

**COURSE DATA****Data Subject**

<b>Code</b>	43910
<b>Name</b>	Research and certification of scientific knowledge
<b>Cycle</b>	Master's degree
<b>ECTS Credits</b>	4.0
<b>Academic year</b>	2019 - 2020

**Study (s)**

<b>Degree</b>	<b>Center</b>	<b>Acad. year</b>	<b>Period</b>
2178 - M.U. en Invest. e Interv. CC Activi. Física y Deporte 13-V.2	Faculty of Physical Education and Sport Sciences (FCAFE)	1	First term

**Subject-matter**

<b>Degree</b>	<b>Subject-matter</b>	<b>Character</b>
2178 - M.U. en Invest. e Interv. CC Activi. Física y Deporte 13-V.2	1 - Research and certification of scientific knowledge	Obligatory

**Coordination**

<b>Name</b>	<b>Department</b>
VILLAMON HERRERA, MIGUEL	122 - Physical and Sports Education

**SUMMARY**

The main purpose of the M1 module is to provide the methodological knowledge necessary to afford a research in Physical Activity and Sport Sciences. The M1 module has an advanced level corresponding to a research master and gather common knowledge to M2 and M3 modules.

The content of the module deals with the main aspects of a research and certification of the scientific knowledge: a) the different types of evaluation and the quality indicators of such knowledge; b) the communication of the knowledge produced through some type of written document and its publication, considering research articles as the outstanding role in such communication process; c) the access to the information through data bases, the visibility of research publication and the impact of the scientific production, as well as the role journals play in the study of science; and d) the role paradigms of research play in the scientific activity of a multidisciplinary field like the Physical Activity and Sport Sciences.



## PREVIOUS KNOWLEDGE

### Relationship to other subjects of the same degree

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

## OUTCOMES

### 2178 - M.U. en Invest. e Interv. CC Activi. Física y Deporte 13-V.2

- Students can apply the knowledge acquired and their ability to solve problems in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study.
- Students are able to integrate knowledge and handle the complexity of formulating judgments based on information that, while being incomplete or limited, includes reflection on social and ethical responsibilities linked to the application of their knowledge and judgments.
- Students have the learning skills that will allow them to continue studying in a way that will be largely self-directed or autonomous.
- Students have the knowledge and understanding that provide a basis or an opportunity for originality in developing and/or applying ideas, often within a research context.
- To understand and analyze the research being done in the context of exercise and health, physical education and sport, and sports performance and management of physical activity and sport.
- To apply knowledge and be able to solve problems in new or unfamiliar environments within broader (or multidisciplinary) contexts related Physical Activity and Sport Sciences.
- To identify new problems related to physical activity and sport that can be studied through applied research.
- Comprender el sentido y utilidad de los paradigmas en el campo multidisciplinar de las ciencias de la actividad física y el deporte.
- Conocer las características y fundamentos que conforman los diferentes paradigmas presentes en la investigación sobre ciencias de la actividad física y el deporte
- To understand the connections between the different epistemological levels of an inquiry.
- To analyze various types of research and relate them to the paradigms.
- To know the types of evaluation in science and the role scientific journals play in the communication of research.
- To analyze examples of scientific documents according to certain quality criteria.
- To use major documentary techniques for literature search.
- To understand the role of databases in the information access, the visibility of science and its contribution to the study of science.

## LEARNING OUTCOMES

- To know the assumptions and foundations that shapes the different research paradigms on physical activity and sport sciences.
- To understand the connections between the different epistemological levels from a research.
- To analyse different types of research and relate them to the paradigms.
- To use the main documentary techniques for a bibliographical search.



- To know the different phases and processes from the cycle of science.

## DESCRIPTION OF CONTENTS

### 1. The communication of the knowledge: the outstanding role of the scientific journals.

- 1.1. Certified knowledge and the cycle of knowledge construction.
- 1.2. The scientific articles as the main documents of research production.
- 1.3. The scientific journals: characteristics, contents and structure.
- 1.4. The role of scientific journals in the transference of knowledge.

### 2. The evaluation of the scientific knowledge (ex ante and ex post) and indicators of quality.

- 2.1. Research evaluation and the system of science.
- 2.2. Indicators of quality in the scientific evaluation and types of indicators.

### 3. The data bases in the research: access to the information, visibility of the production and source of studies of science.

- 3.1. Documentary data bases: structure and use.
- 3.2. Criteria of selection of journals used by the international data bases.
- 3.3. Visibility and impact.

### 4. Paradigm and science: the research paradigms in a multidisciplinary field

- 4.1. What is a paradigm?
- 4.2. Normal science and abnormal science in social sciences.
- 4.3. Physical Activity and SportSciences as a multidisciplinary field.

### 5. The research paradigms in Physical Activity and SportSciences: epistemological, ontological and theoretical characteristics, and validity

- 5.1. Positivist paradigm, symbolic, critical, feminist and postmodernist.
- 5.2. Epistemology, ontology, theories, methodology and validity.

### 6. The paradigms as matrix of coherence between theories, models, methods and instruments

- 6.1. Relation between theory, models, methods and instruments.
- 6.2. Basic assumptions, theory, intention, conception of the reality, causality, knowledge, formalism and validity.

**WORKLOAD**

ACTIVITAT	Hours	% To be attended
Theory classes	18.00	100
Computer classroom practice	8.00	100
Development of individual work	50.00	0
Study and independent work	25.00	0
<b>TOTAL</b>	<b>101.00</b>	

**TEACHING METHODOLOGY**

The teaching methodologies and students' tasks will depend on the type of activity to be done:

- Teachers lectures on different contents (theoretical lessons).
- Discussion in small and big group of students with and without intervention of the teachers.
- Individual mentorship and seminars for data bases search and search in other sources of information.
- Study (oneself and guided).
- Presentations.
- Mentorship meetings.

**EVALUATION**

Module assessment will developed by:

- The participation in the activities during classes and individual theoretical and practical writing assignment.
- The completion of a written practical cases of individual character.

**REFERENCES****Basic**

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