



Academic year	2015-16
Subject	11007 - Scientific Presentation and Visualitation
Group	Group 1, 1S
Teaching guide	A
Language	English

### Subject identification

<b>Subject</b>	11007 - Scientific Presentation and Visualitation
<b>Credits</b>	0.75 de presencials (18.75 hours) 2.25 de no presencials (56.25 hours) 3 de totals (75 hours).
<b>Group</b>	Group 1, 1S (Campus Extens)
<b>Teaching period</b>	First semester
<b>Teaching language</b>	English

### Professors

Lecturers	Horari d'atenció als alumnes					
	Starting time	Finishing time	Day	Start date	Finish date	Office
José Javier Ramasco Sukia <a href="mailto:jramasco@ifisc.uib-csic.es">jramasco@ifisc.uib-csic.es</a>	12:00	13:00	Friday	01/10/2015	30/06/2016	104 Edifici Ins Recerca

### Contextualisation

This class offers an introduction to data visualization and results presentation with a special focus on the applicability of this knowledge to the environment of work related to scientific research.

### Requirements

#### Recommendable

A basic knowledge of scientific programming is highly recommended to obtain the maximum benefit from this course.

### Skills

#### Specific

- \* E3: Capacity for analysis and visualization of numerical data and knowledge of interactive interfaces..

#### Generic

- \* TG1: To be able to describe, both mathematically and physically, complex systems in different situations..
- \* TG3: To write and describe rigorously the research process and present the conclusions to an expert audience..
- \* TG4: To acquire the ability to ask questions, read and listen critically and participate actively in seminars and discussions..





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- \* TG5: To knowing to disseminate and present the concepts acquired at a non-expert..
- \* TG6: To acquire high power computation skills and advanced numerical methods capabilities in applications to problems in the context of complex systems..

### Basic

- \* You may consult the basic competencies students will have to achieve by the end of the Master's degree at the following address: [http://estudis.uib.cat/master/comp\\_basiques/](http://estudis.uib.cat/master/comp_basiques/)

## Content

### Theme content

1. Introduction to data visualization. Introduction to data visualization
  - 1.2. Data attributes and data types. 1.2. Data attributes and data types
  - 1.3. Interaction Principles. 1.3. Interaction Principles
  - 1.4. Item reduction, aggregation of data. 1.4. Item reduction, aggregation of data
  - 1.5. Visualization tools. 1.5. Visualization tools
2. Result presentation. 2. Result presentation
  - 2.1. Structure. 2.1. Structure
  - 2.2. Characteristics of each section. 2.2. Characteristics of each section

## Teaching methodology

### In-class work activities

Modality	Name	Typ. Grp.	Description	Hours
Theory classes		Large group (G)	To understand the basci principles of data visualization and result presentation	9
Practical classes		Large group (G)	To gain practice with visualization tools and to present the results	9.75

At the beginning of the semester a schedule of the subject will be made available to students through the UIBdigital platform. The schedule shall at least include the dates when the continuing assessment tests will be conducted and the hand-in dates for the assignments. In addition, the lecturer shall inform students as to whether the subject work plan will be carried out through the schedule or through another way included in the Campus Extens platform.

### Distance education work activities





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Modality	Name	Description	Hours
Individual self-study		To prepare a presentation	56.25

### Specific risks and protective measures

The learning activities of this course do not entail specific health or safety risks for the students and therefore no special protective measures are needed.

### Student learning assessment

#### Theory classes

Modality	Theory classes
Technique	Papers and projects ( <b>non-retrievable</b> )
Description	To understand the basic principles of data visualization and result presentation
Assessment criteria	Quality of the work developed

Final grade percentage: 20%

#### Practical classes

Modality	Practical classes
Technique	Papers and projects ( <b>non-retrievable</b> )
Description	To gain practice with visualization tools and to present the results
Assessment criteria	Quality of the work developed

Final grade percentage: 30%

#### Individual self-study

Modality	Individual self-study
Technique	Papers and projects ( <b>non-retrievable</b> )
Description	To prepare a presentation
Assessment criteria	Quality of the presented work

Final grade percentage: 50%

### Resources, bibliography and additional documentation

#### Basic bibliography

- Information Visualization: Principles, Methods, and Practice, Tamara Munzner, to be published by AK Peters, with a draft available at <http://www.cs.ubc.ca/~tmm/courses/533-11/book/>





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**Complementary bibliography**

- The Visual Display of Quantitative Information, Edward R. Tufte, Graphics Pr; 2nd edition (May 2001)

