

DPA 8070 – 3D Modeling and Animation

Fall 2019

Syllabus

Instructor

Dr. Sophie Joerg
318 McAdams Hall
Office hours: Thu 1:30pm-2:30pm
sjoerg@clemson.edu
https://people.cs.clemson.edu/~sjoerg/Fall19_8070.html

Class Meeting Times

TR 11:00am - 12:15am, McAdams 110E
Exam: Wed, December 11, 3:00pm - 5:30pm, McAdams 110E

Class Cancellation

Students are expected to wait for 15 minutes after the beginning of class before leaving if the instructor is late and no announcement has been posted on Canvas.

Course Description and Topics

The goal of this course is to provide an overview of 3D Modeling and Animation using the software Autodesk Maya and to give students opportunities to practice and improve their skills.

Topics for the course include:

- 3D Graphics Concepts
- General Maya Concepts
- **Modeling**
 - Techniques and Topology
 - Polygonal Modeling
 - NURBS Modeling
 - Deformers
- Shading and Texturing
- Lighting and Rendering
- **Animation and Rigging**
 - Keyframe Animation
 - Constraints
 - Skeletons, IK, Skinning
 - Blend Shapes
 - Dynamics, Effects
- Scripting

Learning outcomes

At the end of the semester, students who successfully completed this course will be able to do the following:

- Create 3D models
- Discuss the quality of 3D models
- Rig a character or object
- Discuss the needs of a rig for a specific character or object
- Create animations
- Discuss animations based on animation principles
- Create shading, texturing, and lighting for a scene and render it

Materials

Selected materials will be assigned throughout the course. They will be available online. Information on how to access them will be provided if necessary.

Optional textbooks:

Dariush Derakhshani, *Introducing Maya 2016* (or 2015), Sybex, 2015.
Kelly Murdock, *Autodesk Maya 2019*, SDC Publications, 2019.

Grading

Final grades will be mostly based on projects and exercises. Class participation is also required, and includes: contribution to class discussion, engagement, and attitude. Studies have found that the single most important factor that contributes to success in a course is class attendance. With this class, like others, each lecture builds upon preceding lectures.

Projects	60%
Exercises	30%
Participation	10%

Letter grades will be based on a 10-point scale. These ranges may be changed somewhat, but only to your advantage.

Projects and Exercises

Projects and exercises will constitute a significant portion of your grade for the course. Unless instructed otherwise each of these projects and exercises should follow the guidelines listed below.

- **Webpage** For each project or exercise add to your webpage:
 - description of the problem
 - description of the solution
 - images and/or videos produced
- **Source Files** For each assignment, you will be notified on the method for submitting source files, if required.
- **Late Work** Late assignments will be accepted with penalty (10%/day for projects, 33%/day(!) for exercises).

- **Independent/Team Work** You must work on projects independently, unless specifically authorized to work in teams. Cheating of any kind will not be tolerated and will be immediately reported.

Communication

You are required to check your Clemson email at least once a day. All email to the instructors must come from your Clemson email address. Grades and feedback will be posted on Canvas: <http://www.clemson.edu/canvas/>.

Recording Devices

Lectures may not be recorded without the written permission of the instructors. You do not have the instructors' permission to use notes from the lectures for commercial purposes or to make them accessible online.

Mobile Devices and Social Media

Please silence your devices before class. Do not text during class. All social media sites, games, etc. must be turned off during class.

Academic Integrity Statement

As members of the Clemson University community, we have inherited Thomas Green Clemson's vision of this institution as a "high seminary of learning." Fundamental to this vision is a mutual commitment to truthfulness, honor, and responsibility, without which we cannot earn the trust and respect of others. Furthermore, we recognize that academic dishonesty detracts from the value of a Clemson degree. Therefore, we shall not tolerate lying, cheating, or stealing in any form. In instances where academic standards may have been compromised, Clemson University has a responsibility to respond appropriately to charges of violations of academic integrity.

Accessibility Statement

Clemson University values the diversity of our student body as a strength and a critical component of our dynamic community. Students with disabilities or temporary injuries/conditions may require accommodations due to barriers in the structure of facilities, course design, technology used for curricular purposes, or other campus resources. Students who experience a barrier to full access to this class should let the professor know, and make an appointment to meet with a staff member in Student Accessibility Services as soon as possible. You can make an appointment by calling 864-656-6848, by emailing studentaccess@lists.clemson.edu, or by visiting Suite 239 in the Academic Success Center building. Appointments are strongly encouraged – drop-ins will be seen if at all possible, but there could be a significant wait due to scheduled appointments. Students who receive Academic Access Letters are strongly encouraged to request, obtain and present these to their professors as early in the semester as possible so that accommodations can be made in a timely manner. It is the student's responsibility to follow this process each semester. You can access further information here: <http://www.clemson.edu/campus-life/campus-services/sds/>.

Title IX (Sexual Harassment) Statement

Clemson University is committed to a policy of equal opportunity for all persons and does not discriminate on the basis of race, color, religion, sex, sexual orientation, gender, pregnancy, national origin, age, disability, veteran's status, genetic information or protected activity in employment, educational

programs and activities, admissions and financial aid. This includes a prohibition against sexual harassment and sexual violence as mandated by Title IX of the Education Amendments of 1972. This policy is located at <http://www.clemson.edu/campus-life/campus-services/access/title-ix/>. Ms. Alesia Smith is the Clemson University Title IX Coordinator, and the Executive Director of Equity Compliance. Her office is located at 110 Holtzendorff Hall, 864.656.3181 (voice) or 864.656.0899 (TDD).

Academic Continuity Plan

Clemson has developed an Academic Continuity Plan for academic operations. Should university administration officially determine that the physical classroom facility is not available to conduct classes in, class will be conducted in a virtual (online) format. The University issues official disruption notifications through email /www /text notification/Social Media.

When notified, use one of the following links to navigate to Clemson Canvas where you will find important information about how we will conduct class:

Primary access link: www.clemson.edu/canvas

Secondary access link, if needed: <https://clemson.instructure.com/>

You can also use the Canvas Student App.

Our activities for teaching and learning will occur through our Canvas course. This includes: posting of lecture materials, assignments, or further instructions. On E-Learning Day, August 29, 2019, a real-time test of the Academic Continuity Plan will be conducted. Our class has a lecture scheduled on E-Learning Day. You will receive instructions in class and materials through Canvas to work on instead of that lecture.

Changes to Syllabus

Lecture topics and assignments are subject to change. The course syllabus is a general plan for the course; deviations to the class may be necessary and will be announced to class by the instructor.