COURSE PROGRAM

Academic Year: 2026/2027

Identification and characteristics of the course				
Code	401357	ECTS Credits	6	
Course name (English)	Methodology of Sport Applied Research			
Course name (Spanish)	Metodología de la investigación aplicada al deporte			
Degree programs	Master in Health Promotion throughout Physical Activity			
Faculty/School	Faculty of Sport Sciences			
Semester	2	Type of course	Optative	
Module	Research Methods in Sport Science			
Matter	Sport Applied Research			
Lecturer/s				
Name	Office	E-mail	Web page	
Narcis Gusi Fuertes	510	ngusi@unex.es	https://ccdeporte.unex.es/centro/pdi/?personid=6272d0e28bfa01bd1fe5db657397b995	
Subject Area	Physical and Sport Education			
Department	Didactics of Musical, Plastic and Body Expression			
Coordinating Lecturer (If more than one)				

Competencies /Learning Outcomes*

CB6 - To possess and understand knowledge that provides a basis or opportunity for originality in the development and/or application of ideas, often in a research context.

CB7 - That students know how to apply acquired knowledge and problem-solving skills in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study.

CB8 - That students are able to integrate knowledge and address the complexity of formulating judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities linked to the application of their knowledge and judgments.

CB9 - That students know how to communicate their conclusions and the underlying knowledge and reasoning to both specialist and non-specialist audiences clearly and unambiguously.

* The sections concerning competencies, course outline, educational activities, teaching methodologies, learning outcomes and assessment systems must conform to that included in the ANECA verified document of the degree program.

CB10 - That students possess the learning skills that will enable them to continue studying in a largely self-directed or autonomous manner. CT1 - Understand and use scientific literature in the field of physical activity and sport, especially in the area of physical activity and health, in other languages with a significant presence in the scientific field, preferably English.

CT2 - To know how to apply information and communication technologies (ICT) to the field of Physical Activity and Sports Sciences, especially in the area of physical activity and health.

CT3 - To develop leadership, interpersonal, and teamwork skills, especially in the area of physical activity and health.

CT4 - To develop skills for adapting to new situations and solving problems, and for autonomous learning, especially in the area of physical activity and health.

CT5 - To develop habits of excellence and quality in professional practice, especially in the area of physical activity and health.

CT6 - To know and act within the ethical and deontological principles necessary for proper professional practice, especially in the area of physical activity and health.

CT7 - To promote equal opportunities between men and women in the field of physical activity and sports, especially in the area of physical activity and health. CT8 - Promote equal opportunities and universal accessibility for people with disabilities and special populations in the field of physical activity and sport, especially in the area of physical activity and health.

CT9 - Promote equal opportunities for all citizens, regardless of socioeconomic or cultural criteria, in the field of physical activity and sport, especially in the area of physical activity and health.

CT11 - Understand the importance of physical and sporting activities in today's society as forms of leisure and tourism, especially in the area of physical activity and health.

CT12 - Design, develop, present, and publicly defend original reports related to the professional profile, especially in the area of physical activity and health.

CT13 - Deepen knowledge of physical activity for quality of life and health.

CT14 - Possess knowledge that provides a basis or opportunity to be original in the development and/or application of ideas in a professional or research context.

CT15 - Application of knowledge and understanding through problem-solving skills in new or unfamiliar environments within interdisciplinary contexts.

CT16 - Ability to make judgments based on incomplete information.

CT17 - Ability to communicate conclusions and the underlying knowledge and reasoning to both specialist and non-specialist audiences.

CT18 - Use of skills for self-directed or autonomous learning.

SPECIFIC COMPETENCIES

CEO23 Knowledge of the epistemological structure of Sports Science.

CEO24 Knowledge and understanding of the different perspectives and lines of research in Sports Science.

CEO25 Understanding the application of the scientific method in the study of Sports Science.

CEO26 Knowledge of research designs in the different scientific disciplines applied to Sports Science.

CEO27 Designing a research project in one of the research lines of the Faculty of Sports Science

Contents

Course outline*

Epistemology and the scientific method. Instrumental and analytical methods. Experimental design.

Course syllabus

Name of lesson 1: Fundamentals of Health Research
Contents of lesson 1:
1. Concept of health research and priority objectives of research, innovation, and development in European, National, and Regional programs
2. Evidence-based practice
3. Professional fields for scientists
4. Foundations of the scientific method

Description of practical activities of lesson 1: Propose research titles that are potentially linked to different research priorities; identify errors in proposed short-term projects.

Name of lesson 2: Developing and Evaluating a Health Sciences Research Project
Contents of lesson 2:
1. Step-by-step preparation of a national synthetic project based on a clinical trial
2. Other research designs in health sciences and peer review

Description of the practical activities of lesson 2: a) In groups of 1 or 2 students, develop the sections of an application to the Carlos III Institute based on a clinical trial, guided by the professor. Subsequently, complete online work to finalize the application, which will be submitted and discussed in the following session. B) Select a different design and evaluate two research articles using that methodology according to your specific checklist for biomedical journals—presentation and discussion on another day.

Name of lesson 3: Scientific Dissemination in Health Sciences

Contents of lesson 3:
1. Relevance and types of dissemination according to different agents (articles, conferences, to businesspeople, professionals, politicians)
2. Prepare the presentation of a scientific article according to the assigned methodology.

Description of the practical activities of lesson 3: Complete and constructively critique the previous projects (clinical trials and other methodologies, including the dissemination method).

Educational activities *

Student workload in hours by lesson		Presential Activities (PA)					Virtual Activities (VA)					
			Practical Activities								MA	HM
Lesson	**Total**	**L**	**HI**	**LAB**	**COM**	**SEM**	**ST**	**SP**	**AT**	**AP**	**TP**	**TA**
1	30	6							3	6		15
2	69	9							3	12		45
3	49,5	7,5							3	9		30
…												
Assessment**	1,5	1,5										
Totales	**150**	24							9	27		90
		40% Presential					60% Virtuality					

L: Lectures (85 students)
HI: Hospital internships (7 students)
LAB: Laboratory or field practices (15 students)
COM: Computer room or language laboratory practices (20 students)
SEM: Problem classes or seminars or case studies (40 students)
SGT: Scheduled group tutorials (educational monitoring, ECTS type tutorials)
PS: Personal study, individual or group work and reading of bibliography
ST: Synchronized theoretical class
SP: Synchronized practical class
AT: Asynchronized theoretical class
AP: Asynchronized practical class
MA: Monitoring activity
HW: Homework

Teaching Methodologies*

In accordance with the documents approved by ANECA, the following methods will be used:
(1) Expository methods, which consist of the presentation of content on the subject matter, including problem-solving by the professor.

(2) Methods based on the professor posing problems and their resolution in the classroom, as well as on case studies. Students collaboratively develop and interpret appropriate solutions to problems posed by the professor.
(3) Case studies; projects and experiments. Intensive and comprehensive analysis of a real-world case, project, simulation, or experiment in order to understand it, interpret it, solve it, generate hypotheses, compare data, reflect, expand knowledge, diagnose it, and, sometimes, practice possible alternative solution procedures.

(4) Interactive methods based on digital resources and tools, especially those available on the UEX virtual campus. (5) Assessment Activities

The training activities will be of three types:
(1) Lectures: Face-to-face activities of a primarily theoretical nature, based on verbal explanation. These are generally conducted in a large group setting.

(2) Practical Activities: Face-to-face activities involving guided observation, practical application, and discussion, based on experiences, case studies, problem-solving, project design, or skills training (including the use of equipment), with very active student participation, either individually or collaboratively.

(3) Follow-up Tutoring: Face-to-face activities providing support and supervision for the development of projects, monographs, and other products derived from external placements, with very active student participation, either individually or collaboratively. These are generally conducted in an individual or small group interview format.

(4) Independent Learning: Non-face-to-face activities involving inquiry or learning through reading texts, completing theoretical or practical tasks or assignments, and personal study. They are developed outside the classroom, individually or collaboratively, using all kinds of resources including the virtual campus

Learning outcomes *

- Knowledge of the epistemological structure of Sports Science.
- Knowledge and understanding of the different perspectives and lines of research in Sports Science.
- Understanding of the application of the scientific method in the study of Sports Science.
- Knowledge of research designs in the different scientific disciplines applied to Sports Science.
- Design of a research project within one of the research lines of the Faculty of Sports Science in the area of physical activity and health.
- Proficiency in using tools (bibliographic, computer-based, laboratory, etc.) to successfully develop research within a research group.
- Knowledge of the scientific method and the scientific and technological systems of Extremadura, Spain, and Europe related to Sports Science.
- Knowledge and use of appropriate statistical tests commonly used in Sports Science.
- Knowledge and use of qualitative analysis in Sports Science.

Assessment systems *

Number	Assessment system	%	Competencies
1	Part A. Written and oral tests and exams: objective and/or essay tests.	40%	CB 6-10; CG 1, CG7, CG 9; CT 1-18; CEO 23-26
2	Part B. Continuous assessment: portfolios; observation of student engagement and participation in seminars; preparation of journals and other written documents; presentation of various assignments; presentation of tasks and activities; technical quality of written documents, graphics, participation in blogs, forums, virtual campus, wikis, among others. At least 75% of the activities must be submitted to pass the course. This part must be completed by all students since the assignments (the course is based on the development of research projects in stages) are submitted online on the campus because the classroom work is complemented by a high degree of blended learning. Presentations to non-attending students may be submitted in 5-15 minutes videos.	60%	CB 6-10; CG 1, CG7, CG 9; CT 1-18; CEO 23-26

Students wishing to opt for the final comprehensive assessment (not continuous) must formally request it during the first few days of the course, according to the established regulations (during the first term of the course and notifying the course professor via the virtual campus to finalize the details). The assessment will be based on a final exam. The final exams for each session will consist of several parts:
- Part A (all students - in-person/continuous assessment and final comprehensive assessment): Exam A on practical and theoretical content, 40%
- Part B (only students who do not have continuous assessment because they have previously opted for the final comprehensive assessment): corresponding to the continuous assessment of practical and applied cases (based on the work submitted and uploaded to the virtual classroom by the students, both in presentations and practical cases; exercises they have completed in the virtual classroom where the methodology used to solve the cases or activities is explained), 60%. A second opportunity will be established for students to choose whether to maintain or change their assessment method for the extraordinary examination period. If the course was taught in the first semester, students will have the first four weeks of the second semester to change their assessment method (even though they will not have classes, the same procedure used at the beginning of the first semester will be followed). If the course was taught in the second semester, and given that there is not enough time to allocate four weeks, a period of one week (seven calendar days) will be established, starting from the first day of the regular June examination review period. Students who do not respond will be considered to be maintaining the same assessment method they had for the previous regular examination period.

Bibliography (basic and complementary)

Basic Student Manuals

Álvarez Cáceres R. The Scientific Method in Health Sciences. Díaz de Santos Publishers, Madrid, 1996.

Jones I. Research Methods for Sport Studies. 4th ed. Routelage, 2022.

Thomas JR, Nelson JK, Silverman SJ. Research Methods in Physical Activity. 7th ed. Human Kinetics, Champaign, Illinois, 2015.

Several recently published articles accessible digitally through the University of Extremadura (UEX) or in open access systems will be used.

Other resources and complementary educational materials

Web pages of the Web of Knowledge program, Pubmed, H2020, Carlos III Institute (calls in Health) and Regional Research Plan

Considerations
RD822-2021 Adaptation

This document, 12A, identifies the following links and/or adaptations to Royal Decree 822/2021, based primarily on their connection to different Sustainable Development Goals (SDGs) in the following sections:

1. Linking objectives with competencies related to the SDGs (Sustainable Development Goals Competencies):

Competencies	Sustainable Development Goals									
	ODS3	ODS4	ODS5	ODS8	ODS9	ODS10	ODS11	ODS13	ODS15	ODS17
Basics (CB)										
CB 6,7,8,9,10		X								
Generals (CG)										
CG 1,2,3,4,5 ,6,7,8,9	X									
Transversals (CT)										
CT1	X	X								
CT2	X				X					
CT3	X									X
CT4	X	X								
CT5	X			X	X					
CT6	X			X		X				
CT7	X		X							
CT8	X		X			X	X			
CT9	X		X			X				
CT10	X				X		X	X	X	
CT11	X				X		X			
CT12	X	X								
CT13	X	X								
CT14		X								
CT15		X								
CT16		X								
CT17		X								
CT18		X								

1. All related to Health and Wellness due to subject nature
2. Training activities linked to the SDGs
The course assignments must be linked to SDG 3: Good Health and Well-being

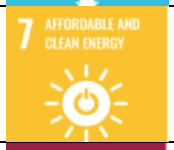
3. Other sections linked to the SDGs: In this course, a significant portion of the SDGs are incorporated, as they are considered in the funding priorities and objectives of research calls, especially those related to SDG 3: Good Health and Well-being, SDG 4: Quality and Democratic Education, SDG 5: Gender Equality, SDG 8: Decent Work and Economic Growth, SDG 9: Industry, Innovation and Infrastructure, and SDG 10: Reduced Inequalities

Considerations
RD822-2021 Adaptations

This document, 12A, identifies the following links and/or adaptations to Royal Decree 822/2021, based primarily on its connection to different Sustainable Development Goals (SDGs), in the following sections:

Linking of competencies, content blocks, and topics with the SDGs:

COMPETENCIES LINKED TO SDGs		Content Block(s) or Lesson(s) linked to the selected SDG	COMPETENCIES LINKED TO SDGs		Content Block(s) or Lesson(s) linked to the selected SDG
			CT6, CT8, CT9		2. Developing and Evaluating a Health Sciences Research Project 3. Scientific Dissemination in Health Sciences
			CT8, CT11		1. Fundamentals of Health Research
CT1, CT", CT3, CT4,CT5, CT6, CT7, CT8, CT9, CT11, CT12, CT13		1. Fundamentals of Health Research 2. Developing and Evaluating a Health Sciences Research Project 3. Scientific Dissemination in Health Sciences			
CB6, CB7, CB8,CB9, CB10, CT1, CT4, CT12, CT13, CT14, CT15, CT16, CT17, CT18		1. Fundamentals of Health Research 2. Developing and Evaluating a Health Sciences Research Project 3. Scientific Dissemination in Health Sciences			
CT8, CT9, CT11		1. Fundamentals of Health Research 2. Developing and Evaluating a Health Sciences Research Project 3. Scientific Dissemination in Health Sciences			

					
					
CT5, CT6		1. Fundamentals of Health Research 2. Developing and Evaluating a Health Sciences Research Project 3. Scientific Dissemination in Health Sciences	CT3		2. Developing and Evaluating a Health Sciences Research Project 3. Scientific Dissemination in Health Sciences
CT2, CT5		1. Fundamentals of Health Research 2. Developing and Evaluating a Health Sciences Research Project 3. Scientific Dissemination in Health Sciences			

Please note that the University of Extremadura (UEX) has a virtual mailbox where you can submit complaints, suggestions, or compliments, accessible via the link https://www.unex.es/buzon. Before submitting any of these, please use the nearest, most appropriate channels for immediate intervention.