

# Java for Video Games

*Duke Talent Identification Program - Academic Adventures*

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## **Course Description**

Discover how the mathematics you learn in school can help you design and write your own video game! In this course we will explore Java programming, modify a networked video game and consider dimensional simulation, projectile motion and polar coordinates. Students will take home a CD that will include their own modifications to the video game and the software used in the class.

**Course Website** - <http://www.duke.edu/~ak121/aa.html>

## **Schedule** (subject to change)

10:00am Welcome, Introductions, and Class Rules  
10:15am Overview  
10:30am Project in Eclipse & Hello World  
10:45am FANG Engine, how to import it, and a note about the FANG window size  
11:00am Wackadot and modifications  
12:00pm Collision Detection and Coordinate Systems  
12:15pm Lunch  
1:00pm Pong and modifications  
2:45pm HTML and Web Applets (time permitting)  
3:15pm Burn Work to CD and Open Discussion for any student questions  
4:00pm Class dismissed

## **Extra Resources for Further Study**

- FANG Engine - [http://www.fangengine.org/index.php/Main\\_Page](http://www.fangengine.org/index.php/Main_Page)  
This website contains the gaming engine used in class. There are several short example programs in the Games>Examples and Tutorials sections of the site. If the content of your CD does not work at home, you may need to download some or all of the programs on the Free Software page's Programming Tools section. Notably, you need Java JDK installed (which includes Java JRE) and Eclipse.
- Sun's Java Tutorials - <http://java.sun.com/docs/books/tutorial/>  
Another good place to find information and exercises to teach you the Java language.
- HTML Primer - <http://www.htmlprimer.com/>  
Learn how to make your own web pages.