

ANGM 3307.001 Lighting and Compositing I Syllabus

Course Information

ANGM 3307.001

Lighting and Compositing I

Spring 2025

Monday 10:00am – 12:45pm in ATC 2.605

Professor Contact Information

Professor Peter McCord

Email: peter.mccord@utdallas.edu

Office location: Animation suite

Office Hours: MS Teams Mondays and Wednesdays 9am – 9:50am

Course Pre-requisites, Co-requisites, and/or Other Restrictions

ANGM 2310

- Access to high speed internet
 - Access to Hardware (Mac or PC desktop or laptop) that can run the following **required** software (**Optional, our labs have everything you need):
 - Maya 2023 or higher version. Arnold will come with this.
 - Latest version of the Foundry's Nuke. Non commercial or student version is okay.
 - Blackboard Collaborative (via eLearning)
 - Microsoft Teams
 - Adobe Photoshop or any digital painting program(optional)
 - Adobe Media Encoder

Course Description

This course is an in-depth examination of Lighting and Composition fundamentals and techniques for use in computer generated art. Students will learn to create custom lighting setups and how lighting affects mood, time, and viewer perception. All models will be supplied for the course.

Student Learning Objectives/Outcomes

Through the successful completion of this course students will:

- Develop an understanding of how lighting can affect the mood, time and the audience's perception of a scene.
- Apply that same understanding to creating lighting setups that perfectly reflect the current tone they are trying to achieve.
- Establish a methodology for analyzing and problem solving as it relates to 3D computer-generated forms
- Continue to develop the ability to offer informed and constructive, technical and aesthetic critiques of the work of peers and of self
- Develop a practical understanding of the specific computers and software used in the course

Course Outcomes:

- Using the software and equipment taught in class, students will be able to light an animated short using the lights as a story telling element, as well as achieving convincing realism with 3D light rigs.
-

Required Textbooks and Materials

No textbooks

Suggested Course Materials

Headphones or Speakers, Mic, and Webcam
External Hard drive

Assignments & Academic Calendar

***All descriptions and timelines are subject to change at the discretion of the instructor.**

COURSE SCHEDULE

Week 1 (Jan 20) MLK Day – No Class

Week 2 (Jan 27) Intro to Maya UI

- Intro to Maya Interface
- What is lighting and how it fits into the anim pipeline
- Also watch 3 point lighting video
- **Assignment 1 – Movie Watching**

Week 3 (Jan 29) Intro to Maya Lights and 3 Point Lighting

DUE: Assignment 1 – Movie Watching

- Creating Lights in Maya and using the Arnold render engine
- Maya Hypershade, Shaping objects with lights
- **Assignment 2 – Lighting Hard Surface and Organic Objects**

Week 4 (Feb 3) Light Linking, Light Filters, and Atmo

- Light linking and light filters
- Adding atmosphere to your scene
- Assignment 2 work day

Week 5 (Feb 10) Lighting an Interior Basics

DUE: Assignment 2 – Lighting Different Surfaces

- Critiques of Assignment 2
- Lighting an Interior Basics and Intro to Nuke
- Lighting interior: what about the props?
- Render Stats and Render Setup
- Nuke and How to structure your render layers

Assignment 3 – Lighting an Interior

Week 6 (Feb 17) Nuke and Compositing. This is the way.

- Comping on Atmo
- Ambient Occlusion
- Organization of Nuke comps
- Matte vs Mask
- Why comp at all?
- Assignment 3 work day

Week 7 (Feb 24) Lighting and Cinematography, REFERENCE IS EVERYTHING!

DUE: Assignment 3 – Lighting an Interior

- Critiques of Assignment 3
- Visions of Light
- Cinematography and Hero Lighting plus Color Keys
- How to plan your lighting scenes
- **Assignment 4 – Lighting Hero Characters**

Week 8 (Mar 3) Integrating CG

- **DUE: Assignment 4 First Week – Color Keys and Reference Images**
- Breaking up your scenes into different layers and passes
- How to break up your scenes and why?
- What are AOVS and why we use them
- In Class Maya and Nuke demos
- Assignment 4 work day

Week 9 (Mar 10) Unreal 5

- **DUE: Assignment 4 – Lighting Hero Characters**
- Unreal 5 UI and Basics
- Lighting in Unreal
- **Assignment 5 – Intro to Lighting in Unreal 5**

Week 10 (Mar 17) Spring Break – No Class

Week 11 (Mar 24) More Unreal 5

- **DUE: Assignment 5 – Intro to Lighting in Unreal 5**
- Assignment 5 critiques
- Megascans, Datasmith, Substance, Mixer, and more
- **Assignment 6 – Relighting in Unreal 5**

Week 12 (Mar 31) Unreal 5

- Assignment 6 work day
- Unreal Q&A

Week 13 (Apr 7) Final Project

- **DUE: Assignment 6 – Relighting in Unreal 5**
- Assignment 6 critiques
- Discuss Final Project
- Discuss teams
- **Final Project**

Week 14 (Apr 14) Where to start with an animated short?

- **DUE: Final Color Keys, Reference Images, Backplates, First Week Document**
- Breaking down each shot
- Planning how to comp before you comp

Week 15 (Apr 21) Render Sequence and Batch Rendering

- Rendering all the things
- Breaking up renders and why?
- Cool nuke stuff

Week 16 (Apr 28) Putting everything together in Nuke

- Rendering Image Sequences in Nuke
- What you can accomplish with your Comp Fu

Week 17 (May 5) Final Class

- **Final Presentations**

Grading Policy

Students must demonstrate satisfactory achievement of course objectives through fulfillment of course assignments and by contributing to class discussions and critiques. Course assignments will require students to use software and equipment available at the ATEC computer labs. Course evaluation will be based upon the following.

Grades by percentage from total points:

A	94 – 100%
A-	90 – 93%
B+	88 – 89%
B	84 – 87%
B-	80 – 83%
C+	78 – 79%
C	74 – 77%
C-	70 – 73%
D+	68 – 69%
D	64 – 67%
D-	60 – 63%
F	Below 60 is failing

Assignment Point Values:

- Assignment 1 – 5 pts
- Assignment 2 – 10 pts
- Assignment 3 – 10 pts
- Assignment 4 – 20 pts
- Assignment 5 – 5 pts
- Assignment 6 – 10 pts
- Final Project: 40 pts
- Total: 100 points

Course & Instructor Policies

Homework Assignments:

Students will use their UTD Box.com accounts (CometSpace) to turn in homework assignments. The instructor will send an invitation to the student's UTD email the first week of class that will include further instructions regarding turning in homework. **Students MUST bring a copy of their homework to class each week.** Homework assignment instructions, rubrics, and grades are posted on eLearning. More information about eLearning can be found here: <https://www.utdallas.edu/elearning/students/>. Information about UTD students Box.com accounts can be found here: <http://www.utdallas.edu/cometspace/>

Taking Notes:

Students are expected to take detailed notes during in-class demonstrations and lectures. There will be times the student will be asked to turn off all computers and electrical devices, so students should be prepared to take notes with a notebook and pen/pencil.

Late Assignments:

Adherence to deadlines is expected. Late assignments will not be accepted. It is the individual student's responsibility to keep track of the goals and deadlines

and to present the work to the class and instructor on the specified dates.

Class Attendance:

This course heavily depends on in-class and online demonstration and lectures. Students who fail to attend online lecture or watch the posted lectures regularly are inviting scholastic difficulty. Missing class will not directly impact your grade, however missing class content will indirectly impact your grade as you will miss out on key concepts and/or announcements. You do so at your own risk.

Making up missed work:

Makeups are available only to students who have a legitimate excuse for missing an exam, such as illness, scheduled job interview out of town, athletic team event out of town, death in the immediate family, etc. If you know in advance that you must miss an exam, give a **written notice to the instructor in advance, and bring documentation to support your anticipated absence**. If you miss an exam unexpectedly because of last minute illness or accident, submit a note to the instructor when you return to campus (or as e-mail attachment if you will be away for some time) with documentation of your situation.

Class Participation and Classroom Citizenship:

- Mute mic until you have a question. You can use the “raise hand” button in the Collaborative to signal the professor
- Do not talk when others (the instructor, guests, and fellow students) are talking.
- Participate in critique sessions and class discussions. You can learn a great deal from critique on other students' work as well your own.

While the instructor or a guest is lecturing or demonstrating, you should be listening to the lecture or observing the demonstration, and taking notes.

Class Materials

The instructor may provide class materials that will be made available to all students registered for this class as they are intended to supplement the classroom experience. These materials may be downloaded during the course, however, these materials are for registered students' use only. Classroom materials may not be reproduced or shared with those not in class, or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. Failure to comply with these University requirements is a violation of the [Student Code of Conduct](#).

Class Attendance

The University's attendance policy requirement is that individual faculty set their course attendance requirements. Regular and punctual class attendance is expected. Students who fail to attend class regularly are inviting scholastic difficulty. In some courses, instructors may have special attendance requirements; these should be made known to students during the first week of classes.

Class Participation

Regular class participation is expected. Students who fail to participate in class regularly are inviting scholastic difficulty. A portion of the grade for this course is directly tied to your participation in this class. It also includes engaging in group or other activities during class that solicit your feedback on homework assignments, readings, or materials covered in the lectures (and/or labs). Class participation is documented by faculty. Successful participation is defined as consistently adhering to University requirements, as presented in this syllabus. Failure to comply with these University requirements is a violation of the [Student Code of Conduct](#).

Class Recordings

Students are expected to follow appropriate University policies and maintain the security of passwords used to access recorded lectures. Unless the Office of Student AccessAbility has approved the student to record the instruction, students are expressly prohibited from recording any part of this course. Recordings may not be published, reproduced, or shared with those not in the class, or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. Failure to comply with these University requirements is a violation of the [Student Code of Conduct](#).

The instructor may record meetings of this course. These recordings will be made available to all students registered for this class if the intent is to supplement the classroom experience. If the instructor or a UTD school/department/office plans any other uses for the recordings, consent of the students identifiable in the recordings is required prior to such use unless an exception is allowed by law.

Off-campus Instruction and Course Activities

None

Comet Creed

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

“As a Comet, I pledge honesty, integrity, and service in all that I do.”

Academic Support Resources

The information contained in the following link lists the University’s academic support resources for all students.

Please see <http://go.utdallas.edu/academic-support-resources>.

UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University’s policies and procedures segment of the course syllabus. Please review the catalog sections regarding the [credit/no credit](#) or [pass/fail](#) grading option and withdrawal from class.

Please go to <http://go.utdallas.edu/syllabus-policies> for these policies.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.