Information about the subject

Degree: Bachelor of Science Degree in Psychology

Faculty: Faculty of Psychology

Code: 291104 **Name:** Fundamentals and Analysis of Data

Credits: 6,00 **ECTS Year:** 1 **Semester:** 1

Module: RESEARCH FUNDAMENTALS AND METHODOLOGY

Subject Matter: STATISTICS **Type:** Basic Formation

Field of knowledge: Health Sciences

Department: -

Type of learning: Classroom-based learning / Online

Languages in which it is taught: Spanish

Lecturer/-s:

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Module organization

RESEARCH FUNDAMENTALS AND METHODOLOGY

Subject Matter	ECTS	Subject	ECTS	Year/semester
STATISTICS	12,00	Fundamentals and Analysis of Data	6,00	1/1
		Psychometrics	6,00	2/1
RESEARCH METHODS, DESIGNS AND TECHNIQUES	6,00	Research Methodology	6,00	4/1
MODERN LANGUAGE	6,00	Scientific English	6,00	1/1

Recommended knowledge

The student is not assumed to have special knowledge of mathematics or statistics applied to the social sciences. However, he or she must know the fundamentals of data analysis corresponding to access to university. Mainly, this knowledge refers to basic descriptive statistical concepts, summary statistics, calculation and probability.

Learning outcomes

At the end of the course, the student must be able to prove that he/she has acquired the following learning outcomes:

R1   Demonstrating the acquisition of a mental representation of the main research methods and techniques as well as their importance and usefulness.

R2   Building a work team in order to practically apply the knowledge acquired through the presential activities and individual work.

R3   Obtaining and organizing information from different sources (journals, books, videos, Internet).

R4   Acquiring a correct mental representation of the theoretical-practical contents of the module.

R5   Obtaining and organizing information from different sources (journals, books, videos, Internet) in order to create a test or for other purposes.

Competencies

Depending on the learning outcomes, the competencies to which the subject contributes are (please score from 1 to 4, being 4 the highest score):

SPECIFIC		Weighting			
		1	2	3	4
CE1	Analyzing needs and requests of addressee functions in different contexts.			x	
CE5	Identifying differences, problems and needs.			x	
CE7	Analyzing and assessing interaction processes, group dynamics and group and inter-group structures.			x	
CE12	Selecting and correctly using tools, products and services and identifying those people and group concerned.			x	
CE13	Designing and adapting tools, products and services to requirements and restrictions.	x			
CE14	Contrasting and checking tools, products and services (prototypes and pilot studies).	x			
CE25	To be able to measure and to collect relevant data for the evaluation of the interventions				x
CE26	Writing oral and written reports.		x		
CE27	Knowing and adapting to the psychology code of ethics.			x	
CE35	To know research methods and data analysis techniques.			x	

TRANSVERSAL		Weighting			
		1	2	3	4
CT1	Capacity to analyze and synthesize.			x	
CT2	Capacity to organize and plan.				x

CT3	Mastering Spanish oral and written communication.			X
CT4	Command of a foreign language.	X		
CT5	Knowing and applying Basic ITC skills related to Psychology.	X		
CT6	Capacity to manage information (capacity to look for and analyze information coming from different types of sources)			X
CT7	Problem solving.			X
CT9	Capacity to work in team.			X
CT12	Interpersonal skills.	X		
CT14	Critical capacity.			X
CT15	Ethics.	X		
CT16	Capacity to develop and update competences, skills and knowledge following professional standards.		X	
CT18	Capacity to produce new ideas (creativity).			X
CT25	Self-criticism ability: being able to critically assess one's performance.			X
CT30	Social commitment.	X		
CT35	Being able to develop audio-visual presentations.		X	
CT36	Being able to collect information using different kinds of sources.		X	

Assessment system for the acquisition of competencies and grading system

In-class teaching

Assessed learning outcomes	Granted percentage	Assessment method
R1, R2, R3, R4, R5	60,00%	Oral and/or written tests employed in initial, training and/or summative student assessment.
R1, R2, R3, R4, R5	20,00%	Attendance and active participation: lessons, group assignments and tutoring sessions. It will be monitored and registered by the teacher.
R2, R3	20,00%	Group assignments.

Observations

Obtaining a minimum grade in each of these evaluation systems will be necessary for them to be cumulative (50% of the total mark). In order to take the individual test of theoretical knowledge and practical abilities, the student will need a calculator and a self-created form.
Criteria to grant the maximum grade: Obtaining at least 9.5 points and carrying out a discriminatory test among applicants.

Online teaching

Assessed learning outcomes	Granted percentage	Assessment method
R1, R2, R3, R4, R5	70,00%	Final evaluation consisting of essay questions and hypothetical scenarios.
R1, R2, R3, R4, R5	5,00%	Submitted tasks
R1, R2, R3, R4, R5	5,00%	Periodical assessment through questionnaires
R2, R3	20,00%	Attendance and participation in synchronic communication activities.

Observations

Learning activities

The following methodologies will be used so that the students can achieve the learning outcomes of the subject:

M1   Teacher presentation of contents, competency analysis, explanation and demonstration of capacities, abilities and knowledge in the classroom (presential modality).

M2   Teacher-supervised groupwork sessions: case studies, diagnostic tests, problems, fieldwork, IT room, visits, data searches, libraries, web, Internet, etc. Building knowledge significantly through interaction and student activities (presential modality).

M3   Supervised monographic sessions with shared participation.

M4   Application of interdisciplinary knowledge.

M6   Personalized attention in small groups. Training and/or orientation period by a teacher aimed at revising and discussing the materials and topics presented in the lessons, seminars, lectures, assignments, etc.

M7   Set of oral and/or written tests employed in initial, training or summative assessment of the student.

M8   Group preparation of readings, essays, problem resolution, seminars, assignments, reports, etc. to be presented or handed in during theory lessons, practical lessons and/or tutoring sessions in small groups. Tasks done on the platform or other virtual spaces.

M9   Students' independent study: individual preparation of readings, essays, problem resolution, seminars, assignments, reports, etc. to be presented or handed in during theory lessons, practical lessons and /or small-group tutoring sessions. Tasks on the platform or other virtual spaces.

M11   Teacher presentation of contents, competencies analysis, explanation and demonstration of capacities, abilities and knowledge on the virtual classroom.

M12   Group work sessions via chat moderated by the teacher. Case studies –both real and fictional– aimed at building knowledge through interaction and students' activities. Critical analysis of values and social commitment.

M13   Monographic sessions throughout the course, focused on current aspects and applications of the subject.

M14   Set of oral and/or written tests employed in initial, training or summative assessment of the student.

M15   Student's individual study: individual preparation of readings, essays, problem resolution, seminars, assignments, reports, etc. to be discussed or turned in in electronic format.

M16   Individualized attention for the monitoring and orientation in the learning process, performed by a tutor in order to revise and discuss the materials and topics, seminars, readings and assignments, etc.

M17   Group preparation of readings, essays, problem resolution, seminars, assignments, reports, etc. to be discussed or handed in.

M18   Participation and contributions to discussion forums related to the subject and moderated by the module's teacher.

M19   Problem resolution, comments, reports to be handed in according to the deadlines throughout the course.

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Course guide

IN-CLASS LEARNING

IN-CLASS LEARNING ACTIVITIES

	LEARNING OUTCOMES	HOURS	ECTS
ON-CAMPUS CLASS Teacher presentation of contents, analysis of competences, explanation and in-class display of skills, abilities and knowledge. M1, M2, M4, M6	R1	33,00	1,32
PRACTICAL CLASSES Group work sessions supervised by the professor. Case studies, diagnostic tests, problems, field work, computer room, visits, data search, libraries, on-line, Internet, etc. Meaningful construction of knowledge through interaction and student activity. M1, M2, M4, M6, M7, M9	R2, R5	15,00	0,60
SEMINAR Supervised monographic sessions with shared participation. M3	R1	2,50	0,10
GROUP WORK EXHIBITION Application of multidisciplinary knowledge. M2	R2	2,50	0,10
OFFICE ASSISTANCE Personalized and small group attention. Period of instruction and/or orientation carried out by a tutor to review and discuss materials and topics presented in classes, seminars, papers, etc. M6	R4	2,50	0,10
ASSESSMENT Set of oral and/or written tests used in initial, formative or additive assessment of the student. M1, M2, M3, M4, M6, M7, M8, M9	R1, R4	4,50	0,18
TOTAL		**60,00**	**2,40**

LEARNING ACTIVITIES OF AUTONOMOUS WORK

	LEARNING OUTCOMES	HOURS	ECTS
GROUP WORK Group preparation of readings, essays, problem solving, seminars, papers, reports, etc. to be presented or submitted in theoretical lectures, practical and/or small-group tutoring sessions. Work done on the university e-learning platform M2, M6, M8	R1, R2, R3, R4, R5	30,00	1,20
INDEPENDENT WORK Student study: Individual preparation of readings, essays, problem solving, seminars, papers, reports, etc. to be presented or submitted in theoretical lectures, practical and/or small-group tutoring sessions. Work done on the university e-learning platform. M1, M2, M4, M6, M9	R1, R2, R3, R4, R5	60,00	2,40
TOTAL		**90,00**	**3,60**

ON-LINE LEARNING

SYNCHRONOUS LEARNING ACTIVITIES

	LEARNING OUTCOMES	HOURS	ECTS
Virtual session (distance learning) M11, M13, M19	R1, R2, R3, R4, R5	30,00	1,20
Virtual practical session (distance learning) M12, M13, M14, M17	R1, R2, R3	18,00	0,72
Seminar and virtual videoconference (distance learning) M12, M13	R3, R4	1,50	0,06
In-person or virtual assessment (distance learning) M14, M19	R1, R4	4,90	0,20
Individual tutoring sessions (distance learning) M15, M16, M17	R1, R2, R3, R4, R5	2,50	0,10
Discussion forums (distance learning) M11, M12	R2, R3	1,00	0,04
Continuous assessment activities (distance learning) M11, M12, M13, M14, M15, M16, M18, M19	R1, R2, R3, R4, R5	1,60	0,06
TOTAL		**59,50**	**2,38**

ASYNCHRONOUS LEARNING ACTIVITIES

	LEARNING OUTCOMES	HOURS	ECTS
Individual work activities (distance learning) M11, M12, M13, M14, M15, M16, M18, M19	R1, R2, R3, R4, R5	60,00	2,40
Teamwork (distance learning) M12, M13, M14, M17, M18, M19	R1, R2, R3, R4, R5	30,50	1,22
TOTAL		**90,50**	**3,62**

Description of the contents

Description of the necessary contents to acquire the learning outcomes.

Theoretical contents:

Content block	Contents
Unit 1	Introduction to methodological pluralism
Unit 2	**Unit II. Descriptive statistics with a single variable** Topic 1. Frequency distribution Topic 2. Statistics that describes the distribution of a single variable
Unit 3	**Unit III. Descriptive statistics with two variables** Topic 1. Descriptive statistics with two variables Topic 2. Relational statistics (Correlation and Regression) Topic 3. Scale change
Unit 3	Introduction to inferential statistics: parameters and hypothesis testing

Temporary organization of learning:

Block of content	Number of sessions	Hours
Unit 1	5,00	10,00
Unit 2	10,00	20,00
Unit 3	10,00	20,00
Unit 3	5,00	10,00

References

References:

Amón, J. (2006). Estadística para Psicólogos I. Estadística descriptiva. Madrid: Pirámide.

Botella Ausina, J., Suero Suñe, M., & Ximénez Gómez, M. C. (2012). Analisis de datos en Psicologia I. Pirámide, Madrid.

Goss-Sampson, M. A. (2018). Statistical analysis in JASP: A guide for students. Retrieved from: https://static.jasp-stats.org/Statistical%20Analysis%20in%20JASP%20-%20A%20Students%20Guide%20v0.10.2.pdf

Pardo, A. y San Martín, R. (2006). Análisis de datos en Psicología II, 2º ed. Madrid: Pirámide

Addendum to the Course Guide of the Subject

Due to the exceptional situation caused by the health crisis of the COVID-19 and taking into account the security measures related to the development of the educational activity in the Higher Education Institution teaching area, the following changes have been made in the guide of the subject to ensure that Students achieve their learning outcomes of the Subject.

Situation 1: Teaching without limited capacity (when the number of enrolled students is lower than the allowed capacity in classroom, according to the security measures taken).

In this case, no changes are made in the guide of the subject.

Situation 2: Teaching with limited capacity (when the number of enrolled students is higher than the allowed capacity in classroom, according to the security measures taken).

In this case, the following changes are made:

1. Educational Activities of Onsite Work:

All the foreseen activities to be developed in the classroom as indicated in this field of the guide of the subject will be made through a simultaneous teaching method combining onsite teaching in the classroom and synchronous online teaching. Students will be able to attend classes onsite or to attend them online through the telematic tools provided by the university (videoconferences). In any case, students who attend classes onsite and who attend them by videoconference will rotate periodically.

In the particular case of this subject, these videoconferences will be made through:

X	Microsoft Teams
	Kaltura

Situation 3: Confinement due to a new State of Alarm.

In this case, the following changes are made:

1. Educational Activities of Onsite Work:

All the foreseen activities to be developed in the classroom as indicated in this field of the guide of the subject, as well as the group and personalized tutoring, will be done with the telematic tools provided by the University, through:

X	Microsoft Teams
	Kaltura

Explanation about the practical sessions:

2. System for Assessing the Acquisition of the competences and Assessment System

ONSITE WORK

Regarding the Assessment Tools:

| X | The Assessment Tools will not be modified. If onsite assessment is not possible, it will be done online through the UCVnet Campus. |

| | The following changes will be made to adapt the subject's assessment to the online teaching. |

Course guide		Adaptation	
Assessment tool	Allocated percentage	Description of the suggested changes	Platform to be used

The other Assessment Tools will not be modified with regards to what is indicated in the Course Guide.

Comments to the Assessment System:

Course guide

ONLINE WORK

Regarding the Assessment Tools:

| X | The Assessment Tools will not be modified. If onsite assessment is not possible, it will be done online through the UCVnet Campus. |

| | The following changes will be made to adapt the subject's assessment to the online teaching. |

Course guide		Adaptation	
Assessment tool	Allocated percentage	Description of the suggested changes	Platform to be used

The other Assessment Tools will not be modified with regards to what is indicated in the Course Guide.

Comments to the Assessment System: