Universitat de les Illes Balears

# Teaching guide

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| Academic year | 2015-16 |
| Subject | 11493 - Analysis and Interpretation of Results |
| Group | Group 1, 1S |
| Teaching guide | A |
| Language | English |

## Subject identification

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| **Subject** | 11493 - Analysis and Interpretation of Results |
| **Credits** | 0.72 de presencials (18 hours) 2.28 de no presencials (57 hours) 3 de totals (75 hours). |
| **Group** | Group 1, 1S (Campus Extens) |
| **Teaching period** | First semester |
| **Teaching language** | English |

### Professors

| Lecturers | Horari d'atenció als alumnes | | | | | |
|---|---|---|---|---|---|---|
| | Starting time | Finishing time | Day | Start date | Finish date | Office |
| Helena Isabel Ferreira Marques<br>helena.ferreira-marques@uib.es | 11:30 | 12:30 | Monday | 14/09/2015 | 23/03/2016 | DB255 (demanar cita prèvia per e-mail) |

## Contextualisation

The "Analysis and Interpretation of Results" course is compulsory for those students who want to graduate in the Master in Economics of Tourism with specialization in Monitoring. The course is offered as an elective for those students who choose to graduate in the Master in Economics of Tourism with specialization in Evaluation or for those who choose to graduate in the Master in Economics of Tourism with no specialization.

The course is integrated into the "Monitoring Techniques applied to Tourism" module. It follows two quantitative courses,"Design and Development of Specific Indicators" and "Generation and Gathering of Quantitative Information for Tourism", and one qualitative course, "Qualitative Analysis Techniques". It is followed by the "Causal Analysis and Prediction" course. Each of these courses focuses on a different stage of Monitoring, with "Analysis and Interpretation of Results" representing an intermediate stage between obtaining data for the available indicators and generating regression results to be used for prediction. "Analysis and Interpretation of Results" studies various measures of association and correlation and how to interpret them, whereas "Causal Analysis and Prediction" is concerned with causality relationships.

## Requirements

### Essential requirements

The essential requirements are covered by the criteria of admission to the Master's degree.

## Skills



Date of publication: 18/06/2015

### Specific

* CE7 – To be able to collect, generate, process and analyse statistical data to support monitoring and evaluation activities.
* CE10 – To develop skills that facilitate integration into labour markets related to the tourism industry and, especially, to the companies and institutions that monitor and evaluate projects and programmes in the tourism environment.
* CE11 – To be able to structure the work undertaken, as well as the results obtained, with the purpose of presenting reports in the fields of monitoring and evaluation.

### 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.
* CG7 – To acquire specialized knowledge about the tourism system in order to make it possible to face challenges and provide solutions.
* CG8 – To know how to apply information and communications technology (ICT) in the context of tourism projects.

### 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

The "Analysis and Interpretation of Results" course is part of the "Monitoring Techniques applied to Tourism" module and as such it will cover a range of quantitative techniques that will allow the study and following-up of the changes that take place in a tourism system during the period of implementation of a project, policy, program or plan. Naturally, the same techniques can be used under an evaluation perspective after the project, policy, program or plan has finished.

The purpose of the course is twofold. First, to learn how to apply those techniques to the comparison between the actual data gathered, and the aims and objectives set at the start. Second, to learn how to analyse and interpret the results of the economic evaluation of tourism projects.

### Theme content

1. Introduction
    * Analysis and Interpretation of Results in the context of Monitoring and Evaluation
    * The importance of comparison in Monitoring and Evaluation
    * Applications to the case of Tourism
2. Statistical inference methods for comparison
    * Basic concepts: statistical inference and hypothesis testing
    * Hypothesis specification
    * Test statistics and decision criteria
    * Test quality: error types, power and p-value
    * Main parametric tests
    * Introduction to GRETL and exercises
3. Analysis of variance (ANOVA)
    * The ANOVA table: one-way and two-way analysis
    * Testing with ANOVA: t-tests and F-tests



Date of publication: 18/06/2015

* Using GRETL and exercises

4. Association measures and testing
   * The coefficients of correlation: simple correlation (Pearson's r) and rank correlation (Spearman's rho)
   * Other measures of association: Cramer's V, Phi and Eta
   * Testing association: t-tests and Chi-square tests
   * Using GRETL and exercises
5. Presentation of results
   * Graphical presentation of results
   * Interpretation of results
   * Writing reports

## Teaching methodology

### In-class work activities

| Modality | Name | Typ. Grp. | Description | Hours |
|---|---|---|---|---|
| Theory classes | | Large group (G) | Theory classes allow a detailed exposition of the most important aspects of each topic, especially the new concepts. They also allow a special focus on the most difficult issues, where students need more learning support. Finally, they also facilitate the understanding of the context in which each topic is placed, including the relationships between the different topics. Theory classes will take up a total of 10 hours per student. At the end of each theory topic, exercises of application and consolidation of the theory will be solved in class. | 10 |
| Practical classes | | Large group (G) | Practical classes will take up a total of 6 hours per student.There will be two types of practical classes.On one hand, there will be a 4-hour computer session to deepen the understanding of the theory and to alllow the student to apply the theoretical concepts to real world data. The free econometric package GRETL will be used to this end. On the other hand, a 2-hour class will be dedicated to the individual presentation of the first draft of the course project, which consists of a written report analysing and interpreting tourism data using the tools learned in the course. Following their presentation, students will receive feedback and will be given more time to improve their project according to the feedback received. The presentation will be worth 15% of the final mark. | 6 |
| Assessment | | Large group (G) | A final exam will be given in the last class in order to assess the understanding of the whole course. The duration of the final exam will be 1.5 hours and it will contain theory questions, exercises, questions regarding the interpretation of computer output, and one question asking for a brief abstract of the course project. The final exam is worth 50% of the final mark. | 2 |



Date of publication: 18/06/2015

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

| Modality | Name | Description | Hours |
|---|---|---|---|
| Group or individual self-study | | Students should study the course materials and review their content in order to ensure that they have grasped the basics of the subject. They should also carry out the tasks proposed to them, such as exercises, computer-based tasks, and the course project. Similarly, to deepen the understanding of the course contents and place them in context it is important to study the bibliography of the course. Students are expected to dedicate 57 hours to studying for the course and carrying out the course project. The written course project will be worth 35% of the final mark. | 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

There will be three forms of assessment:

1) The final exam worth 50% of the final mark and recoverable if the student fails the course.

2) The oral presentation of the first draft of the course project worth 15% of the final mark, which is not recoverable as it takes place in class.

3) The written final course project worth 35% of the final mark and recoverable if the student fails the course.

Students pass the course if the final mark is at least 5 out of 10. Otherwise they fail and can attempt a second time the final exam and the written final course project. After that there will be no more attempts allowed until the student registers again for the course in the following academic year.

Students will be considered as absent from examination under at least one of two situations:

1) If the student participates in assessment activities that correspond to less than 30% of the final mark.

2) If the student attends less than 14 hours of classes.

The justifications accepted by UIB for absence are the death of a first or second line direct relative of the student (for example, parents or grandparents), hospitalization of the student, or participation of the student in a court jury. If one of these situations is proven by a certified document, the student is exempt from the two conditions above on those dates and if assessment is affected the student is given an extraordinary assessment.



Date of publication: 18/06/2015

### Practical classes

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| Modality | Practical classes |
| Technique | Oral tests **(non-retrievable)** |
| Description | Practical classes will take up a total of 6 hours per student.There will be two types of practical classes.On one hand, there will be a 4-hour computer session to deepen the understanding of the theory and to alllow the student to apply the theoretical concepts to real world data. The free econometric package GRETL will be used to this end. On the other hand, a 2-hour class will be dedicated to the individual presentation of the first draft of the course project, which consists of a written report analysing and interpreting tourism data using the tools learned in the course. Following their presentation, students will receive feedback and will be given more time to improve their project according to the feedback received. The presentation will be worth 15% of the final mark. |
| Assessment criteria | Set according to the competences described. |

Final grade percentage: 15%

### Assessment

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| Modality | Assessment |
| Technique | Short-answer tests **(retrievable)** |
| Description | A final exam will be given in the last class in order to assess the understanding of the whole course. The duration of the final exam will be 1.5 hours and it will contain theory questions, exercises, questions regarding the interpretation of computer output, and one question asking for a brief abstract of the course project. The final exam is worth 50% of the final mark. |
| Assessment criteria | Set according to the competences described. |

Final grade percentage: 50%

### Group or individual self-study

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| Modality | Group or individual self-study |
| Technique | Papers and projects **(retrievable)** |
| Description | Students should study the course materials and review their content in order to ensure that they have grasped the basics of the subject. They should also carry out the tasks proposed to them, such as exercises, computer-based tasks, and the course project. Similarly, to deepen the understanding of the course contents and place them in context it is important to study the bibliography of the course. Students are expected to dedicate 57 hours to studying for the course and carrying out the course project. The written course project will be worth 35% of the final mark. |
| Assessment criteria | Set according to the competences described. |

Final grade percentage: 35%

## Resources, bibliography and additional documentation

### Basic bibliography

* Bryman, A. and Bell, E. (2007), "Business Research Methods",Oxford: Oxford University Press, 2nd edition.
* Moore, D. and McCabe, G. (2003), "Introduction to the Practice of Statistics", New York: Freeman, 4th edition.



Date of publication: 18/06/2015

* Newbold, P., Carlson, W. and Thorne, B.(2009), "Statistics for business and economics", Addison-Wesley / Prentice Hall, 7th edition.

**Complementary bibliography**

* Ashenfelter, O., Levine, P. B. and Zimmerman, D. J. (2006),"Statistics and Econometrics:methods and applications", Wiley.
* Beltrán Pascual, M. (2004), "Statistical techniques and methods applied to the tourist sector", Direcció General d'Economia de Balears.
* Greene, W. H. (2007), "Econometric analysis", Addison-Wesley / Prentice Hall, 6th edition.
* Hill, R. C., Griffiths, W.E. and Lim, G. C. (2012), "Principles of Econometrics", Wiley, 4th edition.
* O'Leary, Z. (2006), "Researching Real-World Problems: A Guide to Methods of Inquiry", SAGE Publications.
* Saunders, M.,Lewis, P.and Thornhill, A.(2007), "Research Methods for Business Students",Harlow: Financial Times Prentice Hall, 4th edition.
* Stock, J.H. and Watson, M.M. (2012), "Introduction to Econometrics",Pearson.
* Wooldrige, J. M. (2006), "Introductory Econometrics: a modern approach", South-Western, 2nd edition.

**Other resources**

* Charities Evaluation Services (2015),NCVO (The National Council for Voluntary Organisations), London, UK, available online at:http://www.ces-vol.org.uk/about-performance-improvement/about-monitoring-evaluation/evaluation/conducting-evaluation/data-analysis-interpretation-evaluation
* International Center for Alcohol Policies (1995), Washington, DC, US,available online at: http://www.icap.org/PolicyTools/Toolkits/EvaluationToolkit/4DataAnalysisandInterpretation/tabid/446/Default.aspx
* Wholey, J., Hatry, H. and Newcomer, K. (2010),"Handbook of Practical Program Evaluation" (especially Chapter 20), 3rd edition,San Francisco, CA: Jossey-Bass, free online downloadable book at: http://www.themedfomscu.org/media/Handbook_of_Practical_Program_Evaluation.pdf



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