ACADEMIC PROGRAM

COLOR AND LIGHT THEORY

B.F.A. IN **ANIMATION**

MODALITY: ON CAMPUS

ACADEMIC YEAR: 2023-2024

Name of the course:	Color and Light Theory
Degree :	Animation
Location:	Centro Universitario de Tecnología y Arte Digital
Area:	Artistic Fundamentals
Year:	1º
Teaching period:	2
Type:	OB
ECTS credits:	3
Teaching modality:	On campus
Language:	English
Lecturer / Email	Ángela Sánchez De Vera Torres/angela.torres@u-tad.com
Web page:	http://www.u-tad.com/

SUBJECT DESCRIPTION

Area description

The subject Artistic Foundations provides the students with the necessary fundaments for a digital graphics creator: identification and historical context of artistic currents, knowledge of color, light and photography, three-dimensional representation of space and learning of the basis and classical principles of animation and visual development. Knowledge and learning of traditional principles and techniques is one of the essential basis for training professionals to be able to adapt and take advantage of the progress of digital animation technology.

Subject description

In the subject of Color and Light Theory, students will acquire basic skills and abilities necessary for the perception of color and its representation. The knowledge of the physical laws of light, as well as the development of plastic skills applied to the synthesis of color in both analog and digital media will serve the student to understand the sensitivity and expression of light and color.

COMPETENCIES AND LEARNING OUTCOMES

Competencies

BASIC AND GENERAL

CG1 - Critically understand the interrelationships between the different arts and their currents of thought throughout history and the evolution of aesthetic, historical and cultural values.

CG2 - Know the vocabulary and concepts inherent to the digital art field.

CG4 - Apply the aesthetic and perception fundamentals of the image in terms of structure, form, color and space in the representation of digital content.

CG9 - Use the techniques and artistic tools associated with the generation of digital content.

CB1 - That students have demonstrated to possess and understand knowledge in an area of study that starts from the base of general secondary education, and is usually found at a level that, while relying on advanced textbooks, also includes some aspects that involve knowledge from the forefront of their field of study.

CB2 - That students know how to apply their knowledge to their work or vocation in a professional manner and possess the competencies usually demonstrated through the development and defense of arguments and problem solving within their field of study.

CB3 - That students have the ability to gather and interpret relevant data (usually within their area of study) to make judgments that include a reflection on relevant social, scientific or ethical issues.

CB4 - Students should be able to convey information, ideas, problems and solutions to both specialized and non-specialized audiences.

CB5 - That students have developed those learning skills necessary to undertake further studies with a high degree of autonomy.

TRANSVERSALS

CT5 - Demonstrate versatility, flexibility and creativity in the development of projects, activities and work.

SPECIFIC

CE18 - Devise, design and capture, through drawing, the design and construction of environments, landscapes and scenarios for their construction in 3D.

CE5 - Apply the traditional principles of animation to the digital animation of characters and other elements.

SC1 - Perform drawing with traditional and digital techniques of artistic creation for both ideation and representation of images.

SC2 - Know and apply the basics of photography, its elements of visual composition and the expressive value of lighting.

CE4 - Represent three-dimensional forms and spaces using the essential techniques of traditional and digital modeling. digital modeling techniques.

SC6 - Use the principles and techniques of artistic creation for the conceptualization, design and development of characters, environments, vehicles and props.

CE8 - Apply technical drawing to the representation of parts or spaces.

Learning outcomes

At the end of the degree, the graduate will be able to:

- Analyze artistic works taking into account aesthetic principles and cultural context.

- Interpret the visual and compositional language of a digital artwork.

- Use basic traditional drawing techniques such as charcoal, graphite or watercolor to represent images.

- Apply the physical and aesthetic principles of color in artistic and narrative creation.

- Handle with fluency digital tools for the creation of images, videos, modeling and artistic works.

- Use artistic expression techniques such as drawing, 3D modeling and postproduction for the generation of digital content.

- Develop strategies for continuous and autonomous training in new techniques and tools of the profession of an animator.

- Adapt the knowledge of traditional drawing techniques to digital environments.

- Draw with exclusively digital means and tools for the representation of images applied to the animation industry.

- Use the visual language applied to the different animation techniques to transmit ideas.

- Represent the physical environment, natural figures and objects through drawing with traditional or digital techniques.

- Apply the laws of representation systems for the visualization of objects, figures and spaces.

- Understand and use the photographic language for the creation of artistic and narrative images.

- Use light as a narrative and dramatic element in the creation of photographic images with knowledge of its physical principles.

- Operate a photographic camera according to its principles of operation for the creation of artistic images.

- Design characters through the visual expression of their psychological characteristics.

- Design environments, locations and atmospheres through the visual expression of their characteristics.

- Represent on a two-dimensional plane a three-dimensional space or object according to the systems of representation.

- Discriminate the volumetric, chromatic, space and environment interrelations that occur between the characters and physical spaces used in an animation

scene.

- Apply ideation and creativity techniques to artistic production such as flow state or lateral thinking.

CONTENTS

· The colour in animation.

· Physical and philosophical theories.

· The spectrum and luminous phenomena.

· Shading and chiaroscuro.

· Additive and subtractive synthesis.

· Colourimetry and color harmony.

· Light and matter: shades, reflections, shines and transparencies.

· The colour language: temperature, symbolism, psychology, synaesthesia.

SUBJECT SYLLABUS

Presentation of the subject.1.1. Colour in design.2. The theory of colour and light2.1. Physical and philosophical theories of light in the world.2.2. The visible spectrum and luminous phenomena.2.3. From chiaroscuro to chromatic synthesis3.1. The RGB system and the additive synthesis of colour.3.2. The CMY system and the subtractive and mixed synthesis of colour.3.3. From colour temperature to chromatic symbolism.5.2. Name, sensation and "form" of colour.5.3. Colour psychology and synaesthesia.

TRAINING ACTIVITIES AND TEACHING METHODOLOGIES

TRAINING ACTIVITIES

LEARNING ACTIVITIES	Total hours	Hours of presence
Theoretical / Expository classes	15,63	15,63
Practical classes	11,88	11,88
Tutorials	2,25	1,13
Independent study and autonomous work of the student	23,75	0,00
Elaboration of work (group or individual)	18,75	0,00
Evaluation Activities	2,75	3,00
TOTAL	75	31,64

Teaching methodologies

Expository method or master class

Case method

Problem-based learning

Cooperative or collaborative learning

Inquiry-based learning

Flipped classroom or inverted classroom methodology

Gamification

TEMPORAL DEVELOPMENT

Theme 1-2 weeks

Theme 2- 3 weeks

Topic 3- 3 weeks

Theme 4-3 weeks

Theme 5-3 weeks

EVALUATION SYSTEM

ASSESSMENT SYSTEM	MINIMUM SCORE RESPECT TO THE FINAL ASSESSMENT (%)	MAXIMUM SCORE RESPECT TO THE FINAL ASSESSMENT (%)
Assessment of participation in class, exercises or projects of the course	10	20
Assessment of assignments, projects, reports, memos	20	60
Objective test	30	70

GRADING CRITERIA

ASSESSMENT SYSTEM	ORDINARY EVALUATION	EXTRAORDINARY EVALUATION
Assessment of participation in class, exercises or projects of the course	10	10
Assessment of assignments, projects, reports, memos	60	60
Objective test	30	30

General comments on the evaluations/assessments

Students will demonstrate through their work in the classroom, their partial deliveries, their control work, their corrected autonomous exercises and their general attitude towards their learning whether they are able to develop the competences they have to develop in this subject.

The assignments will be handed in digitally on the Blackboard platform or physically, as specified, within the established deadlines.

Each practical will be graded out of a maximum of 10 points according to the objectives set. A minimum mark of 5 points will be considered a pass.

To pass and count the practical part, at least 80% of the total must be passed.

To obtain the final pass mark, both the practical part of the course and the final project must be passed, with a minimum mark of 5 points.

. The final grade will be determined from the percentages defined for each part and will be established numerically from 0 to 10. It will be an essential requirement to achieve a minimum grade of 5 points in order to obtain a pass.

Work will not be accepted out of form or out of date without a justified cause. If accepted, a considerable reduction in the mark will be applied. "It is crucial to hand in assignments on time. A 10-minute courtesy period will be given during which the submission is considered to be on time. After this time, work may be handed in within 24 hours of the deadline, but with a penalty on the mark to be determined by the teacher. No work will be accepted after 24 hours".

In case of doubt about the documentation submitted, a defence will be called to verify the work presented. Plagiarism is equivalent to a 0 grade.

"Any detection of plagiarism in a paper or exam will imply the failure of this work with a zero, the report to the faculty and academic coordinator and the application of the current regulations, which can lead to very serious penalties for the student".

LIST OF REFERENCES (BOOKS, PUBLICATIONS, WEBSITES):

Basic:Hornung, David, Color. Curso práctico para artistas y diseñadores, ed. Promopress.ISBN 9788492810055Bellantoni, Patti, If It´s Purple, Someone´s Gonna Die, ed. Focal Press. ISBN 978-0240806884Bibliografía recomendadaAlbers, Josef, Interacción del color, ed. Alianza. ISBN 9788420664613Da Vinci, Leonardo, Tratado de pintura, ed. Akal. ISBN 9788476001226Gage, John, Color y cultura, ed. Siruela. ISBN 9788478443802Goethe, Johann Wolfgang, Teoría de los colores, ed. Celeste. ISBN 97884889882089Hornung, David, Color. Curso práctico para artistas y diseñadores, ed. Promopress.ISBN 9788492810055Itten, Johannes., Art de la Couleur, ed. Abregée. ISBN 9782040217884Sanz, Juan Carlos, Lenguaje del color, ed. Blume. ISBN 9788489840935Tornquist, Jorrit, Color y luz. Teoría y práctica, ed. Gustavo Gili. ISBN 97884252221777Wittgenstein, Ludwig, Observaciones sobre los colores, ed. Paidós. ISBN978475098363Wong, Wucius, Principios del diseño en color, ed. Gustavo Gili. ISBN 978842522161

REQUIRED MATERIALS, SOFTWARE AND TOOLS

Type of classroom
Theory

Materials:

BASIC A3 ring notebook for artistic drawing (thick paper)

Set of professional tempera paints (white, black, lemon yellow, magenta and cyan)

Basic set of professional watercolors (basic primary and secondary colors)

Brushes for tempera or watercolors of va

Software:

Software básico