

Degree	Type	Year
Hotel Management	FB	1

Contact

Name: Tatiana Lopez Orozco
Email: tatiana.lopez@uab.cat

Teaching groups languages

You can view this information at the [end](#) of this document.

Prerequisites

None

Objectives and Contextualisation

At the end of the course, students will be able to:

1. Identify the types of variables suitable for quantitative analysis in hospitality.
2. Collect, analyse and present quantitative and qualitative information in the hospitality industry.
3. Understand the importance of collecting, analysing and presenting statistical data considering gender and sustainability perspectives in the sector.
4. Analyse data, populations and samples, as well as the association between variables to assess the economic dimension of the sector.
5. Interpret statistical results from a critical perspective, taking into account aspects of gender inequality and sustainability in the sector.
6. Understand the main concepts and parameters of descriptive statistics and establish criteria for presenting data analytically and graphically.
7. Identify variables related to hospitality and tourism characterised by randomness and analyse them using basic probabilistic techniques.
8. Apply statistical inference using hypothesis testing and estimation.
9. Perform time series analyses and forecast key hospitality and tourism variables.
10. Assess the advantages and disadvantages of different statistical methods for a given type of observation.
11. Identify key sources of quantitative data in the sector (e.g. publications, surveys, databases, etc.) and know how to use them.

Learning Outcomes

1. CM09 (Competence) Integrate quantitative and qualitative information on the tourism sector in order to assess the economic dimension of tourism in accordance with the Sustainable Development Goals.
2. CM10 (Competence) Interpret statistical data on the industry for operational decision-making.
3. KM09 (Knowledge) Identify variables related to the hotel and restaurant sector characterised by randomness.
4. KM10 (Knowledge) Recognise quantitative and qualitative information on the tourism and hotel sector in existing databases.
5. SM12 (Skill) Analyse data, populations, samples, tables and graphics of variables related to the tourism sector.
6. SM13 (Skill) Analyse quantitative and qualitative information related to the economic and social dimension of tourism.

Content

Topic 1: Preliminary concepts

- Basic concepts in statistics.
- Data organisation and presentation: tables and frequency distributions.
- Data collection through questionnaires and tabulation.
- Bar charts, histograms and other graphical representations.
- Sources of qualitative data in tourism and basic methods of integration with quantitative data (for mixed analysis).
- Information systems in tourism:
 - Impact of information systems on the sector.
 - Examples: PMS, CRS, CRM and BI tools applied to the sector.

Topic 2: Measures of central tendency

- Concepts of mean, median, mode, and quintiles.
- Relationship between measures.

Topic 3: Measures of dispersion and concentration

- Range, interquartile range, variance, standard deviation, coefficient of variation.
- Lorenz curve and Gini coefficient, uses of the Gini in tourism.
- Gender inequality analysis in dispersion and concentration indicators.

Topic 4: Measures of shape

- Measures of skewness and kurtosis.
- Box plot.

Topic 5: Bivariate series

- Definition and graphical representation.
- Central tendency.
- Statistical dispersion.
- Covariance.

Topic 6: Statistical dependence

- Correlation: concept, procedure and application.
- Pearson's correlation coefficient.
- Fitting linear regressions between two variables.
- Least squares approach.
- Application of dependence analysis to market studies and characteristics of tourism businesses.

Topic 7: Probability

- Operations with probabilities.
- Probability assignment: random variables and their distributions.

Topic 8: Time series

- Definition and graphical representation.
- Components of time series.
- Seasonal variation.
- Seasonal indices.
- Seasonal adjustment.

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Case study resolution	15	0.6	CM09, KM09, KM10, SM12, SM13, CM09
Theoretical sessions	43	1.72	CM10, KM09, KM10, SM12, CM10
Type: Supervised			
Tutoring	20	0.8	SM12, SM13, SM12
Type: Autonomous			
Research	14	0.56	CM09, KM09, SM12, SM13, CM09
Self-directed study	20	0.8	CM09, CM10, KM09, KM10, SM12, SM13, CM09

The course is structured into three main teaching and learning methods:

1 Theoretical sessions

During the classes, concepts will be explained theoretically and illustrated with practical applications. Some sessions will encourage active student participation through problem-solving activities related to the sector.

2 Practical sessions

These sessions will allow students to review and apply the topics covered in the theoretical sessions through exercises, group projects and individual tests carried out during the course. Case studies related to tourism will be worked on, and specific variables of this industry will be analysed.

The teaching staff will provide guidance for the development of a project requiring the use of statistical skills and computer tools. Specialised software will be used whenever possible during these sessions.

3 Self-directed learning

The Virtual Campus will be used as a complementary resource and as an additional means of communication between the teaching staff and the students. All relevant course materials, including examples and exercises, will be available online.

Each student will be responsible for managing their time to study and solve the proposed problems, as well as for developing a research project based on statistical data from the tourism sector, to be presented at the end of the course.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Assessment

Continuous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Final project and presentation	20%	6	0.24	CM09, KM09, SM12, SM13
Individual and group exercises	40%	4	0.16	CM09, CM10, KM09, KM10, SM12, SM13
Midterm exam 1	20%	2	0.08	CM09, CM10, KM09, KM10
Midterm exam 2	20%	2	0.08	KM09, SM12, SM13

Students can choose between continuous assessment or direct access to the final exam (*single assessment*).

A) Continuous assessment

The continuous assessment system involves the periodic submission of individual and group assignments and the completion of two midterm exams to consolidate the concepts and topics developed during the course. Each midterm exam will count for 20% of the final grade. In order to average the two midterm exam scores, students must achieve a minimum score of 4 points in each exam.

The dates for assignment submissions and midterm exams will be detailed on the Virtual Campus. Students who do not pass the subject through continuous assessment will be assessed under the single assessment system, with no consideration given to previous marks.

B) Single assessment

The single assessment will consist of a final exam covering the entire syllabus, held on the date and time set in the academic calendar according to the Official Programme of the Centre.

There will be only one type of final exam for all students, with no differentiation between those who have followed continuous assessment and those who have not.

C) Re-assessment

There is no minimum grade required to access the re-assessment. The only requirement is having taken the final exam of the failed part(s), on the date and time set according to the Official Programme of the Centre.

D) Not evaluable

The grade for the subject will be NOT EVALUABLE when the student attends less than half of the assessment activities and/or does not attend the final exam.

Bibliography

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Davis, G., & Pecar, B. (2009). Business Statistics using Excel (2nd ed.). Oxford University Press.

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UNWTO (2010) International Recommendations for Tourism Statistics 2008, Statistics and Tourism Satellite Account, World Tourism Organization, New York. Available [online](#)

World Tourism Organization. (2024). *International tourism highlights: 2024 edition*. World Tourism Organization. <https://doi.org/10.18111/9789284425808> - <https://www.unwto.org/un-tourism-world-tourism-barometer-data>

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Software

The course will use Microsoft 365 tools available to students, mainly:

- Excel, Word, PowerPoint, OneDrive and Teams for data analysis, preparation of reports and presentations, and online collaboration.
- Forms for data collection through surveys.
- Other tools recommended by the teaching staff according to the needs of the project or practical activities.

Groups and Languages

Name	Group	Language	Semester	Turn
(TE) Theory	1	Catalan/Spanish	second semester	morning-mixed