INSTITUTO POLITÉCNICO DE BRAGANÇA

Course Unit	Marketing Statistics			Field of study	Statistics		
Bachelor in	Marketing			School	School of Public Management, Communication and Tourism		
Academic Year	2022/2023	Year of study	2	Level	1-2	ECTS credits	6.0
Type	Semestral	Semester	1	Code	9205-714-2101-00-22		

Workload (hours)	162	Contact hours	T -	TP 60	PL -	TC -	S -	E -	OT -	O -

T - Lectures; TP - Lectures and problem-solving; PL - Problem-solving, project or laboratory; TC - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other

Name(s) of lecturer(s): Maria de la Salete Dias Esteves

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:
1. Sort, organize and present data for a situation or a phenomenon;
2. Interpret tables and graphs of statistical data;
3. Inferring population parameters from sample parameters;
4. Develop a critical sense in relation to the exposure mode information and make decisions in the face of statistical evidence;
5. Perform a statistical treatment of data in computer-based support in Microsoft Excel;
6. Apply statistical techniques to solve solve practical problems from Marketing.

Prerequisites

Before the course unit the learner is expected to be able to:
Have knowledge in mathematics.

Course contents

Introduction to statistical analysis. Descriptive statistics. An introduction to probability. Distributions. Confidence intervals.

Course contents (extended version)

1. Introduction to statistical analysis
   - Why study statistics
   - Object of statistics
   - The role of statistics in Marketing
   - Descriptive and inferential statistics
   - Populations and samples
2. Descriptive statistics
   - Presentation and summarization of data
   - Variable definition and types
   - Characterization of univariate samples
   - Data analysis in Microsoft excel and in PSPP
3. Distributions
   - An introduction to probability
   - Random variables
   - Parameters of the distributions
   - Discrete random variables
   - Continuous random variables
   - Approximation Theorems in Probability
   - Point estimation
4. Confidence intervals
   - Confidence interval definition
   - Specification of confidence intervals
   - Confidence intervals for parameters of a population
   - Confidence intervals for certain operations between the two populations parameters
   - Estimating sample size
   - Paired random sample
   - Estimation using Microsoft Excel and in PSPP

Recommended reading

1. Belfiore, P. (2015). Estatística Aplicada a administração, contabilidade e economia com Excel e SPSS. LTC.
2. Figueiredo, F., Figueiredo, A., Ramos, A. ,& Teles, P. (2009). Estatística Descritiva e Probabilidades (2. ª Ed.). Escolar Editora.
3. Gama, S., & Pedrosa, A. C. (2016). Introdução Computacional à Probabilidade e Estatística (3. ª Ed.). Porto Editora. ISBN: 9789720019905.
4. Levine, D. , Szabat, K. , & Stephan, D. (2016). Statistics For Managers Using Microsoft Excel (8ª Ed.). Pearson Edition. ISBN: 9780134173054
5. Navarro, D. & Foxcroft, D. (2022). Learning statistics with jamovi: a tutorial for psychology students and other beginners. DOI: 10.24384/hgc3-7p15. http://learnstatswithjamovi.com

Teaching and learning methods

For each subject there are, periodically and in advance, proposed work modules. The student should study each previously, being encouraged to develop teamwork. The classes will be oriented in order to: overcome difficulties, explore examples connected to practical cases and discuss work proposals.

Assessment methods

1. Distributed evaluation I - (Regular, Student Worker) (Final)
   - Practical Work - 10%
   - Practical Work - 20%
   - Intermediate Written Test - 35%
   - Final Written Exam - 35%
2. Distributed evaluation II - (Regular, Student Worker) (Final)
   - Practical Work - 20%
   - Intermediate Written Test - 40%
   - Final Written Exam - 40%

Assessment methods

3. Distributed evaluation III - (Regular, Student Worker) (Supplementary)
   - Practical Work - 20%
   - Practical Work - 10%
   - Final Written Exam - 70%
4. Distributed evaluation IV - (Regular, Student Worker) (Supplementary, Special)
   - Practical Work - 20%
   - Final Written Exam - 80%
5. Evaluation by final exam - (Regular, Student Worker) (Final, Supplementary, Special)
   - Final Written Exam - 100%
6. Incoming and outgoing students - (Regular, Student Worker) (Final, Supplementary)
   - Practical Work - 50%
   - Final Written Exam - 50%

Language of instruction

Portuguese, with additional English support for foreign students.

Electronic validation

Maria de la Salete Dias Esteves	Luisa Margarida Barata Lopes	Elisabete da Anunciacao Paulo Morais	Luisa Margarida Barata Lopes
11-10-2022	13-10-2022	14-10-2022	14-10-2022