked="" type="checkbox"/> AS Professional Elective	<input type="checkbox"/> AAS Required Professional Course	<input type="checkbox"/> Technical Certificate
<input type="checkbox"/> Other _____	<input type="checkbox"/> PSAV	<input type="checkbox"/> Apprenticeship
<input type="checkbox"/> General Education: (For General Education courses, you must also complete Section 3 and Section 7)		

**Section 3 (If applicable)**

**INDICATE BELOW THE DISCIPLINE AREA FOR GENERAL EDUCATION COURSES:**

<input type="checkbox"/> Communications	<input type="checkbox"/> Social & Behavioral Sciences	<input type="checkbox"/> Mathematics
<input type="checkbox"/> Natural Sciences	<input type="checkbox"/> Humanities	

**Section 4**

**INTELLECTUAL COMPETENCIES:**

<input checked="" type="checkbox"/> Reading	<input checked="" type="checkbox"/> Speaking	<input checked="" type="checkbox"/> Critical Analysis	<input checked="" type="checkbox"/> Quantitative Skills	<input type="checkbox"/> Scientific Method of Inquiry
<input checked="" type="checkbox"/> Writing	<input checked="" type="checkbox"/> Listening	<input checked="" type="checkbox"/> Information Literacy	<input checked="" type="checkbox"/> Ethical Judgment	<input checked="" type="checkbox"/> Working Collaboratively

	LEARNING OUTCOMES	METHOD OF ASSESSMENT
•	Students will demonstrate proficiency with constructing Flash games with buttons, text, imported media	Authentic Learning Tasks, Exams
•	Students will demonstrate proficiency with Flash games which involve movies	Authentic Learning Tasks, Exams
•	Students will demonstrate proficiency with ActionScript controls in Flash games	Authentic Learning Tasks, Exams
•	Students will add button and mouse controls to Flash games	Authentic Learning Tasks, Exams
•	Students will control movie clips in Flash games	Projects
•	Students will create Flash games with ActionScript collision detection keyboard input, and sounds.	Projects
•	Students will design and create Flash games with ActionScript	Projects
•	Students will demonstrate the processes of ActionScript programming including program design, programming development, and program debugging	Projects, Exams
•	Students will develop unique Flash games	
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**Section 6**

Name of Person Completing This Form: John T. Trifiletti, Ph.D. Date: October 22, 2007