

**DePaul University**  
**School of Cinematic Arts**  
**Spring Quarter – 2018-2019**  
**DC 274 – Image, Optics, and Cinematic Motion**  
**Section: 301&301L**

***LECTURE LOCATION:*** Lincoln Park Campus, Levan Building, Room 304  
Day/Time: Thursdays, 1:00PM-4:15PM

***LAB LOCATION:*** Lincoln Park Campus Student Center, Room 364  
Day/Time: Tuesdays, 9:00AM-11:00AM

**INSTRUCTOR INFORMATION**

Instructor: Firas Aladai

Email: faladai@cdm.depaul.edu

Office Location: Lincoln Park Student Center, Room 323

Office Hours: Mondays, 10:00am – 1:00pm

**SUMMARY OF THE COURSE**

Cinematography is the scientifically grounded discipline of making lighting and camera choices in order to record moving images. This course deals with the basic mathematics, physics, and photochemistry that underlie cinematography and that motivate camera design and construction. While we have adopted motion images into our daily lives, most people are unaware of the complexities involved in its creation and distribution—the “language of motion” so to speak.

As opposed to photography where the story is one still image, cinematography must deal with objects in motion and the consequential time based considerations of shutter speed vs. frame rate, image resolution, camera motion, motion perception of the viewer and the display of the image(s) on large screens.

A student who masters the foundations of cinematography through a mixture of lectures, readings, exercises, and labs will be able to evaluate and understand how motion based recording choices affect perception of moving images they see every day.

**COURSE OBJECTIVES**

- To control the depiction of three-dimensional space on a 2D surface through the use of optics
- To understand the nature of light and film/video latitude
- To control exposure
- To determine a visual “look” and achieve it through photochemical and/or digital means
- To understand how the relationship of resolution, frame rate, shutter speed, and camera movement influence the viewer

**GOALS AND LEARNING OUTCOMES**

Below are listed the learning goals and outcomes for the Science Inquiry Domain. Each goal is listed followed by learning outcomes associated with the goal. Most of this document conforms to the National Science Education Standards.

**1. Students will understand the major principles guiding modern scientific thought. Students will demonstrate a mastery of the science content knowledge of their SID courses.**

**2. Students will know that science, technology, and math serve as mechanisms for inquiry into the nature of the universe. Students will:**

- a. Identify questions that can be answered through scientific investigations
- b. Design and conduct a scientific investigation to test a scientific hypothesis
- c. Use appropriate tools and techniques to gather, analyze, and interpret data to support or refute a scientific hypothesis
- d. Develop descriptions, explanations, predictions, and models using evidence
- e. Describe relationships between evidence and explanations using critical and logical thinking
- f. Recognize and analyze alternative explanations and predictions
- g. Communicate scientific procedures and explanations
- h. Use mathematics in all aspects of scientific inquiry

**3. Students will understand and appreciate the interrelationships among science, technology and math. Students will:**

- a. Use technology and mathematics to identify a problem or design a solution to a problem
- b. Give examples of how science and technology inform and influence each other

**4. Students will understand and appreciate the role of science in society and in their lives. Students will:**

- a. Provide examples of how science and technology impact our lives, and how social needs and concerns impact our development of technology and scientific investigation
- b. Develop positive attitudes towards science, technology, and mathematics
- c. Establish an ongoing experiential/service-learning interest in science, technology, and mathematics

**5. Students will understand the nature of science, technology, and mathematics. Students will:**

- a. Provide examples of the abuse of science, including the representation of unfalsifiable claims as science and other forms of Pseudoscience
- b. Explain the strengths and limits of scientific inquiry
- c. Explain the difference between evidence and inference, and the provisional nature of scientific explanations by providing examples of how our understanding of the workings of the world has changed in the past
- d. Explain the difference between probability and certainty, and describe what is meant by uncertainty in the context of science, technology, and mathematics

#### **Scientific Inquiry: Lab Learning Outcomes**

Students will be able to:

- Pose meaningful scientific questions and generate testable scientific hypotheses.
- Plan, design and conduct scientific investigations in a collaborative environment using appropriate tools and techniques to gather relevant data in order to test and revise scientific hypotheses.
- Develop explanations of natural phenomena.
- Address variability in the data and recognize and analyze alternative explanations and predictions.
- Communicate scientific procedures, results, and explanations and engage in arguments based on scientific evidence.

### **HOW LEARNING OUTCOMES WILL BE MET**

A mixture of Lectures and Lab work will allow the student to meet the desired learning outcomes. Assessment of learning will be made through a combination of quizzes (on lectures and reading material) and exams (midterm and final).

### **WRITING EXPECTATIONS**

Writing is integral for communicating ideas and progress in science, mathematics and technology. The form of writing in these disciplines is different from most other fields and includes, for example, mathematical equations, computer code, figures and graphs, lab reports and journals. Courses in the SI domain must include a writing component where that component takes on the form appropriate for that course (e.g., lab reports, technical reports, etc.)

### **HOW WRITING EXPECTATIONS WILL BE MET**

Each Lab will have a lab report or assignment in which students will document their findings. Several take-home quizzes will be given throughout the quarter. The quizzes require concise, accurate and clear written demonstrations of the students' knowledge and understanding of materials covered in class and the supplemental readings.

### **REQUIRED TEXT**

*Cinematography: Theory and Practice*, Second Edition by Blain Brown

- Hand-outs will be supplied by the instructor as needed.

- Software will be provided as needed in the Lab D2L and Course Management System.

### **GRADING**

Reading Quizzes 20%

In-Class Labs 30%

Midterm 20%

Final Exam 30%

### **GRADING SCALE**

A = 100-93, A- = 92-90, B+ = 89-88, B = 87-83, B- = 82-80, C+ = 79-78, C = 77-73,  
C- = 72-70, D+ = 69-68, D = 67-63, D- = 62-60, F = 59-0

A indicates excellence, B indicates good work, C indicates satisfactory work, D work is unsatisfactory in some respect, and F is substantially unsatisfactory work.

### **WEEKLY SCHEDULE (SUBJECT TO CHANGE)**

*Note: For class days with assigned reading from the textbook, students will be asked to write an answer to a question about the reading at the beginning of the class.*

#### **Class One**

(4/2) Lab - Intro to Lab, Procedures, and ColWeb

(4/4) Lecture - Syllabus, Introduction, and History of Moving Images

(4/9) Lab - Camera & lenses demo

#### **Class Two**

(4/11) Lecture - Semiotics, Perspective and Illusions, Continuity and Editing

(4/16) Lab - Stop Motion Animation

#### **Class Three**

(4/18) Lecture - Exposure Pt. 1

(4/23) Lab - Light Metering and Exposure

**Class Four**

(4/25) Lecture - Exposure Pt. 2 & Depth of Field

(4/30) Lab - Depth of Field Calculations

**Class Five**

(5/2) Lecture - Optics

(5/7) Lab - Measuring Focal Lengths of Individual Lenses

**Class Six**

(5/9) Lecture - Midterm Review, film screening (TBD)

(5/14) Lab - Midterm

**Class Seven**

(5/16) Lecture - Color Theory

(5/21) Lab - Color Science

**Class Eight**

(5/23) Lecture - Specialized Cinematography and Lighting

(5/28) Lab - Light Painting

**Class Nine**

(5/30) Lecture - Composition

(6/4) Lab - Shot Exercise: Crafting and composing a variety of shot sizes

**Class Ten**

(6/6) Final Exam Review

**Class Eleven**

(6/13) Final Exam: 11:30am - 1:45PM\*

\*Note: The final exam is scheduled for a different time than the regular class time.

**ACADEMIC INTEGRITY AND PLAGIARISM**

This course will be subject to the university's academic integrity policy. More information can be found at <http://academicintegrity.depaul.edu/>. If you have any questions, be sure to consult with your professor.

**ACADEMIC POLICIES**

All students are required to manage their class schedules each term in accordance with the deadlines for enrolling and withdrawing as indicated in the University Academic Calendar. Information on enrollment, withdrawal, grading and incompletes can be found at:

<http://www.cdm.depaul.edu/Current%20Students/Pages/PoliciesandProcedures.aspx>

**COURSE POLICIES**

**Attendance:** Students are expected to attend each class and to remain for the duration. *Coming 15 minutes late or leaving 15 minutes early constitutes an absence for the student. The overall grade for Attendance drops one-third after any absence. Three absences for any reason, whether excused or not, may constitute failure for the course.*

**Participation:** Student participation in this class will be measured in two ways. First, students will write an answer to a question based on the assigned reading from the textbook at the beginning of class (see grading system). Second, students will receive points for actively contributing to class discussions. Students must keep up with the reading to participate in class discussions.

5 points – Excellent answer, with details from the assigned reading

3 points – Acceptable answer

1 point – Inaccurate/unclear answer

0 points – Absent/no answer

**Attitude:** A professional and academic attitude is expected throughout this course. Measurable examples of non-academic or unprofessional attitude include but are not limited to: talking to others when the instructor is speaking, mocking another's opinion, cell phones ringing, emailing, texting or using the internet whether on a phone or computer. If any issues arise a student may be asked to leave the classroom. The professor will work with the Dean of Students Office to navigate such student issues.

**Civil Discourse:** DePaul University is a community that thrives on open discourse that challenges students, both intellectually and personally, to be Socially Responsible Leaders. It is the expectation that all dialogue in this course is civil and respectful of the dignity of each student. Any instances of disrespect or hostility can jeopardize a student's ability to be successful in the course. The professor will partner with the Dean of Students Office to assist in managing such issues.

**Cell Phones/On Call:** If you bring a cell phone to class, it must be off or set to a silent mode. Should you need to answer a call during class, students must leave the room in an undistruptive manner. Out of respect to fellow students and the professor, texting is never allowable in class. If you are required to be on call as part of your job, please advise me at the start of the course.

### **ASSIGNMENTS AND EXERCISES**

Assignments and exercises must be completed by the due date as indicated in the syllabus. Late work will not be accepted without prior consent of the instructor.

### **EXAMINATIONS**

Students who do not take exams during the regularly scheduled time will receive a failing grade for the exam unless they have contacted the instructor in advance to arrange for a make-up exam. Make-up exams will be administered by the College according to its make-up exam schedule.

### **COURSE LECTURES AND READING ASSIGNMENTS**

The assigned readings offer an opportunity for independent learning that supplements the lectures. Lectures will introduce material not available in the readings, and the readings will explore concepts not mentioned in class. The exam will cover both lecture and reading materials as specified by the instructor.

### **CONTENT CHANGES**

Depending on time factors, the assignments projected for the term may require slight alteration or rescheduling.

### **STUDENTS WITH DISABILITIES**

Students who feel they may need an accommodation based on the impact of a disability should contact the instructor privately to discuss their specific needs. All discussions will remain confidential. To ensure that you receive the most appropriate accommodation

based on your needs, contact the instructor as early as possible in the quarter (preferably within the first week of class), and make sure that you have contacted the Center for Students with Disabilities. There are two office locations:

Loop Campus – Lewis Center, 25 E. Jackson Blvd #1420 – (312) 362-8002

Lincoln Park Campus – Student Center #370 – (773) 325-1677

Email: [csd@depaul.edu](mailto:csd@depaul.edu)

**NOTE ON REQUIREMENTS (and the Syllabus in General)**

This syllabus is subject to change as necessary during the quarter. If a change occurs, it will be thoroughly addressed during class, and posted on D2L. As a member of this class, you are required to know and follow the guidelines set forth on the totality of this syllabus. These guidelines are established to ensure that all students know what is expected of them and that all students are treated equally by being held to the same standards.

**ONLINE COURSE EVALUATIONS**

Evaluations are a way for students to provide valuable feedback regarding their instructor and the course. Detailed feedback will enable the instructor to continuously tailor teaching methods and course content to meet the learning goals of the course and the academic needs of the students. They are a requirement of the course and are key to continue to provide you with the highest quality of teaching. The evaluations are anonymous; the instructor and administration do not track who entered what responses. A program is used to check if the student completed the evaluations, but the evaluation is completely separate from the student's identity. Since 100% participation is our goal, students are sent periodic reminders over three weeks. Students do not receive reminders once they complete the evaluation. Students complete the evaluation online in CampusConnect.

**EMAIL**

Email is the primary means of communication between faculty and students enrolled in this course outside of class time. Students should be sure their email listed under "demographic information" at <http://campusconnect.depaul.edu> is correct. All emails to the instructor must contain a heading specific to the subject discussed in the email.