Universitat de les Illes Balears

Teaching guide

Academic year	2012-13
Subject	11007 - Scientific presentation and visualitation
Group	Group 1, 2S
Teaching guide	A
Language	English

Subject identification

Subject	11007 - Scientific presentation and visualitation
Credits	0.75 in-class (18.75 hours) 2.25 distance (56.25 hours) 3 totals (75 hours).
Group	Group 1, 2S
Teaching period	2nd semester
Teaching language	English

Lecturers

Lecturers	Timetable for student attention					
	Starting time	Finishing time	Day	Start date	Finish date	Office
José Javier Ramasco Sukia jose.ramasco@uib.es	There are no defined sessions					

Degrees where the subject is taught

Degree	Character	Academic year	Studies
Master's Degree in Physics of Complex Systems	Optional		Postgraduate degree

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

1. E3: Capacity for analysis and visualization of numerical data and knowledge of interactive interfaces..

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Generic

1. TG1: To be able to describe, both mathematically and physically, complex systems in different situations..
2. TG3: To write and describe rigorously the research process and present the conclusions to an expert audience..
3. TG4: To acquire the ability to ask questions, read and listen critically and participate actively in seminars and discussions..
4. TG5: To knowing to disseminate and present the concepts acquired at a non-expert..
5. TG6: To acquire high power computation skills and advanced numerical methods capabilities in applications to problems in the context of complex systems..

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.Gr.	Description
Theory classes		Large group (G)	To understand the basci principles of data visualization and result presentation
Practical classes		Large group (G)	To gain practice with visualization tools and to present the results

Distance education work activities

Modality	Name	Description
Individual self-study		To prepare a presentation

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Riscs especifics i mesures de protecció

Les activitats d'aprenentatge d'aquesta assignatura no comporten riscs específics per a la seguretat i salut de l'alumnat i, per tant, no cal adoptar mesures de protecció especials.

Workload estimate

Modality	Name	Hours	ECTS	%
In-class work activities		**18.75**	**0.75**	**25**
Theory classes		9	0.36	12
Practical classes		9.75	0.39	13
Distance education work activities		**56.25**	**2.25**	**75**
Individual self-study		56.25	2.25	75
	Total	**75**	**3**	**100**

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.

Student learning assessment

Theory classes

Modality	Theory classes
Technique	Papers and projects **(Non-recoverable)**
Description	To understand the basci principles of data visualization and result presentation
Assessment criteria	Quality of the work developed

Percentage of final qualification: 20% following path A

Practical classes

Modality	Practical classes
Technique	Papers and projects **(Non-recoverable)**
Description	To gain practice with visualization tools and to present the results
Assessment criteria	Quality of the work developed

Percentage of final qualification: 30% following path A

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Individual self-study

Modality	Individual self-study
Technique	Papers and projects **(Non-recoverable)**
Description	To prepare a presentation
Assessment criteria	Quality of the presented work

Percentage of final qualification: 50% following path A

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/

Complementary bibliography

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

Other resources

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