

Bachelor Degree in Tourism and Hospitality Management

Academic Year: 2020-2021

Teaching guide

Area: Information Systems and ICT

Subject: Data analysis in Tourism and Hospitality

Period: Semester 3

Lecturers:

Dr. Albert Fornells Herrera

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MODULE: BUSINESS FOUNDATIONS

AREA: INFORMATION SYSTEMS AND ICT

SUBJECT: DATA ANALYSIS IN TOURISM AND HOSPITALITY

CODE: OB3TIC-II

LANGUAGE: ENGLISH

YEAR: 2

PERIOD: SEMESTER 3

CREDITS: 3 ECTS

1. Subject objectives

Analyzing what is behind of the millions of data collected every day by the digital technologies has become one of the top priorities in almost all companies and institutions for understanding how businesses operate and how they deliver value to customers.

The goal of this subject is to provide new skills for converting data into business intelligence through the collection and organization of data into visual and interactive dashboards to gain insights about the internal data relations using different analysis approaches. These skills are acquired through the development of two challenges. On the one hand, a revenue management project where the goal is to figure out if a hotel is running a good price strategy in comparison with their main competitors. On the other hand, a study market where the aim is to identify the Barcelona's local perception regarding tourism. Both projects use Microsoft Excel as tool for collecting, organizing and manipulating data in order to create visual dashboard and get insights from them.

2. Competencies developed

Basic

B01 - Be able to acquire, understand and structure knowledge.

B02 - Be able to apply knowledge.

B03 - Be able to search for and manage information in order to solve problems, transmit reflective judgements and/or make decisions.

B04 - Be able to communicate information and/or knowledge in one's mother tongue, as well as in at least two foreign languages.

B05 - Be able to learn autonomously and continuously

General

G02 - Orientation towards achievement: demonstrates perseverance to excel and go beyond standards of excellence. Implies motivation for quality.

G10 - Orientation towards others/the client: implies the desire to help or serve others/the client, to discover and satisfy their needs.

Specific

E20 - Analyze and utilize information technology and communications (ICT) in different areas of the tourism sector.

3. Content

Session 1: Data is the 21st century's oil.

Session 2: Wrap up phase - Getting started with Excel . Related material: General Interface and how to make equations

Session 3: Wrap up phase - Getting started with Excel . Related material: Data validation, lookup functions and conditional formatting

Session 4: Wrap up phase - Getting started with Excel . Related material: Introduction to PivotTables

Session 5: Dashboard Project - Is my hotel running a good price strategy? . Related material: Challenge 1 - Identify trends and seasonality by means of data organization in tables and charts

Session 6: Dashboard Project - Is my hotel running a good price strategy? . Related material: Challenge 1 - Identify trends and seasonality by means of data organization in tables and charts

Session 7: Dashboard Project - Is my hotel running a good price strategy? . Related material: Challenge 2 - Definition of KPIs by means of advanced functionalities in PivotTables

Session 8: Dashboard Project - Is my hotel running a good price strategy? . Related material: Challenge 2 - Definition of KPIs by means of advanced functionalities in PivotTables

Session 9: Trends Project - The COVID19 impact in the hospitality sector . Related material: Challenge 1 - How to plan a survey and design a questionnaire

Session 10: Trends Project - The COVID19 impact in the hospitality sector . Related material: Challenge 2 - How to plan data collection and perform a data cleaning

Session 11: Trends Project - The COVID19 impact in the hospitality sector . Related material: Challenge 3 - How to gain insights from data using descriptive analysis techniques

Session 12: Trends Project - The COVID19 impact in the hospitality sector . Related material: Challenge 3 - How to gain insights from data using descriptive analysis techniques

Session 13: Recap. Related material: Learned lessons and exam preparation

4. Teaching methodology

Practical Exercises. Practical assignments with computer to understand and practice the concepts

Plenary Lectures. The sessions are organized into self-contained capsules of knowledge in which the student participation and interaction is encouraged

Readings. Books and articles are suggested for helping students to complete the activities and also for extending their knowledge if they want to learn optional topics

Self-study or Study Groups. Study of the content of the class sessions

5. Assessment activities

Regular examination call

- **A2-Dashboard project: Is my hotel running a good price strategy? (Nov, 15/2020)**

Academic Work (Group - 25%)

Evaluated competences: B1,B2,B3,B4,B5,G2,G10,E20

- **A3-Trends project: The COVID19 impact in the hospitality sector (Dec, 20/2020)**

Academic Work (Group - 25%)

Evaluated competences: B1,B2,B3,B4,B5,G2,G10,E20

- **A4-Quizzes at the end of some sessions**

Academic Work (Individual - 15%)

Evaluated competences: B1,B2,B3,B4,B5,G2,G10,E20

- **A1-Final exam using computer**

Final exam (Individual - 35%)

Evaluated competences: B1,B2,B3,B4,B5,G2,G10,E20

- The final grade is computed only if the final exam is graded 5 or higher. There is no a minimum grade for activities A2, A3 and A4.

- Activities A2, A3, A4 are available only in the regular call. Their goal is to help you to prepare you for the final exam.

- Activities A2 and A3 are done in pairs. They are graded as 0 if a student cannot demonstrate their participation.

- Students who have not attended a minimum of 70% of classes throughout the semester, will not be eligible to take the final exam in the regular call.

Resit examination call

- **A1-Final exam using computer**

Final exam (Individual - 100%)

Evaluated competences: B1,B2,B3,B4,B5,G2,G10,E20

Repeating students without attendance: regular examination call

- **A1-Final exam using computer**

Final exam (Individual - 100%)

Evaluated competences: B1,B2,B3,B4,B5,G2,G10,E20

The content of the subject is the same that the content of the previous academic course. Students are invited to do the new activities and exercises and submit them into moodle.

Repeating students without attendance: resit examination call

- **A1-Final exam using computer**

Final exam (Individual - 100%)

Evaluated competences: B1,B2,B3,B4,B5,G2,G10,E20

Follow-up meetings

Week 3 , Send an email to set an appointment

Week 7 , Send an email to set an appointment

Week 13 , Send an email to set an appointment

6. Bibliography

Recommended readings

Analyzing and Visualizing Data with Excel -
<https://mva.microsoft.com/en-US/training-courses/analyzing-and-visualizing-data-with-excel-11157>

Winston (2016) Microsoft Excel 2016. Data Analysis and Business Modeling, Microsoft PressSee chapters/pages1-61

Emerald (2017) Research methods and methodology. Emerald Publishing.

<http://www.emeraldgrouppublishing.com/research/guides/methods/index.htm> last accessed in 09/2018

7. Lecturer/s

Dr. Albert Fornells Herrera (Head lecturer) - albert.fornells@htsi.url.edu

Contact hour: Send an email to set an appointment

Dr. Albert Fornells is full professor at School of Tourism and Hospitality Management Sant Ignasi, Universitat Ramon Llull. Nowadays he is the Vice Dean and the director of the undergraduate studies at the faculty. His current interests are focused on the impact of the digital transformation in the hospitality sector and its influence in the future of skills, jobs and work, and how Higher Education can contribute to this challenging transition.

His professional career has been always closely linked research, teaching and academic affairs. His research interests are the analysis of huge volume of data for creating additional value to the tourism industry and how to apply technology and gamification techniques for improving learning and user experience. The results of his research has published in several journals with high impact factor and international conferences. Moreover, he has leaded many research projects based on applying artificial intelligence and data mining for creating decision support systems and he has also supervised different PhD thesis. As lecturer, he teaches subjects related to artificial intelligence, data mining, mathematics, software engineering, software development, project management, computer graphics, information systems and Internet technologies. Finally, he is interested in the future of the European Higher Education and he has leaded the deployment of different quality assessment programs such as the design, modification, monitoring and accreditation of university degrees.

He holds a M.Sc. and a Ph.D. with honors in computer engineering from Universitat Ramon Llull, a Research certification and two Research period certification from The Catalan University Quality Assurance Agency (AQU) and a PhD lecturer certification from The National Agency for Quality Assessment and Accreditation of Spain (ANECA).

Keywords: Digital Transformation, Tourism & Hospitality, EHEA, Artificial Intelligence and Software Engineering.

8. Observations

- * A computer or tablet using Microsoft Excel is required for the practical sessions.
- * You can use your HTSI credentials for getting an educational Microsoft Office version (which includes Excels) as its described on moodle
- * Information on the academic calendar, exam timetables, and room assignment will be posted on the virtual campus and on the faculty's web site once it is available.
- * Academic norms and regulations is an obligation for all the members of the academic community in the faculty.

In the event of a health emergency, the faculty will resume the academic activity as follows:

- * The academic board will notify students and lecturers about the change to remote mode, its timeframe and the appropriate recommendations.
- * The face-to-face activity will be transferred to the remote environment through the virtual classroom and the HTSI videoconferencing tools accessible with the students' credentials.
- * The academic activity will be maintained in the established schedules and calendars, being able to adapt in other timetables to facilitate the development of the meetings and tutoring activities.
- * The contents and activities will be maintained as planned. In the case of visits or sessions with professionals in the classroom, these could be re-planned or adapted by other similar ones depending on the circumstances.
- * The weight of the evaluation activities is maintained. The delivery dates can be modified if the confinement conditions influence the development of the activity (for example, data collection, interviews ...) so as not to harm the student.