

Syllabus

Subject

Subject / Group	11510 - Data Reduction Techniques / 1
Degree	Master's Degree in Economics of Tourism: Monitoring and Evaluation
Credits	3
Period	First semester
Language of instruction	English

Professors

Lecturers	Office hours for students					
	Starting time	Finishing time	Day	Start date	End date	Office / Building
Magdalena Concepción Cladera Munar mcladera@uib.es	14:00	15:00	Monday	10/09/2018	15/02/2019	DB247

Context

Statistical data reduction techniques are applied when the goal is to summarize or aggregate the information contained in large data sets into more manageable (smaller) information pieces. Data reduction techniques can include simple tabulation, aggregation (computing descriptive statistics) or more sophisticated techniques like principal components analysis, factor analysis, and other multivariate techniques. Here, the main statistical data reduction techniques will be presented with examples using statistical software. One application of these techniques is the design and development of indicators, so a review of this topic is going to be covered in this course.

A hands-on approach will be followed. The organization of the sessions will consist in brief presentations of the theoretical contents of each topic followed by students' work with statistical software, under the supervision of the lecturer.

Requirements

Recommended

Knowledge relating the basics of descriptive and inferential statistics is recommended as well as the use of Excel for management and statistical analysis of data.

Skills

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Specific

- * CE4 – To be able to contribute to the planning, monitoring and evaluation of policies, programmes and projects oriented towards the improvement of the competitiveness and sustainability of a tourism company, destination or region. .
- * CE7 – To be able to collect, generate, process and analyse statistical data to support monitoring and evaluation activities. .

Generic

- * CG2 – To develop an innovative capacity by applying the acquired knowledge to the resolution of problems in new environments related to the tourism sector. .
- * CG3 – To be able to formulate judgements that incorporate reflexions about the social and ethic responsibilities linked to the application of the acquired knowledge regarding the tourism system and its economic analysis. .
- * CG7 – To acquire specialized knowledge about the tourism system to make it possible to face challenges and provide solutions. .

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/

Content

Range of topics

1. Introduction to statistical data reduction techniques.
2. Tabulation and descriptive statistics.
3. Introduction to multivariate analysis.
4. Multivariate techniques for data reduction: principal component analysis, factor analysis, regression analysis,...
5. The use of data reduction techniques for the design and development of indicators.

Teaching methodology

In-class work activities (0.72 credits, 18 hours)

Modality	Name	Typ. Grp.	Description	Hours
Theory classes		Large group (G)	In-class presentation of the theoretical contents	10
Practical classes		Large group (G)	Computer classes and exercises	6
Assessment		Large group (G)	Project presentation	2

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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 Aula Digital platform.

Distance education tasks (2.28 credits, 57 hours)

Modality	Name	Description	Hours
Group or individual self-study		Study of the theoretical and practical contents. Preparation of assignments and projects.	57

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

The assessment will consist of:

- Everyday in-class assignments (Final grade percentage: 50%).
- Final group project (Final grade percentage: 50%).

Frau en elements d'avaluació

In accordance with article 33 of Academic regulations, "regardless of the disciplinary procedure that may be followed against the offending student, the demonstrably fraudulent performance of any of the evaluation elements included in the teaching guides of the subjects will lead, at the discretion of the teacher, a undervaluation in the qualification that may involve the qualification of "suspense 0" in the annual evaluation of the subject".

Practical classes

Modality	Practical classes
Technique	Real or simulated task performance tests (non-retrievable)
Description	Computer classes and exercises
Assessment criteria	
Final grade percentage:	50%



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Assessment

Modality	Assessment
Technique	Papers and projects (non-retrievable)
Description	Project presentation
Assessment criteria	
Final grade percentage:	50%

Resources, bibliography and additional documentation

Basic bibliography

- Janssens, W., Wijnen, K., Pelsmacker, P. de, & Van Kenhove, P. (2008). Marketing research with SPSS. Essex (England) : Prentice Hall.
- Johnson, R. A., & Wichern, D. W. (2014). Applied multivariate statistical analysis. Essex (England) : Pearson Prentice Hall.
- Newbold, P., Carlson, W. L., & Thorne, B. (2013). Statistics for business and economics. Boston : Pearson.

