

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

<b>Code</b>	43079
<b>Name</b>	Master's final project
<b>Cycle</b>	Master's degree
<b>ECTS Credits</b>	18.0
<b>Academic year</b>	2022 - 2023

**Study (s)**

<b>Degree</b>	<b>Center</b>	<b>Acad. year</b>	<b>Period</b>
2140 - Master's Degree in Medical Physics	Faculty of Physics	1	Annual

**Subject-matter**

<b>Degree</b>	<b>Subject-matter</b>	<b>Character</b>
2140 - Master's Degree in Medical Physics	4 - Final project	End Labour Studies

**Coordination**

<b>Name</b>	<b>Department</b>
CIBRIAN ORTIZ DE ANDA, ROSA MARIA	190 - Physiology

**SUMMARY**

In this subject the student is trained to know and develop the experimental bases on which the current research in Medical Physics is based. That is why it has an eminently practical character and focuses on the techniques and methodologies of the applications of Physics to Medicine.

**PREVIOUS KNOWLEDGE****Relationship to other subjects of the same degree**

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



## Other requirements

## COMPETENCES (RD 1393/2007) // LEARNING OUTCOMES (RD 822/2021)

### 2140 - Master's Degree in Medical Physics

- Students should apply acquired knowledge to solve problems in unfamiliar contexts within their field of study, including multidisciplinary scenarios.
- Students should be able to integrate knowledge and address the complexity of making informed judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities associated with the application of their knowledge and judgments.
- Students should communicate conclusions and underlying knowledge clearly and unambiguously to both specialized and non-specialized audiences.
- Students should demonstrate self-directed learning skills for continued academic growth.
- To acquire basic skills to develop laboratory work in biomedical research.
- Be able to make quick and effective decisions in professional or research practice.
- Be able to access the information required (databases, scientific articles, etc.) and to interpret and use it sensibly.
- Students should possess and understand foundational knowledge that enables original thinking and research in the field.
- Know how to work in multidisciplinary teams reproducing real contexts and contributing and coordinating their own knowledge with that of other branches and participants.
- Have a proactive attitude towards possible changes that may occur in their professional and/or investigative work.
- Be able to integrate new technologies in their professional and/or research work.
- Be able to access to information tools in other areas of knowledge and use them properly.
- Use the different exhibition techniques oral, written, presentations, panels, etc., to communicate the knowledge, proposals and positions.
- Project the knowledge on specific problems and know how to summarize and extract the most relevant arguments and conclusions for their resolution.
- Design the objectives of a research work, propose the experimental study to carry it out, use the appropriate data treatment and draw up its conclusions.
- To acquire a critical attitude that allows you to make reasoned judgments and defend them with rigor and tolerance.
- Critically analyze both his/her work and that of the colleagues.
- Acceder a herramientas en el área de Física que puedan ser susceptibles de aplicación a la Medicina y valorar su aplicabilidad e interés.



- Planificar y gestionar la utilización de las técnicas físico-médicas teniendo en cuenta los principios básicos de control de calidad, prevención de riesgos, seguridad y sostenibilidad.
- Seleccionar la instrumentación apropiada para el estudio a realizar y aplicar sus conocimientos para utilizarla de manera correcta.
- Emplear las herramientas básicas para el tratamiento de datos experimentales en la investigación.
- Elaborar una memoria clara y concisa de los resultados de su trabajo y de las conclusiones obtenidas.
- Saber redactar y preparar presentaciones para posteriormente exponerlas y defenderlas en público.

## **LEARNING OUTCOMES (RD 1393/2007) // NO CONTENT (RD 822/2021)**

Utilitzar correctament l'instrumental científic i conèixer i aplicar les bones pràctiques de laboratori.

Aplicar el mètode científic a la resolució de treballs experimentals.

Treballar amb les fonts d'informació, tant tradicionals com a través de les noves tecnologies d'Internet.

Sintetitzar i comunicar la informació científica.

Adquirir els coneixements suficients que permetin a l'estudiant, en la seva tasca investigadora futura en el camp de la Física Mèdica.

Realitzar un adequat tractament de les dades experimentals, tant amb l'acotació dels errors associats a les mesures directes com a les indirectes.

## **DESCRIPTION OF CONTENTS**

### **1. Research on Medical Physics topics**

Research topics may be developed in various topics related to Medical Physics corresponding to the lines of research of the Master's professors, or, where appropriate, of special interest to the student.



## WORKLOAD

ACTIVITY	Hours	% To be attended
Graduation project		100
Tutorials	50,00	100
Other activities	10,00	100
*Realización del Trabajo Fin de Máster	390,00	0
<b>TOTAL</b>	<b>450,00</b>	

## TEACHING METHODOLOGY

Development of a research project

## EVALUATION

Public or synchronous videoconference exposition before a court of the work done.

The student, 15 days before the TFM exhibition, will put the memory in pdf format at the Electronic Office of the Universitat de València-ENTREU (<https://webges.uv.es/uvEntreuWeb/>).

The characteristics that the TFM must have is advertised on the master's website

If the presentation of the TFM is made by videoconference, the day before said presentation, you must upload a powerpoint file to the virtual classroom with which you are going to make the presentation.

The exposure of the TFM should not exceed 15 minutes.

### **Evaluation of the Master's Final Project, memory, presentation and oral defense of the same**

#### **EVALUATION OF THE WRITTEN MEMORY:**

The scientific or technical value of the topic will be valued, the scientific argumentation: the correct and complete description of the contents, the way in which the student has stated and discussed the results obtained and the validity of the conclusions obtained, statistical analysis, where appropriate, and academic rigor: structuring and presentation of the manuscript with an adequate use of written language. (30%)

#### **EVALUATION OF THE ORAL EXHIBITION:**

The clarity of the exposition, the adequate distribution of time between the presentation of the topic and the presentation of the results and conclusions, the correct use of language, the adequacy of the visual presentation and the scientific knowledge of the topic. The adequate answer to the commission's questions (60%).



TUTOR'S REPORT: 10%

The course is passed with a grade equal to or greater than 5.

