Statistical crime analysis

Academic Year: (2022 / 2023)   **Review date: 20/06/2022 12:44:55**

Department assigned to the subject: Statistics Department

Coordinating teacher: WIPER , MICHAEL PETER

Type: Compulsory ECTS Credits : 6.0

Year : 3 Semester : 1

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

None

OBJECTIVES

Know the basic rules of probability
Manage the most important probability distributions
Synthesize statistical information in tabular, numerical and graphical form
Obtain the distribution in the sampling of estimators in normal populations, raise hypothesis contrasts and construct
the corresponding confidence intervals
To propose and validate the linear regression model as a model of relationship between variables
To practice in the computer the construction of models, contrasts and confidence intervals
Apply these procedures to the treatment of statistical problems in security management and criminology

DESCRIPTION OF CONTENTS: PROGRAMME

Content leading to the acquisition of knowledge in:
-Introduction to probability and statistics: concept of probability and basic rules, distributions, descriptive statistics for
one and several variables
-Introduction to statistical inference: confidence intervals and hypothesis contrasts for mean and variance;
Comparisons of means between two populations
-Relations between variables: introduction to linear models, estimation of model parameters and inference about these
parameters
-Applications to security management and criminology

LEARNING ACTIVITIES AND METHODOLOGY

Lecture classes for the presentation of fundamental concepts,
Practical classes in computer labs,
Tutorials in groups and individual

ASSESSMENT SYSTEM

% end-of-term-examination/test:	40
% of continuous assessment (assigments, laboratory, practicals…):	60

Exercises, intermediate tests, mini-project using statistical analysis of data, final exam

BASIC BIBLIOGRAPHY

- J.M. Gau Statistics for Criminology and Criminal Justice, SAGE Publications, 2015

- R.D. Bachman & R. Paternoster Statistics for Criminology and Criminal Justice, SAGE Publications, 2016

- R.D. Bachman & R. Paternoster Statistics for Criminology and Criminal Justice, SAGE Publications, 2016

ADDITIONAL BIBLIOGRAPHY

- D. Rowntree Statistics Without Tears, Penguin, 2018

BASIC ELECTRONIC RESOURCES

- M.P. Wiper . Teaching web page: http://halweb.uc3m.es/esp/Personal/personas/mwiper/eng/docencia.html