

**COURSE DATA****DATA SUBJECT**

Code: 43310
Name: Research placement
Cycle: Master's Degree
ECTS Credits: 6
Academic year: 2026-27

STUDY (S)

Degree	Center	Acad. year	Period
2150 - Master's degree in Advanced Physics	Facultat de Física	1	Second quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
2150 - Master's degree in Advanced Physics	Research training	ELECTIVES

COORDINATION

OLMO ALBA GONZALO

FABREGAT LLUECA JUAN BAUTISTA

SUMMARY

The Research Internship course consists of a stay in a research centre and in a research group different from the group in which the Master's Final Project is to be carried out. The course is intended as a complementary way of getting into research tasks through the knowledge in-situ of the operational areas of the centre and/or research group in which the stay is to be carried out. The course is designed for those students who have chosen a more theoretical training path, so that they complete their training by learning how experimental research works in fields of Physics related to their speciality, clearly differentiated in methodology or objectives with respect to the topic in which they will develop the Master's Final Project. The contents of the course should serve to reinforce the training of Master's students and provide them with an alternative vision of the problems and their interrelations.

In the Research Stay course, there is a person in charge of each specialty who is responsible for ensuring compliance with the criteria that define the course and which are set out below:

- Each student has a person in charge/director/supervisor of the research stay who must be a doctor other than the tutor.
- The research stay must take place in a different research group from that of the tutor.
- The duration of the stay will be approximately three full weeks full-time (120 hours) plus the time for preparation and presentation of the results (30 hours).
- Students write a report on the activity carried out, with the approval of the director/supervisor of the stay.



- The report may be complemented with a short oral presentation in a session in which reports from the same specialty participate. It is desirable that the persons in charge of each stay participate in this session, although the attendance of the tutors is not obligatory.
- The course is evaluated by the person in charge of the course, taking into account, when necessary, the report of the directors/supervisors of the stays.
- In the specialty of Theoretical Physics this subject is mandatory.

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 / LEARNING OUTCOMES

2150 - Master's degree in Advanced Physics

Analizar una situación compleja extrayendo cuales son las cantidades físicas relevantes y ser capaz de reducirla a un modelo parametrizado.

Comprender de una forma sistemática el campo de estudio de la Física y el dominio de las habilidades y métodos de investigación relacionados con dicho campo.

Concebir, diseñar, poner en práctica y adoptar un proceso sustancial de investigación con seriedad académica.

Conocer el funcionamiento interno de un grupo de investigación.

Elaborar una memoria clara y concisa de los resultados de su trabajo y de las conclusiones obtenidas en el área de la Física.

Estar en disposición para seguir los estudios de doctorado y la realización de un proyecto de tesis doctoral.

Evaluar la validez de un modelo o teoría propuesto por otros miembros de la comunidad científica.

Exponer y defender públicamente el desarrollo, resultados y conclusiones de su trabajo en el área de la Física.

Ostentar la preparación para tomar decisiones correctas en la elección de tareas y en su ordenación temporal en su labor investigadora y/o profesional.

Poseer la capacidad para el desarrollo de una aptitud crítica ante el aprendizaje que le lleve a plantearse nuevos problemas desde perspectivas no convencionales.



Realizar un análisis crítico, evaluación y síntesis de ideas nuevas y complejas en el área de la Física.

Saber modelizar matemáticamente los problemas físicos sencillos nuevos, conectados con problemas conocidos. Ser capaz de expresar en términos matemáticos nuevas ideas.

Saber organizarse para planificar y desarrollar el trabajo dentro de un equipo con eficacia y eficiencia.

Ser capaz de gestionar información de distintas fuentes bibliográficas especializadas utilizando principalmente bases de datos y publicaciones internacionales en lengua inglesa.

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.

Students should possess and understand foundational knowledge that enables original thinking and research in the field.

DESCRIPTION OF CONTENTS

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theory	38,00
Total hours	38,00

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	36,00
Individual or group project	30,00
Independent study and work	84,00
Preparation of lessons	0,00
Preparation for assessment activities	0,00
Resolution of case studies	0,00
Total hours	150,00



TEACHING METHODOLOGY

In the subject of <<Research stay>>, students have to make a stay in a different group to group where they will make the Master Thesis Project. There is a supervisor for each specialty responsible for ensuring the criteria that define the subject and explained below:

- Each student has an official / director / supervisor of the research stay to be a doctor different than the Master Tutor.
- The research stay should take place in a group different to the research group of the Master Tutor.
- The duration of the stay is about three weeks full time (120 hours) plus the time of preparing the presentation of results (30 hours).
- Students should make a memory report of the activity, with the approval of the director / supervisor of the stay.
- The report must be presented orally during a short time in a session in which all memories of the same specialty are presented. This session is intended to be attended by all the students and their stay supervisors. It is not required the assistance of tutors.
- The course is assessed by the professor responsible of the subject and the directors / supervisors of the research stays.

EVALUATION

SE7 - Oral presentation of the work in a public session.

SE10 - Report from the supervisor of the research stay.

The course is evaluated by the person in charge of the course, taking into account, when necessary, the report of the directors/supervisors of the stays.

This evaluation system will be used for both the first and second call.

REFERENCES