Data Visualization

Academic Year: (2019 / 2020) **Review date: 26/02/2020 16:25:28**

Department assigned to the subject: Library and Information Sciences Department

Coordinating teacher: OLMEDA GOMEZ, CARLOS

Type: Compulsory ECTS Credits : 6.0

Year : 4 Semester : 1

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

There are no specific course prerequisites for this course.

OBJECTIVES

After completing the course satisfactorily, students should:
- Know techniques and theoretical aspects of data visualization.
- Know methods for design, visual coding and interaction with data.
- Know and understand the state of the art of data visualization.
- Clearly and efficiently understand how to communicate patterns found in the data.

Acquire proficiency for:
- Use tools to generate data visualizations.
- Use tools that generate interactive visualizations in a web environment.
- Explain the importance of choosing an appropriate color map.
- Identify a visualization where an inappropriate design choice was made and explain why the choice was inadequate.

and acquire skills:
- to know the phases that comprise a complete data visualization project, independent of any specific software tool;
- to propose alternative ways to visualize the same set of data;
- to create better and more reflective data visualizations;
- identify their own learning needs in relation to the use of data visualization in a specific context;

DESCRIPTION OF CONTENTS: PROGRAMME

1. Quantitative communication and visual data analysis.
2. Perception and visual design.
3. Design of graphics, components and solutions.
4. Analytical techniques.
5. Visual analysis.
6. Data communication.
7. Use of data.

LEARNING ACTIVITIES AND METHODOLOGY

TRAINING ACTIVITIES OF THE STUDY PLAN
LA 1. Individual work for the study of readings and course materials developed and contributed by the teacher.
LA 2. Individual work for problem solving and case studies.
LA 3. Working in groups for solving data exercises.
LA 4. Throughout the course it is expected to use videos to exemplify some of the aspects related to data visualization.
LA 5. Active participation in practical classes.

TEACHING METHODOLOGIES

M 1. Explanations of the teacher with support of computer and audiovisual media, in which the main concepts of the subjects are developed.
M 2. Critical reading of texts recommended by the professor of the subject.
M 3. Resolution of practical cases and problems raised by the teacher in an individual way.

ASSESSMENT SYSTEM

% end-of-term-examination/test:	60
% of continuous assessment (assigments, laboratory, practicals…):	40

Final and individual exam on the taught content of the subject and the compulsory literature.
The continuous evaluation is based on the presence and participation in class, especially in the practical part, and small works with the aim of deepening the knowledge of the main aspects of the subject.