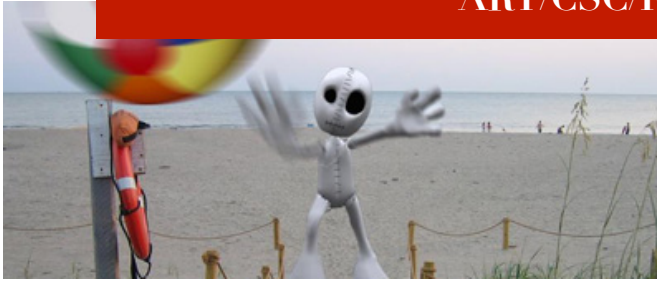


# ART/CSC/FST 320: Computer Animation



3:30 - 4:45 p.m.

Mondays and Wednesdays

CIS 2006

Labs: CIS 2006, Digital Arts Lab

Eric Patterson, Ph.D.

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CIS 2031, Office Hours 10:00 a.m.-12:00 p.m. or by appointment.

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## Course Description:

This course continues material introduced in ART/CSC/FST 320 and concentrates on character animation and its related theory, production, and industry. Advanced 3D modeling, rigging, shading, rendering, and character-design skills are developed in conjunction with traditional story, animation, lighting, and cinematography methods. Students complete several projects and work for a final animated film.

## Required Materials:

*The Modeling and Animation Handbook (Maya 2008)* by Autodesk Maya Press

*Character Animation in 3D* by Bruce Roberts

*MEL Scripting for Maya Animators* by Mark Wilkins and Chris Kazmier

Access to a still camera, CD/DVD-Rs, and art supplies such as drawing paper, pencils, and clay such as Super Sculpey.

## Optional:

*The Animator's Survival Kit* by Richard Williams

## Useful:

Photoshop, Illustrator, Final Cut Pro or Premiere -- installed on computers in Digital Arts Lab.

<https://renderman.pixar.com/>

<http://www.learning-maya.com>

<http://www.highend3d.com>

<http://www.alias.com>

<http://www.aqsis.com>

Maya Resources housed in the Randall Library, including:

*The Art of Maya*

*Maya Cloth Courseware*

*MEL Fundamentals Courseware*

*Learning Maya: Foundations*

*Learning Maya: Character Rigging and Animation*

*Learning Maya: Dynamics*

*Learning Maya: Games and Interactive*

*Learning Maya: Rendering*

*Maya Seminars: Optimizing a Production Pipeline*

*Maya Techniques: Patch Modeling for Visual Effects*

*Maya Techniques: Rendering 2D Effects in a 3D Environment*

*Maya Techniques: Integrating a Creature Animation Rig*

*Maya Techniques: Particles for Visual Effects*

*Maya Techniques: Understanding Maya Shading Networks*

*Maya Techniques: Exploring Advanced Shading Networks*

*Maya Techniques: MELBot Wars: Virtual Fighting Robots*

*Maya Techniques: Polygon Texturing, Lighting, and Shading*

*Maya Techniques: RigidBody Simulations for Visual Effects*

*Maya Techniques: Inside the Maya Architecture*

*Maya Techniques: Hyper-Realistic Modeling*

*Maya Techniques: Hyper-Realistic Body Setup*

*Maya Techniques: Hyper-Realistic Facial Setup*

Adding additional Digital Tutors videos on various topics this semester.

## Grades:

Project 1: Character Pack (reference, maquette, modeling, rigging, etc). 15%

Project 2: Character Animation (given shots) 15%

Project 3: TBA (Demo reel and/or face-anim or lip-sync) 15%

Project 4: Elements of an Animated Short 15%

Homework, smaller exercises focused on improving basic skills. 20%

Unannounced quizzes based on readings and class material. 15%



Class participation, discussion, and presentations.

5%

## Tentative Project Description Summaries:

1. Create a complete character, ready-to-animate. Design, model, rig, shade, and animate a 3D character of your choice.
2. Animate a 3D character in a variety of actions such as jump, lift, walk, sneak, etc.
3. Complete elements for a demo reel including modeling, lighting, character turntable, animation shots.
4. Complete elements of a professional quality 3D animated short.

## Class Policies

Quizzes will cover materials presented in class, whether lecture, video, tutorial, etc., as well as material from the required texts. Quizzes may include written questions and/or practicum.

General computer literacy is required for this course. Also desirable are artistic and cinematic interests and talent. 3-D graphics work is very time-consuming. Plan carefully to complete projects in a timely manner. Late work will be reduced in grade by 5 points a day. There are no make-up quizzes. Please contact me in advance, if possible, if you must miss any graded work.

Attendance is required and will both directly and indirectly affect grades -- covered material is very pertinent to completing homework and projects effectively. Unless special circumstances are involved, more than three absences will result in class failure. Students are individually responsible for keeping current with course material and assignments.

Class announcements supersede posted material.

Academic honesty in all your work is required for a passing grade.

This syllabus may be subject to change with reasonable notice.