Introduction to Video Game Interfaces

**Teacher:** Sarah Buchanan  
**Email:** sarahb0816@gmail.com  
**Class Time:** 1-1:50pm  
**Class Location:** BHCSI Computer Lab

**Course Objective:** This course explores creating computer games using different interfaces. We will be using the Java with the Swing and WiiUseJ API’s, which will allow us to easily create a 2D game using the keyboard as input as well as a Nintendo Wii remote.

**Course Website:** [http://www.cs.ucf.edu/~sarahb/BHCSI_2011](http://www.cs.ucf.edu/~sarahb/BHCSI_2011)

**Grading:** The final letter grade will be based upon the five items listed below. The programming assignments can be done during class and you can also finish them during your lab period.

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<tr>
<th>Item</th>
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<tbody>
<tr>
<td>Exam #1</td>
<td>20</td>
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<td>Exam #2</td>
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<td>Final Exam</td>
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<tr>
<td>Lab Participation/Programs</td>
<td>40</td>
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**Tentative Schedule:**

**Week 1:**
- **Day 1)** History of video game interfaces.  
- **Day 2)** Demo and analyze the game we will be making.  
- **Day 3)** Math background.  
- **Day 4)** Introduction to Swing and GUI components.  
- **Day 5)** Moving sprite across the screen at a constant velocity.  
  **Exam #1**

**Week 2:**
- **Day 6)** GameObject class.  
- **Day 7)** Get input from the keyboard. Precalculus math background.  
- **Day 8)** Shoot bullets with a constant velocity.  
- **Day 9)** Replace the keyboard input with input from the wiimote.  
- **Day 10)** Smooth the Wiimote values.  
  **Exam #2**

**Week 3:**
- **Day 11)** Create an array of GameObjects for your bullets and enemies.  
- **Day 12)** Collision detection between bullet and enemy.  
- **Day 13)** Keep Score.  
- **Day 14)** Customize your game.  
- **Day 15)** Demo your game. *(11am – 11:50am)*  
  **Final Exam**