California State University, Northridge
Summer Academic Enrichment Program

Adventures in Alice Programming

Course Overview:

The Adventures in Alice Programming class teaches the student how to develop and animate digital models and simulations using the award-winning software application, Maya. The teacher will give step-by-step instructions to insure successful student achievement in the design and creation of modeling and animation within the 3-D environment. Examples will be given to inspire the student's imagination, as well as to facilitate the learning of the concepts of 3-D. The teacher will explain the science, mathematics and computer principles behind the different concepts, enabling students to successfully apply the new knowledge in different subject areas.

Course Description:

Adventures in Alice Programming is an exciting, innovative class. The student will learn 3-D concepts that will be applicable in other academic classes including: Mathematics; Science; Computers; Physics; and Chemistry. The teacher will instruct the student in how to create 3-D models, equipping the student to be able to illustrate concepts that are otherwise hard to visualize.

In the first part of the course, the teacher will teach the student the concepts required to create 3-D basic objects. After understanding how to create these basic 3-D objects, the student will create her/his own 3-D models. While developing one's own models, the student will learn: the use of 3-D coordinates; how to find distances between objects in space; the definitions of area, perimeter, and volume in 3-D; the concept of intersection among objects; and, how objects rotate around a particular axis. All these concepts synthesize when the student, guided by the teacher, creates her/his own solar systems in 3-D and observes how each planet rotates on its own axis and rotates relatively to the other planets.

In the second part of the course, the teacher will cover animation and visual effects in 3-D. The student will learn the fundamentals of character/object interaction and apply the concepts by creating her/his own characters and animating them. The student then will create a short story, and finish with a simple 3-D animation using one's own characters.

Course Goals and Objectives

1. **Goal:** To learn the Maya Interface 3-D computer program.
       Objective: Understanding a 3-D environment.
       Objective: Creating and working with 3-D objects.
       Objective: Creating and working with 3-D models.

2. **Goal:** To apply the Maya Interface 3-D computer program.
       Objective: Drawing and Editing Curves.
       Objective: Working with NURBS Surfaces.
       Objective: Creating and Editing Polygon Objects.
       Objective: Working with Subdivision Surfaces.
       Objective: Assigning Materials and Textures to 3-D models.
       Objective: Working with Color Texture.

3. **Goal:** To create animation using the Maya Interface 3-D computer program.
       Objective: An Introduction to Animation in 3-D.
       Objective: Using Cameras and Lights in a 3-D environment.
       Objective: Animating with Keyframes.
       Objective: Working with Animated models.
       Objective: Animating with Dynamics.

Course Materials:

During the class at CSUN, the student will be provided a computer with all of the necessary multimedia software. On a daily basis, the student will be required to bring the following materials:

1. USB Drive with at least 4 GB of memory
2. Notebook
3. Writing Utensils

Course Grading

Assignments and projects will be assessed on completeness and creativity; incomplete projects and assignments will lower the student's grades. The student is expected to actively participate in the classroom discussion and exploration. Grades will be based on the following scale:

Class Projects	50%
Quizzes	20%
Final Project	20%
Class Participation	10%

Academic Integrity

Plagiarism: "1. the unauthorized use or close imitation of the language and thoughts of another author and the representation of them as one's own original work."
 ("Plagiarism." Dictionary.com Unabridged (v 1.1). Random House, Inc. 20 Feb. 2009. <Dictionary.com http://dictionary.reference.com/browse/Plagiarism>.)

Access to technology makes it easier to copy the work of others. Students will learn what constitutes plagiarism and how to steer clear of it. <u>As a rule, if there are three words in a row that someone else can claim, cite it</u>. Plagiarism is stealing and cheating and will not be tolerated. Plagiarism is against the law.

The first time a student is caught plagiarizing, there will be a teacher/student conference, a phone call home, no credit given for the assignment, and notification given to the SAEP office.

Copying from a fellow classmate is also unacceptable on homework assignments and individual assessments. The consequences are the same as above.

Teacherease.com:
Parents and students can access grades and attendance through a web-based grade program at <u>teacherease.com</u>. By the end of the first week, parents will be emailed the password to access the program. If you do not receive your password via email, please contact the office staff at <u>saep@csun.edu</u> and request the password to be re-sent. It is beneficial for you to refer often to the website to check your child's progress and attendance in class. If you have any questions, please feel free to email me.

Classroom Behavior:
The student is expected to demonstrate mature, polite behavior and extend courtesy to everyone at all times:
1. Actively participate, and respectful verbal and nonverbal interaction with all opinions must be shown at all times.
2. Since differing views will be expressed, the teacher and the student(s) will mutually maintain a safe environment for courteous dialogue.
3. Respect is to be shown for all CSUN property.
4. No food or beverages will be permitted in the classroom. Snacks must be eaten outside between the designated breaks.
5. Warnings for behavior / discipline problems will be given once. Any further problems will result in a phone call to the parent(s) or guardian(s) and possible dismissal from the program.

SAEP Electronics Policy

<u>Cell phones, music players and headphones are not permitted to be used during class hours.</u>
    a. Please put your cell phone on silent (NOT vibrate).
    b. No texting is allowed during class.

You will be given one verbal warning if the above is not followed. Should a second warning be necessary, your cell phone, music player and/or headphones will be confiscated and held by the teacher until after class. If a third time occurs, your cell phone, music player and/or headphones will be confiscated and held in the SAEP office and MUST BE PICKED UP BY A PARENT.

Adventures in Alice Programming

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After reading through the syllabus, please sign and date and have your student return it to class. The signature constitutes your commitment to the class as we partner to make the next five weeks a life-long educational experience for your student.

<u>Student/ Parent Agreement</u>:
Please bring this signed and dated **Adventures in Alice Programming** syllabus agreement to class tomorrow.

If you do not understand any portion of this syllabus, or if you have any questions regarding this class, please do not hesitate to email the teacher.

We have read and understand the contents of this syllabus.

Student name _____

Student signature_____

Date_____

Parent/Guardian name _____

Parent/Guardian signature_____

Date_____

Phone _____

E-mail_____