

# Add Course Request

Submitted on: 2012-12-03 15:40:35

1. <b>COURSE SUBJECT</b>	DMD
2. <b>COURSE NUMBER</b> (OR PROPOSED NUMBER)	2300
3. <b>COURSE TITLE</b>	3D Animation 1
4. <b>INITIATING DEPARTMENT or UNIT</b>	Digital Media & Design
5. <b>NAME OF SUBMITTER</b>	Eva Gorbants
6. <b>PHONE of SUBMITTER</b>	Phone: +1 860 486 3016
7. <b>EMAIL of SUBMITTER</b>	Email: eva.gorbants@uconn.edu
8. <b>CONTACT PERSON</b>	Tim Hunter
9. <b>UNIT NUMBER of CONTACT PERSON (U-BOX)</b>	1041
10. <b>PHONE of contact person</b>	Phone: 6-2281/6-6765
11. <b>EMAIL of of contact person</b>	Email: tim.hunter@uconn.edu
12. Departmental Approval Date	11/05/2012
13. School/College Approval Date	12/03/2012
14. Names and Dates of additional Department and School/College approvals	
15. Proposed Implementation Date	Term: Fall, Year: 2013
16. Offered before next printed catalog is distributed?	No
17. <b>General Education Content Area</b>	
18. <b>General Education Skill Code (W/Q).</b> Any non-W section?	None
19. Terms Offered	Semester: Fall Spring Year: Every_Year
20. Sections	Sections Taught: 1-2
21. Student Number	Students/Sections: 16/section
22. Clarification:	
23. <b>Number of Credits</b>	03 if VAR Min: Max: credits each term
24. <b>INSTRUCTIONAL PATTERN</b> Two 3 hour studio sessios per week	
25. Will this course be taught in a language other than English?	No If yes, then name the language:

26. Please list any prerequisites, recommended preparation or suggested preparation: Prerequisites: 1000 DIGITAL FOUNDATION 1030 ANIMATION LAB	
27. Is Instructor, Dept. Head or Unit <b>Consent Required</b> ?	No
28. Permissions and Exclusions:  Students should take this course in the their 4th semester term	
29. Is this course <b>repeatable for credit</b> ?	No If yes, total credits allowed: Allow multiple enrollments in same term?
30. <b>Grading Basis</b>	Graded
31. If satisfactory/unsatisfactory grading is proposed, please provide <b>rationale</b> :	
32. Will the course or any sections of the course be taught as Honors? AsHonors	
33. Additional Details:  Other (specify): offered at the Storrs Campus only	
34. Special Attributes:	
35. <b>REGIONAL CAMPUS AVAILABILITY:</b> The Storrs Campus currently has the digital media faculty and studio/lab facilities available to offer this course. Expansion to Stamford is possible.	
36. <b>PROVIDE THE PROPOSED TITLE AND COMPLETE CATALOG COPY:</b>  2300. 3D ANIMATION 1 Three credits. Two 3-hour studio sessions. Prerequisites: DMD1000 & DMD1030. An introduction to 3D Animation techniques including key framing, curve editing, timing, squash and stretch, walk cycles, and the 12 principles of animation.	
37. <b>RATIONALE FOR ACTION REQUESTED</b>  This course is designed to provide digital media students instruction and guidance in the technique and critical understanding of animation specific to a 3d environment. The technical instruction will be focused around the use of appropriate state of the art 3D animation programs. This course will be required for future “advanced” 3D related classes. Students will develop their skills using key-frame animation and the graph editor. Students will also learn techniques for researching & using reference. Students can apply skills learned in this class in other areas including game art, design, motion graphics and 2D animation.  This course is also central to the curriculum of the new department of digital media and design and essential to creating the major and minor in this field.  why the course is appropriate for the 1000 or 2000 level	

The course is the introductory course for the 3D animation track, addressing fundamentals of animating in 3D space. It builds on the principles introduced in 1000 level digital foundation courses.

justification for enrollment restrictions

The enrollment CAP of 16 is based on available studio/lab space.

effect on other departments

The course is open to digital media majors and minors. Should space be available, non-digital media students will have the ability to enroll in the course with instructor consent if prerequisites are met.

effects on the regional campuses

Currently not offered at the regional campuses. Expansion to the Stamford Campus is planned for the near future.

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**38. SYLLABUS:**

Online URL: ( [https://web2.uconn.edu/senateform/request/course\\_uploads/evg02003-1354311772-Syllabus DMD 2300 3D Animation I.docx](https://web2.uconn.edu/senateform/request/course_uploads/evg02003-1354311772-Syllabus DMD 2300 3D Animation I.docx) )

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**39. Course Information: ALL General Education courses, including W and Q courses, MUST answer this question**

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**40. Goals of General Education: All Courses Proposed for a Gen Ed Content Area MUST answer this question**

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**41. Content Area and/or Competency Criteria: ALL General Education courses, including W and Q courses, MUST answer this question.: Specific Criteria**

- a. **Arts and Humanities:**
- b. **Social Sciences:**
- c. **Science and Technology:**
  - i. **Laboratory:**
- d. **Diversity and Multiculturalism:**
  - 43. **International:**
- e. **Q course:**
- f. **W course:**

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**42. RESOURCES:**

Does the department/school/program currently have resources to offer the course as proposed  
YES

If NO, please explain why and what resources are required to offer the course.

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**43. SUPPLEMENTARY INFORMATION:**

**ADMIN COMMENT:**

Senate approved new course 12/10/12

## DMD2300: 3D ANIMATION 1

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Instructor:	Prof. Samantha Olschan/ Prof. Perry Harovas	Term:	
Office:	DRMU 108	Class Meeting Days:	-
Phone:	(860) 486-6636	Class Meeting Hours:	-
E-Mail:	<a href="mailto:samantha.olschan@uconn.edu">samantha.olschan@uconn.edu</a>	Class Location:	-

[perry.harovas@uconn.edu](mailto:perry.harovas@uconn.edu)

Office  
Hours:

By Appointment (please email to schedule)

Lab Location:

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**I. COURSE DESCRIPTION**

This course will provide an exploration of 3D computer-based character animation. We will be strict analysts of motion, drawing from the classical past of traditional animation and film, learning spacing, timing, weight, and dynamic expression. Using programs including Maya and Softimage, the semester will be exclusively dedicated to movement and character. This course will not cover modeling, rigging, texturing, or lighting, although such topics will

necessarily be discussed in passing. Basic rigs will be provided, but you may make, purchase, or appropriate more distinctive models on your own time.

Students should master a basic “skillset” of important techniques in animation. However, our goals are to go beyond simply learning the technical interface, as we will also focus on learning principles of good visualization in preparation for both artistic and commercial endeavors. Accordingly, students will be evaluated on their creativity and diligence, as demonstrated by a final project consisting of a coherent short piece at least one minute in length... The technical exercises & projects are to be rendered to QuickTime format. You may hand in your work in Playblast-format, although for your own benefit you should consider a full render.

## **II. COURSE RATIONALE**

This is an introductory course in 3D animation. It will emphasize traditional animation principles as applied to 3D animation. Topics will include: principles of animation, transformations and deformations of 3D objects, rigging, and rendering. Its purpose is to familiarize the students with working in a 3-D environment and build a working knowledge of the basic tools used in 3D animation. This course will be required for future “advanced” 3D related classes. Students will develop their skills using key-frame animation and the graph editor. Students will also learn techniques for researching & using reference. Students can apply skills learned in this class in other areas including game art, motion graphics and 2D Animation.

## **III. COURSE OBJECTIVES & GOALS**

After completing this course, students will have:

1. A solid base in animation fundamentals.
2. The ability to use 3D animation tools to apply fundamentals to animation applications
3. An understanding of how camera and lighting affect animation, and how they can be used together to tell story.
4. A broad understanding of all animation styles and techniques, and how they apply to and can aid animation in 3D.
5. A portfolio demonstrating all the basic techniques of 3D animation.

#### IV. POLICIES

Participation is required. This course is experiential and participation is evaluated each day; there is no practical way to recapture material covered in class. Students are responsible for turning all assignments in on time and for getting missed course material from peers.

**If you are absent for a medical reason:** If you have a serious illness which will accrue absences, a Doctor's note is required. Then see me for handouts or pertinent material you may have missed.

A note on in class etiquette: **Please turn off all cellphones during class.** No texting or checking of personal email or social networks during class time.

#### V. GRADING

Creativity is the key to doing well in this class and in getting the most out of it. The work involves great patience and perseverance at times. By being creative in what you do, by finding answers in yourself, you will continue to find the energy to persevere without trouble, and you will easily work your way towards a good grade.

The purpose of grading is to clearly and accurately pinpoint the strengths and weaknesses of your progress. You will receive a grade on each assignment and a progress report at midterm. This report will evaluate progress, note strengths and areas for improvement. Your overall grade will be based on your understanding of the information and ideas discussed, and your formal, technical, and conceptual progress as demonstrated in projects and exercises, and professionalism during the course.

Students will be evaluated through exercises, class participation, presentations, and technical proficiency with various project and media applications. Aesthetic applications, and problem solving are also points of evaluation. Students will be evaluated on their creativity and diligence in applying the course tools to produce cogent and polished shorts. Our goals are to go beyond simply achieving technical proficiency, as we will also focus on learning principles in preparation for both artistic and commercial endeavors.

**Late Work Policy:** Offer specifics about your policy on late work.

Assignments turned in late will be assessed a penalty: a half-letter grade if it is one day late, or a full-letter grade for 2-7 days late and will not be accepted if overdue by more than seven days.

Assessment	Percent of Final Grade
Participation	20%
Technical Exercises	25%
Presentations	25%
Final Project	30%
	100%

## VI. TEXTS & MATERIALS

Required Text:

*"The Animators Survival Kit" - Richard Williams*

*"Character Animation in 3D" Steve Roberts*

Recommended Texts:

*"The Animators Workbook" - Tony White*

Please note: Readings, essays, films, and/or media clips may be periodically given throughout the course.

## VII. ASSIGNMENTS

1. *Technical Exercises*



Each week, students will be expected to demonstrate that they understand the techniques discussed the previous week's class. How you do this is up to you. You can design a very short and specific piece that focuses on demonstrating technique. Or, you can show a part of your final project in progress that incorporates the technique. All pieces should closely adhere to the principles of animation that we discuss in class, as well as display the assigned technique. Please have your piece pre-rendered in QuickTime format. I want to make sure that you understand how to render a piece and prepare it for easy display.

## *2. Brief Presentation*

There is a presentation component to this course. Each student will have to deliver a brief 15-20 minute presentation and discussion on topic of their choice as it related to 3D animation. Examples may include- walk cycle sequences in specific films, facial animation/capture technology, text based animation, short animations that caught their interest and why- and apply these topics to what we are learning in class.

## *3. Final Project or Demo Reel*

The final project for this class must demonstrate an understanding of the concepts discussed in the course. The guidelines are extremely flexible: you should show that you understand the techniques and software discussed, that you can incorporate principles of good filmmaking, and that you have the creativity and dedication to produce a sophisticated piece. You will have ample class time both to work on the project itself, as well as to use me and your fellow students as resources. Alternatively, if you are not interested in animating a short piece of your own, you may produce a final Demo Reel of all techniques assignments that you have created through the course, which have been revised, and re-rendered, based on feedback received during critiques.

We will view and critique the final projects during Final Exam Week.

## **VIII. SUPPLEMENTARY MATERIALS**

I strongly recommend that you purchase an external hard drive. Students are responsible for having their work available for viewing in class during weekly class critiques. You do not need to submit your work to me on any kind of disk or storage device as long as I can view it in class. Note: hardware problems are no excuse for late or missing work. The hard drives of the computers are

notoriously unreliable, and constantly get erased! Make backup copies and save your work on media besides the schools hard drives! Files can become corrupted.

Reference Websites

[www.autodesk.com](http://www.autodesk.com)

[www.creativecrash.com](http://www.creativecrash.com)

[www.awn.com](http://www.awn.com)

## IX. SCHEDULE

### Week 1

Class Discussion: Introduction to the course , basic review of the 12 Principles of Animation

Demo: basic animation tools (Keyframe, animation curve, graph editor, playblast). We will learn how to master the tools so that we can fine tune timing and eases, squash & stretch in 3D- how this set up differs from 2D

*Assignment 1: Go beyond the basic bouncing ball - create 3 bouncing balls (basketball, beach ball, bowling ball) using the basic animation tools to create the necessary physical attributes for each different type of bounce.*

*Reading: 12 principles of animation, Williams, p.35-45, p.102-111, Roberts, p.28-44*

## **Week 2**

Critique: Review bouncing ball assignments from previous week

Class Discussion: An explanation of Rigged Models

Demo: the basic Biped Jump

*Assignment 2: Creatively animate a jump*

*Reading: Roberts, p.47-76*

## **Week 3**

Critique: Review jump assignments

Class discussion: Weight, Displacement, and Resistance

Demo AE: Using Constraints

*Assignment 4: Creatively show a character lifting a heavy object.*

*Reading: Roberts, p. 78-100*

#### **Week 4**

Critique: Review lift assignments

Class discussion: Walk Cycles, how basic steps can be used to create a naturalistic walk with character

Demo: Walk Cycles

*Assignment 3: Creatively animate two (2) walk cycles from the list discussed in class.*

*Reading: Roberts, p.104-119, p121-135*

#### **Week 5**

Critique: Review walk cycle assignments

Class discussion: Working with Sound, Body Sync, anticipation, follow through

Demo : Body and Sound Sync Animation

*Assignment 5: Body sync a character to a clip of dialogue. Also, bring in some clips of dialogue that you enjoy (digitized format, MP3, CD or DVD).*

*Reading: Roberts, p.159-168*

## **Week 6**

Class Discussion: Body Sync (continued)

Demo: Character Performance with Sound, Secondary animation, using blend shapes

*Assignment 6: One additional body sync animation (to dialogue of your choice). Bring in more sound clips.*

*Reading: Roberts, p.169-182*

## **Week 7**

Critique: Review Character Performance assignment

Class Discussion: Phonemes and Lip Sync, other facial animation techniques

Demo: Lip Sync, Importing Sound, Secondary facial motion

*Assignment 7: Lip sync and body sync your character to a dialogue clip.*

*Reading: Roberts, p. 222-239*

## **Week 8**

Critique: Review Final Character Performance with Lip Sync assignment

Class Discussion: timing, motion and emotion— how can time express emotions and ideas.

Demo: Fist Pound- A more in depth look into inbetweening, breakdown poses, anticipation, follow through in a human character

*Assignment 9: Fist Pound- Creatively use the rig provided to have your character make its point by pounding its fist on a table in a convincing manner.*

## **Week 9**

Class discussion: Concept Acquisition/Scriptwriting/Narration/Storyboarding

Demo: Scripting/Storyboarding technique review.

*Assignment 8: Produce a rough draft of a script/storyboard for your final project. If you are opting to create a Demo Reel- please produce a “plan of attack” on sections to revise and propose at least two new techniques to complete/add to your reel.*

## **Week 10**

Review Scripts/Boards/Plan of Attack for Final Project

Class Discussion: timing, motion and emotion — how can timing express emotions and ideas.

Demo: Fist Pound- A more in depth look into inbetweening, breakdown poses, anticipation, follow through in a human character

*Assignment 9: Fist Pound- Creatively use the rig provided to have your character make its point by pounding its fist on a table in a convincing manner.*

## **Week 11**

Class discussion: This will be phase I of creating your piece of animation that will be your final project for this class.

Demo: Planning your animation to create effective timing, blocking and poses with which to tell your story, demonstrate making a “Key all button”.

Final project studio — review of students proposals and workshop project.

*Assignment: Final project*

## **Week 12**

Class discussion: Inbetweening your character

Demo: dope sheet, graph editor and various other tools to fine tune your animation.

*Assignment: Final project*

### **Week 13**

Critique: Rough animation in class

Class discussion: Final in Progress

Demo: discuss ways of using graph editor, dope sheet etc. to improve timing and motion for final animation. I will also be working one on one with people to address specific issues.

*Assignment: Final project*

### **Week 14**

***Presentation and Critique of Final Projects!***

\* Note: The Schedule is subject to revision