Universidad Zaragoza

Academic Year/course: 2022/23

25139 - Digital Image Processing

Syllabus Information

Academic Year: 2022/23
Subject: 25139 - Digital Image Processing
Faculty / School: 301 - Facultad de Ciencias Sociales y Humanas
Degree: 278 - Degree in Fine Arts
ECTS: 6.0
Year:
Semester: Second Four-month period
Subject Type: Optional
Module:

1. General information

2. Learning goals

3. Assessment (1st and 2nd call)

4. Methodology, learning tasks, syllabus and resources

4.1. Methodological overview

1. Presentation of contents by means of presentation and explanation by the teacher through the corresponding demonstrations and the putting into practice of each of the contents of the program. The teaching activity in the classroom involves continuous monitoring of the work and the overall evolution of each student in order to take the most effective decisions for the achievement of the objectives set. To this end, there is permanent supervision of the work carried out by the students.

2. Problem-based learning. This involves the analysis of professional situations presented by the teacher, where the appropriate conceptualization is carried out from a given context, so that the most effective solutions are sought in terms of the required objectives.

3. For a better monitoring of the learning process, students will be encouraged to use tutoring hours.

4.2. Learning tasks

Teaching methology		
Activity	Teaching techniques	Student work
AF01. Theoretical class	Classes given by the teacher with the support of audiovisual material. Discussion of the proposed topics and resolution of doubts raised by the students.	Classroom-based: Note-tak doubts
		Non-presential:Study of th resolution of the proposed
AF2. Practical classes	Practical exercises proposed by the teacher in the photography workshop (set). Individual and group practice.	Classroom-based: (individu Active participation in class preparation of work plan a presentation.

		Non-presential: developme… or group work. Field and a… research of documentatio… bibliography.
		TOTAL

4.3. Syllabus

The course will address the following topics:

1. Process of image capture and digital image formation.
2. Fundamentals of digital editing and processing of the photographic image.

    Methods of digital image representation and storage formats. Management, organization and creation of portfolios (pdf and flash) using Adobe Bridge. DNG development and image processing from Camera RAW.
3. Editing and digital image processing from Adobe Photoshop (advanced level).

    - Advanced management of selection tools.

    - Resources and procedures. The interaction of layers in the digital image: adjustment layers. Advanced management: filters, channels, levels, curves, luminosity and color.

    - Tools and mechanisms for extracting specific features in the image: the functioning of masks and intelligent objects.
4. Procedures and characteristics of HDR photographs.
5. Digital black and white processing: from digital color images to black and white.

    - Luminance methods

    - Tonal methods

    - Digital colouring procedures for B&W photographs.
6. Creating a digital image: digital collage.

    Processes and tools: photomontage

4.4. Course planning and calendar

- Beginning and presentation of the course: 1st week (2nd semester)

- Practice 1: editing and digital image processing: 2nd to 4th week (2nd semester) Practical 2: HDR: 5th to 6th week (2nd semester)

- Practice 3: Digital image editing and processing: 7th to 9th week (2nd semester) Practicum 4: Digital black and white: 10th to 12th week (2nd semester)

- Practice 5: Digital colouring of B&W photography: 10th to 12th week (2nd semester)

- Practice 6: Creating a digital image: digital collage: 13th to 15th week (2nd semester)

4.5. Bibliography and recommended resources

http://psfunizar10.unizar.es/br13/egAsignaturas.php?codigo=25139