Curricular Unit Form

Updated On	2021/09/23
Curricular Year / Period	2021/22 / S1
Course	Enfermagem Veterinária
Curricular Unit	Métodos Estatísticos e Informáticos
Language(s) of Instruction	português

ECTS/tempo de trabalho (horas)

ECTS	Total	Horas de contacto semestral								
		T	TP	PL	S	TC	E	O	OT	EC
6	160		64	32						

T - Theoretical; TP - Theoretical and practical; LP - Laboratory Practice; S - Seminar; TG - Tutorial guidance; FW - Fieldwork; T - Training; ; EC - Clinical teaching; O* - Other hours typified as Clinical Training under the Directive 77/453/EEC of June 27, adapted by Directive 2005/36/EC.

Teacher in charge (GDPR consent)
[complete name, email]

Adelaide João Cardoso Marques Proença / adelaideproenca@ipportalegre.pt

Prerequisites
[Curricular Units that must precede and specific entry competences]

Not applicable.

Learning outcomes
[Description of the overall and specific objectives] [Knowledge, skills and competences to be developed by students]

The student must be able: (i) use statistical methods to summarize data and perform exploratory data analysis; (ii) understand the conditions underlying the applicability of the theoretical models used for statistical analysis; (iii) distinguish the validity and limits of each model; (iv) analyze and interpret the results obtained; (v) distinguish between cause-effect relationships and statistical association relationships between variables; (vi) acquire basic research skills and critical reading of technical and scientific documentation. (vii) know how to use the computer to: (a) word processing and graphics construction (b) store, capture, process and analyze data using a statistical application program (c) search documentation on the internet and bibliographic databases on-line.

Syllabus

Statistics:
Introduction to descriptive Statistics; Descriptive Statistics;
Random variables;
Theoretical distributions of probability and your relationships; Statistical Inference;
Experimental Design.

Computing:
The spreadsheet and basic features
Cell Editing
Building and editing formulas
Functions application
Graphical data analysis
Mathematical and statistical analysis
Measures of location or central tendency
Dispersion Measures
Obtaining Frequency Tables
Absolute and relative frequencies
Histogram construction
Linear correlation
Scatterplot, adjustment and prediction
Random variables
Probability Models: Continuous and Discrete
Linear Programming
Hypothesis analysis and data simulation
Advanced use of analysis tools

Teaching methodologies (including assessment)

1 - Teaching methodologies

Curricular Unit Form

POLITÉCNICO
DE PORTALEGRE

POLITÉCNICO
DE PORTALEGRE
Escola Superior
Agrária de Elvas

Theoretical classes with content exposition and subsequent exploration through solved examples and exercises to solve in class and/or at home. Theoretical-practical classes with direct explanation and exemplification, as well as resolution of example sheets. Performing group work.

2 - Period assessment

Two intercalary frequencies and/or exam (45% + 45% = 90%)
- Individual work and/or practical work (10%)
- All students must have a minimum of 75% attendance in the set of classroom teaching-learning activities;
Important notes about the assessment:
- To obtain aprobbation in the discipline by frequency, all students must have a positive arithmetic mean in the assessment elements, but may not have less than 7.5 in either frequency.
- If the student does not meet the above conditions, for aprovation, will have to propose the exam.
- The date of the first test is conditioned by the fulfillment of the contents planned for it, ie the first three topics in the field of Statistics.

3 - Examination assessement

[Specify the types of assessment and the weights and evaluation criteria]

- In the exam, for the purposes of approbation, the student will have the option to answer only the part of the subject in which they did not obtain a classification equal or higher than 7.5 in the respective test. These conditions will apply to the regular, recourse and special season exams of this school year.

- In the exam, for the purpose of classification improvement, the student will always have to answer the entire subject.
- Students must carry a student card or other official photo ID and writing material for the tests.

- With regard to the practical component, it has an optional character, and its evaluation will only be considered if it benefits the student. Thus, for students who have not done practical work, or whose performance was not desired, implies that the partial weighting (of the tests or exams) will be as follows:
 - 1st frequency / part 1 - 50% and 2nd frequency / part 2 50%.

- With regard to the exams, the student may choose to take only the part that did not obtain a minimum classification (of test or previous exams) or to take the entire exam. In case the student chooses to take the complete exam (two parts) the classifications of previous moments will not be taken into consideration.
- It is expressly forbidden for students to use in the evaluation tests of graphing calculators, mobile phones, smart watches, tablets and the others like, implying the cancellation of the test immediately. Only the use of scientific calculator is allowed.

Bibliography

1 - Main Bibliography

SOUSA, Maria José. Domine a 110%. Excel 7 para Windows.
 MOURATO, Joaquim (1997). Estatística. Textos de apoio às aulas. ESAE
 CARVALHO, Adelaide. Exercícios resolvidos com o EXCEL XP
 CALLEGARI-Jacques, S.M. (2003). Bioestatística : princípios e aplicações. 1ª edição. Artmed Editora AS. Porto Alegre Brasil
  HOFMANN, Rodolfo, e VIEIRA, Sónia. Estatística experimental, Atlas
     MURTEIRA, B. ; RIBEIRO, C. S.; SILVA, J. A.; PIMENTA, C. (2007). Introdução à Estatística (2ª ed.). Lisboa: McGraw-Hill.
     PEDROSA, A. C.; GAMA, S. M. (2004). Introdução Computacional à Probabilidade e Estatística. Porto: Porto Editora.
     PESTANA, D. D.; VELOSA, S. F. (2008). Introdução à Probabilidade e à Estatística (vol. I). Lisboa: Fundação Calouste Gulbenkian.
REIS, Elisabeth, Estatística Descritiva, Edições Sílabo.
 MURTEIRA, Bento J., e BLACK, George H., Estatística Descritiva, McGraw-Hill
 OLIVEIRA, J. Tiago, Probabilidades e Estatística (conceitos, métodos e aplicações), Vol. I e II, McGraw-Hill.

2 - Complementary Bibliography

HOGG, R. V. & TANIS, E. A. (2006). Probability and Statistical Inference (7th ed.). Upper Saddle River, New Jersey: Prentice Hall.
     LARSON, R.& FARBER, E. (2006). Elementary Statistics: Picturing the World (3th ed.). Upper Saddle River, New Jersey: Prentice Hall.
     MANN, P. M. (2010). Introductory Statistics (7th ed.). New York: John Wiley and Sons.

MOORE, D. S.; McCABE, G. P; CRAIG, B. (1996). Introduction to the Practice of Statistics. New York: W. H. Freeman and Company.

ROSS, S. M. (2007). Introduction to Probability Models (9th ed.). San Diego, Califórnia: Elsevier - Academic Press.

Special Situations [Students with special status]	**1 - Period assessment - Students with special status** The above conditions apply, except for the attendance in which the student has no mandatory minimum limit. No special support is provided, being in the judgment of the teacher each particular situation. **2 - Examination assessement - Students with special status** The above conditions apply, except for the attendance in which the student has no mandatory minimum limit. No special support is provided, being in the judgment of the teacher each particular situation.