COURSE DATA

Data Subject

Code	33935
Name	Statistics
Cycle	Grade
ECTS Credits	6.0
Academic year	2020 - 2021

Study (s)

Degree	Center	Acad. year	Period
1205 - Degree in Human Nutrition and Dietetics	Faculty of Pharmacy and Food Sciences	1	Second term

Subject-matter

Degree	Subject-matter	Character
1205 - Degree in Human Nutrition and Dietetics	5 - Statistics	Basic Training

Coordination

Name	Department
IÑIGUEZ HERNANDEZ, MARIA DEL CARMEN	130 - Statistics and Operational Research
PEIRO RAMADA, JUAN JOSE	130 - Statistics and Operational Research

SUMMARY

This course aims to provide students with the tools and basic concepts of Statistics which are necessary to state statistical hypotheses, recognize simple probabilistic models, analyse data obtained by either direct observation of the environment or as a result of controlled experiments in laboratories, and make decisions based on the conclusions drawn from this analysis. An additional purpose of this course is to motivate students in the study and application of Statistics, using the proper tools to solve real problems.

PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

Other requirements

There are no recommendations as this is an introductory course.

OUTCOMES

1205 - Degree in Human Nutrition and Dietetics

- Design simple experiments that may be useful to achieve the objectives of the study.

- Describe and synthesise the dataset observed in the experiment.

- Analyse the data observed using a statistical package.

- Interpret the results provided by statistical packages.

- Prepare and present a report of the experimental study conducted.

- Be familiar with statistics applied to health sciences.

LEARNING OUTCOMES

This course aims to encourage the students to:

- Work together.
- Plan and organize the work.
- Express suitably their thoughts and decisions.

DESCRIPTION OF CONTENTS

1. Unit 1: Introduction to Statistics and Exploratory Data Analysis.

Introduction to Statistics
Sample description.
Population description: Introduction to Probability

2. Statistical analysis of a variable

Inference on proportions
Inference on a population mean

3. Statistical analysis of more than one variable

Comparison of two population means
Comparison of more than two population means
Comparison of categorical variables

WORKLOAD

ACTIVITY	Hours	% To be attended
Theory classes	45,00	100
Seminars	10,00	100
Tutorials	2,00	100
Development of group work	10,00	0
Study and independent work	20,00	0
Preparation of evaluation activities	20,00	0
Preparing lectures	20,00	0
Preparation of practical classes and problem	20,00	0
TOTAL	**147,00**	

TEACHING METHODOLOGY

Theory classes will be devoted to develop the agenda and raise problems whose solution requires the methodology corresponding to each subject. We will introduce the appropriate statistical technique and apply it to solve proposed problems using statistical software. For the preparation of the course the student will have a collection of proposed problems, separated by subjects, which they will have to resolve on their own. The practical sessions will take place in a computer room and will be synchronized with the theory; they will allow the student to solve problems by applying the statistical procedures

EVALUATION

The knowledge acquired both in theory and practical sessions will be evaluated together, by means of an exam which may require the interpretation of results presented in the standard statistical software format used throughout the course. This evaluation will represent the 70% of the final grade. The remaining 30% of the final grade will come from work evaluated throughout the course (20%) and seminars (10%).

Case studies and practical work (20% of the final grade) will be conducted in groups of no more than 3 students. Each group will write its own report with resolution of the proposed tasks. To pass the course you must have at least a grade of 4/10 both in final grade and practical works.

Practical work evaluated throughout the course is done in group and computer lab so it is not recoverable.

REFERENCES

Basic

- Samuels, M.L., Witmer, J.A. y Schaffner, A. (2012). Fundamentos de Estadística para las Ciencias de la Vida (4a ed.) Pearson Educación S.A.

Additional

- Bower, J.A. (2009). Statistical Methods for Food Science. Wiley-Blackwell.

ADDENDUM COVID-19

This addendum will only be activated if the health situation requires so and with the prior agreement of the Governing Council

1. Content

The contents initially included in the teaching guide are unchanged.

2. Workload and temporary education planning

The workload for the student, derived from the number of credits, remain unchanged as well. However, the methodology of the activities changes along with the conventional teaching guide as a result of the current situation, which made it necessary to adopt a hybrid model of teaching.

3. Teaching methodology

• Theoretical teaching: will be carried out through synchronous sessions (videoconferences synchronized on BBC, or other technology indicated by the center) and face-to-face teaching. The students will be distributed into two groups, 50% of the total number of students in each one. While one group learns in the classroom of the Faculty, the other will connect online, alternating their attendance every week. The classes will always be held following the schedule (date and time) approved by the Center Board.

• Tutoring: All sessions will be held face-to-face according to the dates set by the course calendar.

• Coordinated seminars: All sessions will be held face-to-face according to the dates set by the course calendar.

• Practical classes: All sessions held face-to-face and according to the calendar of the course, but with the appropriate modifications to comply with the safety regulations against COVID-19.

If a state of total confinement were to be reached, all face-to-face teaching would be done online.

4. Evaluation

The weight of continuous evaluation is increased. The final grade of the course will be computed from the following four blocks:

- B1. Theoretical-practical exam, the resolution of which requires interpreting different outputs of the statistical software R employed during the course: 50% of the final grade. The minimum mark required in this block to be compensated with the mark of the remaining blocks is 4 out of 10.

- B2. Resolution of theoretical-practical questions and problems raised during the course in relation to the theory sessions: 20% of the final mark.

- B3. Resolution of those practical cases raised in the practical sessions by using the statistical software R and the interpretation of the obtained results: 20% of the final grade. The minimum mark required in this block to be compensated with the mark of the remaining blocks is 4 out of 10.

- B4. Coordinated Seminar Work: 10% of the final mark. The delivery of the written work, the diary of each student and the exhibition file, all in electronic format, will be mandatory.

The continuous evaluation, corresponding to blocks B2, B3 and B4, is not recoverable. In the second call, only the theoretical-practical exam (Block B1) will be repeated, and the grades obtained for blocks B2, B3 and B4, respectively, will be maintained.