



Information about the subject

Degree: Bachelor of Science Degree in Psychology

Faculty: Faculty of Psychology

Code: 291202 **Name:** Psychometrics

Credits: 6,00 **ECTS Year:** 2 **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

It is recommended to have acquired the skills established in the subject of Fundamentals and Data Analysis



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 Building a work team in order to practically apply the knowledge acquired through the presential activities and individual work.
- R2 Acquiring a correct mental representation of the theoretical-practical contents of the module.
- R3 Working in groups in order to carry out different practical activities such as the creation and application of a test in order to measure and psychological construct.
- R4 Obtaining and organizing information from different sources (journals, books, videos, Internet) in order to create a test or for other purposes.
- R5 Using specific software for the resolution of problems related to the contents of the module.
- R6 Assessing the different quality criteria of a psychological test.
- R7 Understanding the importance of the information offered in a test's manual and using it correctly.



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 | | | |
| CE4 Analyzing and measuring variables (personality, intelligence and other aptitudes) and cognitive, emotional, psychobiological and behavioral processes . | | | | 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 |
| CE15 Defining objectives and devising action plans according to action goals. (prevention, treatment, rehabilitation, insertion, support). | X | | | |
| CE16 Choosing adequate psychological intervention techniques. | X | | | |
| CE18 Putting into practice direct intervention strategies and methods: psychological advice, therapy, negotiation mediation... | 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 | | |



Universidad
**Católica de
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San Vicente Mártir

Course guide

Year 2023/2024
291202 - Psychometrics





Assessment system for the acquisition of competencies and grading system

In-class teaching

| Assessed learning outcomes | Granted percentage | Assessment method |
|----------------------------|--------------------|--|
| R2, R3, R5, R6, R7 | 60,00% | Oral and/or written tests employed in initial, training and/or summative student assessment. |
| R1, R2, R3, R4, R5, R6, R7 | 10,00% | Attendance and active participation: lessons, group assignments and tutoring sessions. It will be monitored and registered by the teacher. |
| R2, R3, R5, R6 | 30,00% | Group assignments. |

Observations

Notes: The written exam will consist of a theoretical part and a practical part. To carry out this exam, the form provided by the teacher and a calculator with statistical functions will be used. A minimum mark must be obtained in the written exam and group work so that they can be accumulated (50% of the total mark to which the can choose with each evaluation system) Criteria for the award of honors: Obtain 9.0 points or more and perform a discriminatory test among applicants

Online teaching

| Assessed learning outcomes | Granted percentage | Assessment method |
|----------------------------|--------------------|--|
| R2, R3, R4, R5, R6, R7 | 70,00% | Final evaluation consisting of essay questions and hypothetical scenarios. |
| R2, R5, R6 | 5,00% | Submitted tasks |
| | 0,00% | Periodical assessment through questionnaires |
| R1, R2, R3, R4, R5, R6, R7 | 25,00% | Attendance and participation in synchronic communication activities. |

Observations

Notes: The written exam will consist of a theoretical part and a practical part. To carry out this exam, the form provided by the teacher and a calculator with statistical functions will be used. A minimum mark must be obtained in the written exam and group work so that they can be accumulated (50% of the total mark to which the can choose with each evaluation system) Criteria for the award of honors: Obtain 9.0 points or more and perform a discriminatory test among applicants



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.



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 | R1, R2, R5, R6, R7 | 37,75 | 1,51 |
| 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. M2, M4, M6 | R2, R3, R4, R5, R6 | 15,00 | 0,60 |
| SEMINAR Supervised monographic sessions with shared participation. M3, M4 | R2, R4, R7 | 1,50 | 0,06 |
| GROUP WORK EXHIBITION Application of multidisciplinary knowledge. M2, M4, M6, M8 | R1, R3, R4, R5, R6, R7 | 1,75 | 0,07 |
| 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. M3, M6 | R2, R3 | 1,50 | 0,06 |
| ASSESSMENT Set of oral and/or written tests used in initial, formative or additive assessment of the student. M2, M7, M8, M9 | R2, R3, R4, R5, R6, R7 | 2,50 | 0,10 |
| 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, M4, M6, M8 | R1, R2, R3, R5, R6, R7 | 32,50 | 1,30 |
| 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. M9 | R2, R3, R4, R5, R6, R7 | 57,50 | 2,30 |
| TOTAL | | 90,00 | 3,60 |



ON-LINE LEARNING

SYNCHRONOUS LEARNING ACTIVITIES

| | LEARNING OUTCOMES | HOURS | ECTS |
|--|----------------------------|--------------|-------------|
| Virtual session (distance learning) M11, M12, M17, M19 | R1, R2, R3, R4, R5, R6, R7 | 38,00 | 1,52 |
| Virtual practical session (distance learning) M12, M15, M17, M19 | R2, R3, R5, R6, R7 | 15,00 | 0,60 |
| Seminar and virtual videoconference (distance learning) M13 | R2 | 0,40 | 0,02 |
| In-person or virtual assessment (distance learning) M12, M14, M15, M18, M19 | R2, R3, R5, R6, R7 | 2,00 | 0,08 |
| Individual tutoring sessions (distance learning) M16 | R2 | 1,50 | 0,06 |
| Discussion forums (distance learning) M13, M18 | R2, R4 | 0,75 | 0,03 |
| Continuous assessment activities (distance learning) M14 | R2, R5, R6 | 1,60 | 0,06 |
| TOTAL | | 59,25 | 2,37 |

ASYNCHRONOUS LEARNING ACTIVITIES

| | LEARNING OUTCOMES | HOURS | ECTS |
|--|--------------------|--------------|-------------|
| Individual work activities (distance learning) M15, M16, M18, M19 | R2, R4, R5, R6, R7 | 58,25 | 2,33 |
| Teamwork (distance learning) M12, M17 | R1, R3 | 32,50 | 1,30 |
| TOTAL | | 90,75 | 3,63 |



Description of the contents

Description of the necessary contents to acquire the learning outcomes.

Theoretical contents:

| Content block | Contents |
|---------------|---|
| I | Introduction to psychological measurement |
| II | Test theory |
| III | Metric quality assessment |
| IV | Assignment, transformation and matching of scores |
| V | Techniques for the construction of a test |
| VI | Adaptation of tests for use in other languages |



Temporary organization of learning:

| Block of content | Number of sessions | Hours |
|------------------|--------------------|-------|
| I | 3,00 | 6,00 |
| II | 2,00 | 4,00 |
| III | 17,00 | 34,00 |
| IV | 5,00 | 10,00 |
| V | 2,00 | 4,00 |
| VI | 1,00 | 2,00 |

References

Bibliografía básica Barbero, I. (Coord.), Vila, E. y Holgado, F.P. (2010). Psicometría. Madrid: Sanz y Torres. Barbero, I., García, E., Vila, E. y Holgado, F.P. (2010). Problemas resueltos de Psicometría. Madrid: Sanz y Torres. Barbero, I., Vila, E. y Holgado, F.P. (2010). Formulario de Psicometría y tablas estadísticas. Madrid: Sanz y Torres. Muñiz, J. (1996). Psicometría. Madrid: Universitas. Bibliografía complementaria Alaminos, A. y Castejón, J. L. (2006). Elaboración, análisis e interpretación de encuestas, cuestionarios y escalas de opinión. Editorial Marfil, S. A. Levy, J. y Varela, J. (2003). Análisis Multivariable para las Ciencias Sociales. Pearson-Prentice hall.



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:

☒ 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:

☒ 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:

☒ 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:



ONLINE WORK

Regarding the Assessment Tools:

☒ 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: