#### Course 60415

#### Advanced ETB: Animation

#### Fall 2010

Mondays and Wednesdays 8:30 to 11:20

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Blackboard login page: <http://www.cmu.edu/blackboard/>

Optional Text: Learning Autodesk® Maya® 2009, Alias/Wavefront available at Amazon.com

Materials: We will have an art server account for this class but a USB Flash Drive for backing up your work is strongly suggested.

On successful completion of this course, you will be able to:

• Produce work that uses the tools of animation for self-expression.

• Critically evaluate your work and the works of others through formal critique.

• Critically discuss examples of animation done with and without the computer.

Week 1

**M 8/23** Class introduction, course introduction, watch animation.

**W 8/25** Introduction to Maya. Project 1: In Maya build at least three objects, environments or characters by manipulating the primitive shapes provided.

Text pp. Text pp. 13 – 69

MayaHelp> Learning Resources> tutorials> Getting Started with Maya> Maya Basics.

MayaHelp> Learning Resources> tutorials> Getting Started with Maya>Polygonal Modeling

Week 2

**M 8/30** Crit on Project 1. Maya overview. Project 2 Work through the Squash and Stretch exercise (Project One in text) substitute one of your objects for the ball.

Text pp. 71 – 85, 108 -181. Begin work on Project 2.

MayaHelp> Learning Resources> tutorials> Getting Started with Maya> Animation> Lesson 1

MayaHelp> Learning Resources> tutorials> Getting Started with Maya> Animation> Lesson 2

MayaHelp> Learning Resources>tutorials> Getting Started with Maya> Dynamics

**W 9/1** Work on Project 2. Watch Animation.

Week 3

**M 9/6 Labor Day NO CLASS.**

**W 9/8** Crit on Project 2. Watch Animation.

Week 4

**M 9/13** Discuss building objects from scratch and key framing. Project 3: Build at least two objects from scratch using at least two construction techniques and create an animation where the objects are attached, one object moves and the other doesn't.

Text pp. 185 - 217.

MayaHelp> Learning Resources> tutorials> Getting Started with Maya> Polygon Modeling

MayaHelp> Learning Resources>tutorials> Getting Started with Maya> Animation> Lesson 3

**W 9/15** Work on Project 3. Watch Animation.

Week 5

**M 9/20** Crit on project 3 Discuss skinning and skeletons. Project 4: Build at least two objects from scratch and create an animation where both are moving, skinned and connected to a skeleton.

Text pp. 240 – 273. 289 – 349, 405 - 415.

MayaHelp> Learning Resources>tutorials> Getting Started with Maya> Character Setup> Lesson 1

MayaHelp> Learning Resources>tutorials> Getting Started with Maya> Character Setup> Lesson 2

**W 9/22** Work on Project 4. Watch Animation.

Week 6

**M 9/27** Crit on Project 4. Discuss lighting, cameras, IK (Inverse Kinamatic) and blend shapes. Project 5: Create an animation where at least one light and the camera are moving which incorporates either an IK movement or a morph. Text pp. 275 – 287. 447 – 459.

MayaHelp> Learning Resources>tutorials> Getting Started with Maya> Character Setup> Lesson 3

**W 9/29** Work on Project 5.

Week 7

**M 10/4** Crit on Project 5. Discuss texture mapping. Project 6: create at least three separate objects that have been texture mapped, animate and render them. Text pp.87 – 105, 219 – 237, 462 - 475.

MayaHelp> Learning Resources>tutorials> Getting Started with Maya> Polygon Texturing

MayaHelp> Learning Resources>tutorials> Getting Started with Maya> Rendering

**W 10/6**  Work on Project 6.

Week 8

**M 10/11** Crit on Project 6. Discuss Storyboarding. Project 7: Develop a story board for a project you would like to create in 3-D Animation.

**W 10/13** Work on Story board. Watch Animation.

Week 9

**M 10/18** Crit on Storyboards.

**W 10/20** Project 8: Develop the main elements from your story board (Models, character designs etc.) Text pp.216 – 236, 292 – 308.Watch Animation.

Week 10

**M 10/25** Work on Project 8.

**W 10/26** Work on Project 8. Watch Animation.

Week 11

**M 11/1** Work on Project 8.

**W 11/3** Work on Project 8. Watch Animation.

Week 12

**M 11/8** Crit on Project 8. Project 9: Animate the elements you created completed with sound to a quick time file or mpeg3.

**W 11/10**  Work on Project 9. Watch Animation.

Week 13

**M 11/15** Work on Project 9. Work In Progress Crit.

**W 11/17** Work on Project 9. Watch Animation.

Week 14

**M 11/22** Work on Project 9.

**W 11/24** **Thanksgiving Break - NO CLASS**

Week 15

**T 11/29** Work on Project 9.

**H 12/1** Last class to put any finishing touches on your project.

**Final Crit - Date TBA at the end of exam week.**

Daily attendance is mandatory, since all production will be done during class it is essential you arrive by class time, 8:30 PM. You are required to sign the attendance sheet daily, Three absences will result in one letter grade lower than the averaged final grade, if you are late three times that is equal to one absence. Grades will be the result of averaging class participation and cooperation, performance on assignments and final quality of the assigned projects.

No Assignment is to be longer than 150 frames except the final project.

All rendering will be no larger than half screen except for the final project.

**Grading:**

The most important thing you can get out of this class is a well animated short. However, since grades are important to some, here are my requirements.

Quality of projects and presentation at crits: 40%

One letter grade will be deducted from projects and assignments turned in late

Participation: 20%

You are expected to assume an active role in critique and presentation

Attendance: 40%

You are expected to be at every class, if you are late three times that is equal to one absence

Students are encouraged to attend the Art School Lecture Series.

Assignment overview

Project 1: In Maya build at least three objects, environments or characters with the primitive shapes provided.

Project 2 Work through the Squash and Stretch exercise in the online help, substitute one of the objects you built in project 1 for the ball.

Project 3: Build at least two objects from scratch using at least two construction techniques and create an animation where the objects are attached, one object moves and the other doesn't

Project 4: Build at least two objects from scratch and create an animation where both are moving, skinned and connected to a skeleton.

Project 5: Create an animation where at least one light and the camera are

moving or changing which incorporates either an IK movement or

a blend shape.

Project 6: Create at least three separate objects that have been texture

mapped, animate and render them.

Project 7: Develop a story board for a project you would like to create in 3-D Animation

Project 8: Develop the main elements from your story board (Models, character designs etc.)

Project 9: Animate the elements you created and render them completed to a Quicktime or to DVD with sound.