

Course Syllabus
CAP 3034 Introduction to Computer-Aided Animation
Section 8644, Spring 2009

1. Catalog Description (3 credits):
Introduction to topics related to computer-aided animation. Rigging for forward and inverse kinematics. Skin weighting. Morph targets. Expression-driven animation, rigid-body and particle simulation.
2. Pre-requisites and Co-requisites
Pre-requisites: MAC 1147 Precalculus: Algebra and Trigonometry, or equivalent
3. Course Objectives:
 - Familiar with the history of animation and computer animation
 - Understand elemental topics in physics and geometry related to 3D animation
 - Understand the 3D computer animation techniques and algorithms
 - Implement and rendering 3D computer animations using Maya
4. Instructor: Dr. Rong Zhang
Office location: CSE E526
Telephone: 392-9685
E-mail address: rzhang@cise.ufl.edu
Office hours: M 1:55pm – 2:30pm, W F 1:55pm – 2:45pm or by appointment in CSE 526
5. Teaching Assistant Shayan Javed
E-mail address: sjaved@cise.ufl.edu
Office hours: T period 5-6, R period 6 or by appointment in Weil 410
6. Meeting Times and Location:
MWF period 6 (12:50am – 1:40pm) in WEIL 0410
7. Textbooks and Software Required
Required textbook: **Learning Autodesk Maya 2008: The Modeling & Animation Handbook**
Publisher: Autodesk Maya Press
ISBN: 978-1-897177-38-9

Recommended textbook: **Mastering Maya 8.5** by John Kundert-Gibbs, Mick Larkins, Dariush Derakhshani, Eric Kunzendorf
Publisher: Sybex
ISBN: 978-0-470-12845-9

Software: Maya Unlimited 2008 is available in UF CIRCA labs. Students do not need to purchase
8. Course Outline -

There might be a shift in topics depending on the backgrounds or interests of the students.

- History of animation and computer animation
- Key framing and fine tune animation curves
- Hierarchical animation
- Motion path animation
- Driven keys
- Skeletons
- Forward and Inverse kinematics
- Skinning and rigging
- Expression-driven animation
- Morph targets
- Rigid-body dynamics
- Non-linear editing
- Particle simulation

9. Attendance and Expectations –

Class attendance is required. If for some reason you have to miss a class, you are responsible for getting class notes from a classmate. Make sure to submit your completed work before the due date to avoid a penalty if an assignment is due. Cell phones should be turned off or set to vibrate.

10. Homework Policies –

You may discuss assignments with other students. But you must implement it by yourself. If your work is proven to be copied from another student, 0 points will be given to both students.

Late assignments will be accepted with a penalty of deduction of 10% of the maximum point value every 12 hours, for up to 3 days, to accommodate the mis-estimation of rendering time. Please plan final renderings for one to two days in advance.

11. Grading Scale –

Final grade is calculated according to the following schedule

Quizzes	25%
Homework and projects	50%
Final project	25%

And the grade scale is:

A(100-90),B+(89-85),B(84-80),C+(79-75),C(74-70),D+(69-65),D(64-60),F(59-0)

12. Make-up Exam Policy –

All students should plan to take their exams at the scheduled times. In the case of sudden or unexpected events that will cause them to miss an exam, students are required to notify the instructor prior to the exam or as early as possible. Make-up exams are given only in exceptional circumstances with the Instructor's permission.

13. Honesty Policy –

All students admitted to the University of Florida have signed a statement of academic honesty committing themselves to be honest in all academic work and understanding that failure to comply with this commitment will result in

disciplinary action. This statement is a reminder to uphold your obligation as a UF student and to be honest in all work submitted and exams taken in this course and all others.

14. Accommodation for Students with Disabilities –

Students requesting classroom accommodation must first register with the Dean of Students Office. That office will provide the student with documentation that he/she must provide to the course instructor when requesting accommodation.

15. UF Counseling Services –

Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:

- University Counseling Center, 301 Peabody Hall, 392-1575, Personal and Career Counseling.
- SHCC mental Health, Student Health Care Center, 392-1171, Personal and Counseling.
- Center for Sexual Assault/Abuse Recovery and Education (CARE), Student Health Care Center, 392-1161, sexual assault counseling.
- Career Resource Center, Reitz Union, 392-1601, career development assistance and counseling.

16. Software Use –

All faculty, staff and student of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.