



Information about the subject

Degree: Bachelor of Sciences of Physical Activity and Sport

Faculty: Faculty of Physical Activity and Sport Sciences

Code: 282066 **Name:** Applied Research Methods and Techniques in Sport Sciences

Credits: 4,50 **ECTS Year:** 3, 4 **Semester:** 2

Module: 4) Optional Module.

Subject Matter: Research Methods and Techniques **Type:** Elective

Field of knowledge: Health Sciences

Department: Basic Sciences and Cross-disciplinary Subjects

Type of learning: Classroom-based learning

Languages in which it is taught: English, Spanish

Lecturer/-s:

OAC5 Carlos Sanchis Sanz (**Responsible Lecturer**)

carlos.sanchis@ucv.es



Module organization

4) Optional Module.

Subject Matter	ECTS	Subject	ECTS	Year/semester
Inclusive Activities and Practices	4,50	Inclusive Activities and Practices in the Areas of Education and Leisure Time	4,50	3, 4/2
Anthropology.	12,00	Anthropology	6,00	3/1
		Science, Reason and Faith	6,00	3/2
Collective Sports	22,50	Basketball	4,50	3, 4/2
		Football	4,50	3, 4/2
		Handball	4,50	3, 4/2
		Hockey	4,50	This elective is not offered in the academic year 25/26
		Volleyball	4,50	4/2
Adversary Sports	18,00	Fencing	4,50	This elective is not offered in the academic year 25/26
		Judo	4,50	4/2
		Paddle	4,50	4/2
		Tennis	4,50	3, 4/2



Sports in the Natural Environment	4,50	Sports in Nature: Specific Techniques	4,50	3, 4/2
Individual sports	22,50	Athletics	4,50	3, 4/2
		Cycling	4,50	This elective is not offered in the academic year 25/26
		Gymnastics	4,50	This elective is not offered in the academic year 25/26
		Swimming	4,50	This elective is not offered in the academic year 25/26
		Triathlon	4,50	3, 4/2
Direction and Management of Gyms and Sports Centers	4,50	Gym and Sports Centre Management and Administration	4,50	This elective is not offered in the academic year 25/26
Idiom	9,00	Inglés Avanzado para Ciencias Actividad Física y Deporte	4,50	3, 4/2
		Inglés Intermedio para Ciencias Actividad Física y Deporte	4,50	3, 4/2
Sports facilities	4,50	Sports Facilities	4,50	This elective is not offered in the academic year 25/26
Research Methods and Techniques	4,50	Applied Research Methods and Techniques in Sport Sciences	4,50	3, 4/2
Nutrition	4,50	Nutrition	4,50	3, 4/2



Professional Itinerary Electives	27,00	Fitness and Physical Conditioning	6,00	4/1
		Pedagogy in Educational Values in Sports and Physical Activity	6,00	4/1
		Skills, Entrepreneurship and Employment	3,00	4/2
		Sports Management of Human and Economic Resources	6,00	4/1
		Theory and Practice of Training for High Performance in Sports	6,00	4/1
Trends in sports practices	4,50	Trends in Sports Practices	4,50	This elective is not offered in the academic year 25/26
Social Skills and Group Dynamics	4,50	Social Skills and Group Dynamics	4,50	This elective is not offered in the academic year 25/26



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 Identify the theoretical, methodological, procedural, and ethical foundations of the scientific method applied to research in various fields related to Physical Education and Sports Sciences (CCAFD), in order to develop a critical mindset toward methodological approaches.
- R2 Plan and conduct research that addresses the analysis of variables related to different areas of application within CCAFD, following methodological criteria for scientific rigor and analyzing the results.
- R3 Critically locate, analyze, and classify the quality of evidence from various knowledge sources (in Spanish and English) to propose specific solutions or research proposals in different contexts.
- R4 Prepare and present research findings (whether original or from other sources) in various formats (oral and written) for optimal dissemination in each context, using bibliographic management software to enhance citation
- R5 Justify, compare, decide, and apply learning strategies and optimal pedagogical principles based on group characteristics, materials, and sports facilities.

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):

	Weighting			
	1	2	3	4



Assessment system for the acquisition of competencies and grading system

Assessed learning outcomes	Granted percentage	Assessment method
R1, R2, R3, R4, R5	20,00%	Written and/or practical tests.
R1, R2, R3, R4, R5	60,00%	Individual or Group Work / Project.
R1, R2, R3, R4, R5	20,00%	Exercises and Practices in the Classroom.

Observations

· The student may keep the assessment instruments passed during the 3 years following the first enrolment.

· The student must pass 50% of each of the items of the assessment system.

· In the project, attendance at 50% of the group work sessions in the classroom is required, as part of the correct development of the group work. In these sessions each group and student must complete the proposed tasks in due time and form.

· According to article 4.2. of the Guidelines for Evaluation at UCV, the limit of absences that may be due to eventualities (medical consultation, bureaucratic procedures...) that do not have to be justified, is 30%.

· If any of these criteria is not met, the student will be graded with a maximum of 4.5.

The detailed explanation (procedure of the tasks) as well as the evaluation instruments (cards or rubrics) of each section will be published on the platform of each group at the student's disposal.

Learning activities

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

M1 Attendance at practices.

M2 Resolution of problems and cases.



- M3 Discussion in small groups.
- M4 Practical laboratories.
- M5 Presentation of content by the teacher.
- M6 Practical lesson.
- M7 Group dynamics and activities.



IN-CLASS LEARNING ACTIVITIES

	LEARNING OUTCOMES	HOURS	ECTS
THEORETICAL CLASS: Presentation of contents by the teacher. Competency analysis. Demonstration of capabilities, skills and knowledge in the classroom. M2, M4, M5, M6, M7	R1, R2, R3, R4, R5	12,50	0,50
PRACTICAL CLASS / SEMINAR: Group dynamics and activities. Resolution of problems and cases. Practical laboratories. Data search, computer classroom, library, etc. Meaningful construction of knowledge through student interaction and activity. M4, M6, M7	R1, R2, R3, R4, R5	26,50	1,06
EVALUATION: Set of oral and/or written tests used in the evaluation of the student, including the oral presentation of the final degree project. M6, M7	R1, R2, R3, R4, R5	4,00	0,16
TUTORING: Supervision of learning, evolution. Discussion in small groups. Resolution of problems and cases. Presentation of results before the teacher. Presentation of diagrams and indexes of the proposed works. M4	R1, R2, R3, R4, R5	2,00	0,08
TOTAL		45,00	1,80



LEARNING ACTIVITIES OF AUTONOMOUS WORK

	LEARNING OUTCOMES	HOURS	ECTS
GROUP WORK: Problem solving. Preparation of exercises, memoirs, to present or deliver in classes and/or in tutoring. M6, M7	R1, R2, R3, R4, R5	18,75	0,75
SELF-EMPLOYED WORK: Study, Individual preparation of exercises, assignments, reports, to present or deliver in classes and/or in tutoring. Activities in platform or other virtual spaces. M2	R1, R2, R3, R4, R5	48,75	1,95
TOTAL		67,50	2,70

Description of the contents

Description of the necessary contents to acquire the learning outcomes.

Theoretical contents:

Content block	Contents
BLOCK I	Research: analytical, quantitative, quantitative, qualitative and descriptive
BLOCK II	Documentary research and ethical principles
BLOCK III	The research process applied to PHYSICAL ACTIVITY AND SPORT SCIENCE
BLOCK IV	Statistical processing, analysis and interpretation of results



Temporary organization of learning:

Block of content	Number of sessions	Hours
BLOCK I	5,50	11,00
BLOCK II	5,50	11,00
BLOCK III	5,50	11,00
BLOCK IV	6,00	12,00



References

BASIC REFERENCES:

- Day, Robert A. (2005). *Cómo escribir y publicar trabajos científicos* (3ª Ed.) Washington, D.C.: Organización Panamericana de la Salud.
- Diez, D., Barr, C. y Çentikaya-Rundel, M. (2013). *Openintro Statistics* (2ª Ed). Recuperado de <https://www.openintro.org/stat/textbook.php>
- Martín González, Germán (2008). *Prácticas de Estadística básica con SPSS*. Valencia: Universidad Católica de Valencia San Vicente Mártir.
- Martín González, Germán (2009). *Introducción a la estadística*. Valencia: Universidad Católica de Valencia San Vicente Mártir.
- Sampieri Hernández, R., Collado Fernández, C. y Lucio Baptista, P. (2008). *Metodología de la investigación* (4ª Ed.). México D.F., México: McGraw-Hill.
- Thomas, J.R., Nelson, J.K. y Silverman, S.J. (2007). *Métodos de Investigación en actividad física*. Barcelona: Paidotribo.
- Schulz, K. F., Altman, D. G., Moher, D., & CONSORT Group (2010). CONSORT 2010 statement: updated guidelines for reporting parallel group randomised trials. *BMJ (Clinical research ed.)*, 340, c332. <https://doi.org/10.1136/bmj.c332>
- Goss-Sampson & Meneses, J. Análisis estadístico con JASP: una guía para estudiantes. (2019). Universitat Oberta de Catalunya.
- Cuschieri S. (2019). The STROBE guidelines. *Saudi journal of anaesthesia*, 13(Suppl 1), S31–S34. https://doi.org/10.4103/sja.SJA_543_18
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., McGuinness, L. A., ... Moher, D. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ (Clinical research ed.)*, 372, n71. <https://doi.org/10.1136/bmj.n71>
- Riley, D. S., Barber, M. S., Kienle, G. S., Aronson, J. K., von Schoen-Angerer, T., Tugwell, P., Kienle, H., Helfand, M., Altman, D. G., Sox, H., Werthmann, P. G., Moher, D., Rison, R. A., Shamseer, L., Koch, C. A., Sun, G. H., Hanaway, P., Sudak, N. L., Kaszkin-Bettag, M., Carpenter, J. E., ... Gagnier, J. J. (2017). CARE guidelines for case reports: explanation and elaboration document. *Journal of clinical epidemiology*, 89, 218–235. <https://doi.org/10.1016/j.jclinepi.2017.04.026>
- O'Brien, B. C., Harris, I. B., Beckman, T. J., Reed, D. A., & Cook, D. A. (2014). Standards for reporting qualitative research: a synthesis of recommendations. *Academic medicine : journal of the Association of American Medical Colleges*, 89(9), 1245–1251. <https://doi.org/10.1097/ACM.0000000000000388>
- Tod, D. (2019). *Conducting Systematic Reviews in Sport, Exercise, and Physical Activity*. Springer Nature. <https://doi.org/10.1007/978-3-030-12263-8>



COMPLEMENTARY REFERENCES:

- Ballester, R., Huertas, F., Yuste, F. J., Llorens, F., & Sanabria, D. (2015). *The relationship between regular sports participation and vigilance in male and female adolescents*. PloS one, 10(4).
- Benito Peinado, P. J., Díaz Molina, V., Calderón Montero, F. J., Peinado Lozano, A. B., Martín Caro, C., Álvarez Sánchez, M., & Pérez Tejero, J. (2007). *La revisión bibliográfica sistemática en fisiología del ejercicio: recomendaciones prácticas*. RICYDE. Revista Internacional de Ciencias del Deporte, 3(6).
- Borreani, S., Calatayud, J., Martin, J., Colado, J. C., Tella, V., & Behm, D. (2014). *Exercise intensity progression for exercises performed on unstable and stable platforms based on ankle muscle activation*. Gait & posture, 39(1), 404-409.
- Prellezo, J.M. & García, J.M. (2003). INVESTIGAR. *Metodología y técnicas del trabajo científico*. Madrid: CCS.
- Romero-Franco, N., Martínez-Amat, A., & Martínez-López, E. J. (2016). Efecto del entrenamiento propioceptivo en atletas velocistas / Effect of the proprioceptive training in sprinters. Revista Internacional de Medicina y Ciencias de la Actividad Física y del Deporte , 13(51), 437-451. Recuperado de <http://cdeporte.rediris.es/revista/revista51/artefecto393.htm>