



ESCUELA UNIVERSITARIA
DE ARTES. MADRID

Workshop: Lighting in the Virtual Environment

COURSE GUIDE

BACHELOR'S IN FILMMAKING

COURSE 2026/2027



Universidad
Rey Juan Carlos

Course data

<i>Duration</i>	1 st semester
<i>Credits</i>	3 ECTS
<i>Modality</i>	In-person
<i>Language</i>	English
<i>Faculty</i>	Filmmaking
<i>Teacher</i>	David Gómez Blanco

Course presentation

Lighting design of virtual spaces and advanced development of virtual lighting schemes applicable to a real environment.

Student competencies

CG01	Utilize different historical, sociologic, cultural and/or artistic sources in the creation of audiovisual projects.
CG03	Know the codes of ethics and deontology applicable to the audiovisual industry.
CG04	Know the various applications of the technological resources from the field of audiovisual creation.
CG05	Understand the concepts of photography, the creation of the film image and audiovisual language from an artistic and technical perspective.
CE03	Know the production workflows of the audiovisual industry.
CE04	Understand filmmaking in an open, multi-directional manner, from the forms and formats that are intrinsically related to the entertainment industry, to more expressive manifestations that explore avant-garde aesthetics and/or auteur philosophies.
CE07	Understand the importance of the various roles, tasks and responsibilities related to the development of audiovisual projects.
CE17	Understand the possibilities offered by film technology and light engineering to create specific settings and atmospheres.
CE18	Work with different image capture technologies in accordance with the needs of the project.

Learning outcomes

Upon completion of this course, each student must be able to:

1. Design and set up a 3D virtual environment, that is as close as possible to the reality of a film set.

2. Design a tour through that virtual space to decide the points of view in planning, optimize the construction of sets and choose the most suitable lenses for the shoot.
3. Control workflows on a virtual basis of the scene.

Teaching methodology

<i>MD1</i>	Participatory masterclass.
<i>MD2</i>	Case studies and discussion.
<i>MD3</i>	Problem resolution and discussion of results.
<i>MD5</i>	Cooperative and collaborative learning.
<i>MD6</i>	Academic tutoring.

Course content

<i>Content</i>	1. Interactive lighting and virtual cinematography. 2. Modelling and texturizing with software. 3. Interface software. 4. Materials and shaders. 5. Camera and lens configurations. 6. Lighting techniques and tools, and virtual emitters. 7. Environment lighting. 8. Render configuration. 9. Render postproduction and final retouching.
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Learning activities

AF1	Theoretical and theoretical-practical classes.	6 hours
AF3	Design and implementation of artistic creation projects (individual or group).	15 hours
AF4	Art appreciation activities: attendance at seminars, visits to exhibitions or viewing of visual/audiovisual works.	6 hours
AF5	Search and selection of documentation, reading of supporting material and bibliographic and visual references.	30 horas
AF7	Evaluation.	3 horas
AF8	Autonomous study of theoretical content and autonomous preparation of practical work and activities.	30 horas

* The hours assigned to the different learning activities may vary depending on the academic needs of the course, the group or the teaching team.

Assessment

GENERAL ASSESSMENT CRITERIA

ATTENDANCE

The classes are in-person, and attendance is mandatory, as it is a determining factor in the continuous assessment system, as well as in class attitude and participation. However, in exceptional cases due to health situations or family reconciliation, students may request online access as a methodological adaptation (for more information, please contact the student department).

MARKS

Continuous Assessment is a comprehensive assessment of each student's results judged on the assessment criteria described in the following section, on a scale of 0 to 10 as provided in current legislation.

Students wishing to bring up their grade in the extraordinary/re-assessment period must first contact the Registrar's Office to expressly waive in writing all of the marks they obtained in the regular assessment period. Their final assessment mark will be the mark obtained in re-assessment.

SPELLING AND EXPRESSION

The grading of written examinations and assignments will consider spelling, grammar, and clarity of expression. Errors in spelling, punctuation, and writing style may negatively affect the final grade, depending on their nature, frequency, and severity.

UNIVERSITY WRITTEN REPORTS

These must have a title page, table of contents and bibliography listing at least 4 sources. These works must be original. Excerpts from other authors must be properly cited. Demonstrable plagiarism is an academic offense. If one student copies the work of another student, both shall be held accountable.

SPECIFIC ASSESSMENT CRITERIA

REGULAR ASSESSMENT PERIOD

In this course, absence to more than 20% of class sessions and activities will lead to failure of the course and disqualification from the regular assessment period.

The teaching team will provide the details/specifications on the content or submission of assessment tasks; this information will be given in class or in a document made available to the student on the Virtual Course Space (in Spanish, *Aula Virtual*).

Assignments not submitted by the deadlines set by the teaching team will receive an assessment mark of 0.

<i>Assessment task (*)</i>	<i>Revaluable/non-revaluable</i>	<i>Minimum mark yes/no</i>	<i>% of final mark</i>
SE2 Assignments and projects	Revaluable	Yes	65%

SE3 Continuous assessment: weekly tasks and homework, periodical reports, problem resolution.	Non-Revaluable	No	25%
SE5 Attitude and participation.	Non-Revaluable	No	10%
			100%

(*) Records and evidence of all of the assessment tasks (writings, recordings, etc.) listed in this table will be kept and filed in the Registrar's Office.

EXTRAORDINARY/RE-ASSESSMENT PERIOD

Students who have not passed the course during the regular assessment period may choose one of the following extraordinary assessment options:

- **Option 1: Criterion-based reassessment.** Assessment will be limited exclusively to the reassessable criteria that were not passed during the regular assessment period. The reassessment activity will be of the same nature as the original one (exam, assignment, etc.). The grades obtained in the ordinary assessment period for non-reassessable criteria (provided the minimum passing grade was achieved) will be retained and included in the weighted calculation of the final extraordinary assessment grade.
- **Option 2: Comprehensive reassessment.** Students may complete a single assessment activity accounting for 100% of the extraordinary assessment. The nature of this activity will be determined by the instructor and may include an oral or written examination, submission of a portfolio, theoretical and/or practical assignments, or other equivalent forms of assessment.

The instructor must communicate both Option 1 and Option 2 for the extraordinary assessment through the course notice board on the virtual campus at least 10 days prior to the extraordinary assessment date.

Students must respond to this communication via the virtual campus notice board, indicating their choice of Option 1 or Option 2, at least 3 days prior to the extraordinary assessment date. If a student does not respond, the instructor will automatically apply Option 2 (a single assessment activity accounting for 100% of the extraordinary assessment).

REVIEW OF ASSESSMENT MARKS

As set out in the TAI School of the Arts Student Handbook.

Resources

RECOMMENDED BIBLIOGRAPHY

- Brown, B. (2021). *Cinematography: Theory and practice* (4th ed.). Routledge.
- Epic Games. (2024). *Virtual Production Field Guide* (Vol. 2). Epic Games.
- Epic Games. (2025). *Unreal Engine documentation*.
<https://dev.epicgames.com/documentation>
- Mascelli, J. V. (1998). *The five C's of cinematography*. Silman-James Press.
- Mercado, G. (2011). *The filmmaker's eye*. Focal Press.
- Mercado, G. (2019). *The language of cinematography*. Routledge.
- Millerson, G., & Owens, J. (2019). *Lighting for television and film* (4th ed.). Routledge.

RECOMMENDED FILMOGRAPHY

- Edwards, G. (Director). (2023). *The Creator* [Film]. Regency Enterprises; Entertainment One; Lucasfilm.
- Favreau, J. (Director). (2019). *The Lion King* [Film]. Walt Disney Pictures.
- Friese, J. (Creator), & bo Odar, B. (Creator). (2022). *1899* [TV series]. Dark Ways; Netflix.
- Favreau, J. (Executive Producer). (2019–present). *The Mandalorian* [TV series]. Lucasfilm; Golem Creations.
- Rees, M. (Director). (2022). *The Batman* [Film]. Warner Bros. Pictures; DC Films.
- Villeneuve, D. (Director). (2024). *Dune: Part Two* [Film]. Warner Bros. Pictures; Legendary Pictures.

RECOMMENDED WEBSITES

- American Society of Cinematographers. (s. f.). ASC. <https://theasc.com>
- CineD. (s. f.). *CineD*. <https://www.cined.com>

Epic Games. (s. f.). *Epic Developer Community Forums*. <https://forums.unrealengine.com>

Epic Games. (s. f.). *Epic Games Documentation*. <https://dev.epicgames.com/documentation>

Epic Games. (s. f.). *Unreal Engine Learning Library*. <https://dev.epicgames.com/community>

No Film School. (s. f.). *No Film School*. <https://nofilmschool.com>

REQUIRED MATERIALS FOR THE COURSE

Wheeled mouse with 3 buttons (recommended).

Unreal Engine 5 installed (LTS).

Enough storage space for projects (at least 100 GB recommended).

Epic Games free account.

USB memory or cloud storage for projects exchange.

VISITS, MASTER CLASSES, EVENTS AND ADDITIONAL WORKSHOPS

Will be detailed during the course.