**ANIMATION I** :: SYLLABUS

ARTS 4060 Spring 2012

Tuesdays and Fridays

Sage, VAST Studio, 2411

**Professor:** Silvia Ruzanka

**Office:** Sage 4202

**Office Hours:** By appointment or Mondays/Thursdays 2:30-3:30

**Email:** ruzans@rpi.edu (please include ARTS 4060 in the subject heading)

\*Note this information is subject to change over the course of the semester.

COURSE DESCRIPTION

**Animation I** is an introduction to 3D animation. Students will complete several small assignments that are designed to encourage creativity, develop a familiarity with the tools and learn animation terminology.

REQUIREMENTS

1.There will be several small projects leading up to a final project. Satisfactory completion of projects and participation during in-class critiques is mandatory for credit. **Critiques are not optional.**

2.Late arrivals, early departures and unexcused absences are frowned upon. Only 3 unexcused absences will be allowed. If you need an official excuse, go to the Student Experience office: 4th floor of Academy Hall, x8022, [se@rpi.edu](mailto:se@rpi.edu). Every additional absence will result in the lowering of the final grade by a letter. Do not arrive late or leave early. Three tardies or early departures are considered one absence. It is the student's responsibility to make up material missed due to absence; the professor does not provide lecture notes to students who miss class.

ASSIGNMENTS

All assignments are due at the beginning of class and will be marked down if turned in later. Work must be submitted in the format listed in the assignment. Late assignments will be lowered one letter grade for each day late. Satisfactory completion of projects is mandatory for a passing grade.

Budget in time for technical difficulties. **Losing your files due to a computer crash or other means will NOT be allowed as an excuse for turning in work late.** You are responsible for backing up all of your files. Backing up files is very important. **Printer malfunction will NOT be allowed as an excuse for turning in work late.** You are responsible for printing your images ahead of time.

MATERIALS

**Required**

Laptop computer (bring laptops to every class)

Active RCS account

Video Camera for shooting reference footage

Flash Drive or portable hard drive: You are responsible for backing up all your files.

Maya

Sketchbook-for keeping ideas, drawings, photographs, and notes. Bring this to class.

RECOMMENDED READING

The Animator’s Survival Kit, Richard Williams

Introducing Maya 2012, Dariush Derakhshani

The Art of Maya, Autodesk Maya Press

LEARNING OBJECTIVES

By completion of the course:

* Students will be able to use basic 3D modeling techniques
* Students will be able to use basic shading, rendering, texturing, and lighting techniques
* Students will be able to apply animation concepts learned in Fundamentals of Animation to a 3D environment
* Students will create a short 3D animation

COURSE EVALUATION

Students must demonstrate satisfactory achievement of course objectives through fulfillment of course projects and by contributing to class discussions and critiques.

All appeals must be brought to the instructor during office hours or at a scheduled time convenient to both parties. Keep in mind that an appeal has the potential to raise or lower your grade.

If a student completes all assignments adequately, participates in class discussions and activities, and has a good attendance record, she/he can expect to receive a grade of C.

Grades of B and A are given for work, participation and engagement that substantially **exceed** the average expectation.

Letter grade equivalents for the course are as follows:

A=4.0, A-=3.67, B+=3.33 B=3.0, B-= 2.67, C+= 2.33,

C=2.0 C-= 1.67, D+=1.33, D=1.0, F=0.0

**Grade Breakdown:**

Attendance & Participation: 10%

Short Studies: 50% total

Midterm Project: 15%

Final Project: 25%

ACADEMIC INTEGRITY

**Trust**: Student-Teacher relationships are built on trust. Students must trust that teachers have made appropriate decisions about the structure and content of the courses they teach. And, teachers must trust that the assignments that students turn in are their own. Acts, which violate this trust, undermine the educational process.

**Plagiarism**: All work produced in this course must be original and created by the student. First infraction will result in a failure for the course and a report to the Office of the Dean.

**COURSE CALENDAR**

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| **Week 1**  **1/24 & 1/27** | **First class meeting on Friday**  **Introduction**:   * Introduction to the course * Creating a Vimeo account | **Homework:**  **Short Study:** Post your best work from previous classes onto Vimeo and email Vimeo address to [ruzans@rpi.edu](mailto:ruzans@rpi.edu). Remember to include ARTS 4060 in the subject line. For next Friday make some reference videos of bouncing balls |
| **Week 2**  **1/31 & 2/3** | **Tuesday:**  Poly Modeling:  Components, Mesh Tools  Extrusion, Mirroring  Edges and Edge Loops  Combining Meshes  Normals  UV coordinates  Using Reference images  **Friday:**  Review of Animation concepts  Graph Editor  Playblast | **Short Study (modeling): Due Tuesday**  Find a household object, prepare reference images (drawn or photo) and create a model of the object. Upload maya file to LMS.  **Short Study (animation): Due Friday**  Simple Bouncing Ball |
| **Week 3**  **2/7 & 2/10** | **Tuesday:**  Poly Modeling  Spline techniques,  Subdivision surfaces,  Using Quads  **Friday**  Weight, squash and stretch | **Short Study (modeling): Due Tuesday**  Choose an organic, natural object. Prepare reference images and create a model of the object. Upload maya file to LMS.  **Short Study (animation): Due Friday**  Bouncing Ball of different weights |
| **Week 4**  **2/14 & 2/17** | **Tuesday:**  Textures  UV Mapping  Texture creation  **Friday**  Weight, squash and stretch | **Short Study (modeling): Due Tuesday**  Concept sketches for environment model. Collect reference images and textures.  **Short Study (animation): Due Friday**  Animation based on tempo and rhythm |
| **Week 5**  **2/21 & 2/24** | **Tuesday:**  Continue working with UV mapping and texture editing  Work on models  **Friday:**  Working with rigged models | **Short Study (modeling): Due Tuesday**  Model and texture environment first draft  **Short Study (animation): Due Friday**  Go out and observe people and create sketches of people in different poses. |
| **Week 6**  **2/28 & 3/2** | **Tuesday:**  Lighting and rendering  Cameras  **Friday:**  Continue working with rigged models | **Short Study (modeling): Due Tuesday**  Add lighting to your environment  **Short Study (animation): Due Friday**  Pose rigged model and output renders |
| **Week 7**  **3/6 & 3/9** | **Tuesday:**  Work in class on environment | **Project 1: Due after spring break**  Finish environment model, pose character in it, do polished render. Pay attention to framing, composition, weight, color, light. |
| **Week 8**  **Spring Break**  **3/13 and 3/16** | **Spring Break** | **Work on Project 1** |
| **Week 9**  **3/20 and 3/23** | **Tuesday:**  **Critique**  **Friday:**  Pose-to-pose animation, overlap | **Short Study (modeling):**  Make your own basic character model.  **Short Study (animation):**  Animate gestures |
| **Week 10**  **3/27 and 3/30** | **Tuesday:**  Bones, skinning, and IK  **Friday:**  Walk cycles | **Short study (modeling):**  Rig your character model  **Short study (animation):**  Walk cycle blocking |
| **Week 11**  **4/3 and 4/6** | **Tuesday:**  Skin and rig clinic  **Friday:**  Splining | **Short study (modeling):**  Create poses with your model  **Short study (animation):**  Walk cycle splining |
| **Week 12**  **4/10 and 4/13** | **Tuesday:**  Constraints and control objects  **Friday**  Polish walk cycles | **Final Project: Animated short**  **Storyboard: Due Tuesday** |
| **Week 13**  **4/17 & 4/20** | **Work in class** | **Final Project Blocking: Due Tuesday** |
| **Week 14**  **4/23 & 4/27** | **Work in class** |  |
| **Week 15**  **5/1 & 5/4** | **Tuesday**  Last-minute questions & fixes  **Friday: FINAL PROJECT DUE**  **Begin Final Critiques** |  |
| **Week 16**  **5/8** | **Final Critiques** |  |
| **Final**  **Exam** | **No Final Exam** |  |