



**DPA 4820/6820 – ST: Digital Lighting**  
 Fall 2018 syllabus

**Professor Tony Penna**  
 Office 219 Brooks

**tpenna@clemson.edu**  
 864-656-6961

**OFFICE HOURS**

Mon-Fri 12:30-1:30, and  
 by appointment

**CLASS MEETING TIME** Tuesday, Thursday 9:30-10:45

**CLASS MEETING LOCATIONS** 110E McAdams “The Holodeck” – Clemson  
 ??? – Charleston

**REQUIRED TEXT** *Digital Lighting and Rendering*, 3<sup>rd</sup> edition by Jeremy Birn

**REQUIRED TECHNOLOGY** Autodesk Maya software  
 Access to DVDs and/or a video streaming service

**STUDENT LEARNING OUTCOMES**

- Develop proficiency with lighting tools in Autodesk Maya and other software programs
- Develop a vocabulary of lighting aesthetics
- Establish a methodology for applying appropriate lighting principles to computer animation
- Collaborative and independent work in digital lighting and the ability to offer constructive criticism of the work of peers and yourself
- Create images and scenes to be used in a demo reel or portfolio

**REQUIREMENTS**

- You must be present, both physically and mentally, at all classes unless excused by the professor.
- You must complete all projects and assignments.
- Class participation is expected.

|                   |                  |              |                                |
|-------------------|------------------|--------------|--------------------------------|
| <b>EVALUATION</b> | Project 1        | 12.5%        | Quality of light               |
|                   | Project 2        | 12.5%        | Types of lights                |
|                   | Project 3        | 12.5%        | Shadow study                   |
|                   | Project 4        | 12.5%        | Environment study              |
|                   | Project 5        | 12.5%        | Character lighting             |
|                   | Project 6        | 12.5%        | Camera and exposure tests      |
|                   | Project 7        | 12.5%        | Color study                    |
|                   | <u>Project 8</u> | <u>12.5%</u> | <u>Caustics and reflection</u> |
|                   | <b>TOTAL</b>     | <b>100%</b>  |                                |

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## ATTENDANCE POLICY

You are expected to be present, both physically and mentally, at every class session.

If you know you will be absent from a class, let me know as soon as possible. Use the Notification of Absence module in Canvas for this.

It is **your** responsibility to acquire notes, handouts, and assignments from any day that you miss and to hand in (early) any assignments that are due on the day you miss class.

Yes, class will meet on the Thursday before fall break and the Tuesday before Thanksgiving break. Tell your parents to make your travel arrangements accordingly.

Any exam that was scheduled at the time of a class cancellation due to inclement weather will be given at the next class meeting unless contacted by the instructor. Any assignments due at the time of a class cancellation due to inclement weather will be due at the next class meeting unless contacted by the instructor. Any extension or postponement of assignments or exams must be granted by the instructor via email or Canvas within 24 hours of the weather related cancellation.

## HOW TO HAND IN MATERIALS

In class we will discuss and decide on a file naming convention, which must be adhered to.

All assignments are to be submitted to Canvas unless otherwise noted.

**Anything handed in more than four days late will not be accepted.**

## ACADEMIC INTEGRITY

“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.”

The graduate academic integrity policy can be found at [http://www.clemson.edu/graduate/files/pdfs/GS\\_Policy\\_Handbook\\_May2015.pdf](http://www.clemson.edu/graduate/files/pdfs/GS_Policy_Handbook_May2015.pdf)

## 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

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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](mailto: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 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 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/>. Mr. Jerry Knighton is the Clemson University Title IX Coordinator. He also is the Director of Access and Equity. His office is located at 110 Holtzendorff Hall, 864.656.3184 (voice) or 864.656.0899 (TDD).

## **LATE INSTRUCTOR POLICY**

If the instructor is 15 minutes late to class, that day's session is cancelled. Use the class time wisely.

## **CLASSROOM ETIQUETTE**

Classes will start promptly at the appointed time. As a courtesy to your fellow students and in order to avoid disruption, arrive early and be prepared to start class promptly.

Students are encouraged to use computers during class at appropriate times for taking notes and doing in-class exercises. As a courtesy to your classmates, please refrain from using social media or other web sites that would cause a distraction to the people around you.

Turn off and put away cell phones and other distractions before class begins.

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**CLASS SCHEDULE (SUBJECT TO CHANGE)**

WEEK 1

R      Aug. 23      Course introduction, syllabus, expectations

WEEK 2

T      Aug. 28      Fundamentals of lighting design  
*Digital Lighting & Rendering* chapter 1

R      Aug. 30      Types of digital lights, project 1 guidelines  
*Digital Lighting & Rendering* chapter 2

WEEK 3

T      Sept. 4      In-class work on project 1

R      Sept. 6      In-class work on project 1

WEEK 4

T      Sept. 11      Review and discuss project 2

R      Sept. 13      Shadows & Occlusion  
*Digital Lighting & Rendering* chapter 3

WEEK 5

T      Sept. 18      Shadows & Occlusion  
In-class work on chapter 3 exercises

R      Sept. 20      Shadows & Occlusion, project 2 guidelines

WEEK 6

T      Sept. 25      Review and discuss project 3

R      Sept. 27      Lighting Environments and Architecture  
*Digital Lighting & Rendering* chapter 4

WEEK 7

T      Oct. 2      Lighting Environments and Architecture

R      Oct. 4      Lighting Environments and Architecture

WEEK 8

T      Oct. 9      Review and discuss project 4

R      Oct. 11      Lighting Characters  
*Digital Lighting & Rendering* chapter 5

WEEK 9

T      Oct. 16      Lighting Characters

R      Oct. 18      Lighting Characters

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|---------|---------|-------------------------------------------------------------------------------------|
| WEEK 10 |         |                                                                                     |
| T       | Oct. 23 | Review and discuss project 5                                                        |
| R       | Oct. 25 | Cameras & Exposure<br><i>Digital Lighting &amp; Rendering</i> chapter 6             |
| WEEK 11 |         |                                                                                     |
| T       | Oct. 30 | Cameras & Exposure                                                                  |
| R       | Nov. 1  | Cameras & Exposure                                                                  |
| WEEK 12 |         |                                                                                     |
| T       | Nov. 6  | No class – fall break                                                               |
| R       | Nov. 8  | Review and discuss project 6                                                        |
| WEEK 13 |         |                                                                                     |
| T       | Nov. 13 | Composition & Staging<br><i>Digital Lighting &amp; Rendering</i> chapter 7          |
| R       | Nov. 15 | The Art & Science of Color<br><i>Digital Lighting &amp; Rendering</i> chapter 8     |
| WEEK 14 |         |                                                                                     |
| T       | Nov. 20 | The Art & Science of Color                                                          |
| R       | Nov. 22 | No class – Thanksgiving break                                                       |
| WEEK 15 |         |                                                                                     |
| T       | Nov. 27 | The Art & Science of Color                                                          |
| R       | Nov. 29 | TBA                                                                                 |
| WEEK 16 |         |                                                                                     |
| T       | Dec. 4  | Shaders & Rendering Algorithms<br><i>Digital Lighting &amp; Rendering</i> chapter 9 |
| R       | Dec. 6  | Shaders & Rendering Algorithms                                                      |

FINAL EXAM

Tuesday, May 1<sup>st</sup>, 3:00pm-5:30pm  
110E McAdams