UAB
Universitat Autònoma de Barcelona

2023/2024

Infographics and Data Visualisation

Code: 104733
ECTS Credits: 6

Degree	Type	Year	Semester
2503873 Interactive Communication	OB	3	1

Contact

Name: Òscar Coromina Rodríguez

Email: oscar.coromina@uab.cat

Teaching groups languages

You can check it through this link. To consult the language you will need to enter the CODE of the subject. Please note that this information is provisional until 30 November 2023.

Prerequisites

Students should be familiar with spreadsheet software and eager to tinker with technology. Also, English will be required for some of the mandatory readings.

Objectives and Contextualisation

- Apply theoretical principles to analyze and visualize data.
- Plan and perform visual data analysis in accordance with communicative, scientific or management objectives.
- Select and apply different methods to collect, analyze and visualize data.
- Present and critically discuss different types of data visualizations.

Competences

- Act with ethical responsibility and respect for fundamental rights and duties, diversity and democratic values.
- Act within one's own area of knowledge, evaluating sex/gender-based inequalities.
- Distinguish between and apply the principal theories, conceptual frameworks and approaches regulating interactive communication.
- Introduce changes in the methods and processes of the field of knowledge to provide innovative responses to the needs and demands of society.
- Manage time efficiently and plan for short-, medium- and long-term tasks.
- Search for, select and rank any type of source and document that is useful for creating messages, academic papers, presentations, etc.

- Students must be capable of applying their knowledge to their work or vocation in a professional way and they should have building arguments and problem resolution skills within their area of study.

Learning Outcomes

1. Analyse a situation and identify its points for improvement.
2. Communicate using language that is not sexist or discriminatory.
3. Cross-check information to establish its veracity, using evaluation criteria.
4. Distinguish the salient features in all types of documents within the subject.
5. Evaluate the impact of problems, prejudices and discrimination that could be included in actions and projects in the short or medium term in relation to certain people or groups.
6. Identify situations in which a change or improvement is needed.
7. Plan and conduct academic studies in the field of theory and practice of computer graphics and data visualisation.
8. Propose new methods or well-founded alternative solutions.
9. Propose projects and actions that are in accordance with the principles of ethical responsibility and respect for fundamental rights and obligations, diversity and democratic values.
10. Propose projects and actions that incorporate the gender perspective.
11. Recognise the communicative and aesthetic norms of data visualisation.
12. Submit course assignments on time, showing the individual and/or group planning involved.
13. Weigh up the risks and opportunities of both one's own and other people's proposals for improvement.

Content

- Fundamentals of visual data analysis
- Statistical concepts and principles
- Processing and analysis of various forms of data
- Data visualization and analysis.
- Infographics, dahsboards and data visualization packaging

Methodology

The detailed calendar with the content of the different sessions will be presented on the day of presentation of the subject.

The development of the subject involves carrying out different types of activities:

a) Master classes.

b) Laboratory practices.

c) Seminars.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Activities

Title	Hours	ECTS	Learning Outcomes

Type: Directed			
Laboratory practices	22	0.88	3, 4, 7, 12, 11
Seminar: TIC tools	9	0.36	7, 11
Theory classes	15	0.6	3, 4, 7, 12, 11
Type: Supervised			
Follow-up tutorials	6	0.24	3, 4, 7, 12, 11
Type: Autonomous			
Study and data search	30	1.2	3, 4, 7
Work process	30	1.2	3, 4, 7, 12, 11

Assessment

This subject can be passed on the basis of continuous assessment (AC).

There will be a written test (40%), a project (40%) and theoretical-practical seminars (20%).

To pass the subject you must pass the written test with a minimum grade of 4. There will be a written reassessment test.

The project is a mandatory delivery and does not give the option of re-evaluation.

The theoretical-practical seminars are mandatory and in case of absence, an alternative exercise will be required to be reassessed.

Plagiarism: In the event that the student commits any irregularity that could lead to a significant variation in the grade of an assessment act, this assessment act will be graded with 0, regardless of the disciplinary process that may be instituted . In the event that several irregularities occur in the evaluation acts of the same subject, the final grade for this subject will be 0.

This subject does not foresee the single evaluation system.

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Project	40%	30	1.2	1, 2, 3, 4, 6, 7, 12, 8, 9, 10, 11, 5
Seminars	20%	6	0.24	1, 2, 3, 4, 6, 7, 13, 12, 8, 9, 10, 11, 5
Theory test	40%	2	0.08	1, 3, 4, 6, 13, 11

Bibliography

- Alberto Cairo. El arte funcional: infografía i visualización de la información. Alamut. 2010
- Alberto Cairo. The truthful art: Data, charts, and maps for communication. New Riders. 2016
- Marybeth Sandell. Visualización de Datos & Storytelling. Barbara Covarrubias, 2020

- Pere Rovira & Víctor Pascual. Analítica visual. Cómo explorar, analizar y comunicar datos. Anaya Multimedia. 2021

- Additionally, supplementary readings will be provided as well as short articles that may be required for seminars.

Software

- Affinity: Photo, Publisher i Designer
- Davinci Resolve
- Excel
- Powerpoint
- Tableau