COURSE DATA

DATA SUBJECT

Code: 34265
Name: Final degree project in Physics
Cycle: Undergraduate Studies
ECTS Credits: 6
Academic year: 2026-27

STUDY (S)

Degree	Center	Acad. year	Period
1105 - Degree in Physics	Facultat de Física	4	Indefinite (Individuals)
1928 - Double Degree Program Physics-Mathematics	Facultat de Ciències Matemàtiques	5	Indefinite (Individuals)
1929 - Double Degree Program in Physics and Chemistry	Facultat de Física	5	Indefinite (Individuals)

SUBJECT-MATTER

Degree	Subject-matter	Character
1105 - Degree in Physics	Degree Final project in Physics	FINAL DEGREE PROJECT
1928 - Double Degree Program Physics-Mathematics	Trabajo Final de Doble Grado F-M	FINAL DEGREE PROJECT
1929 - Double Degree Program in Physics and Chemistry	Trabajo Final de Doble Grado F-Q	FINAL DEGREE PROJECT

COORDINATION

VICENTE MONTESINOS AVELINO

SUMMARY

The objective of the final degree project (TFG) is the study of a particular subject in physics. The TFG will always be supervised by a tutor, Professor Dr., of the University of Valencia, is based on the content and level of the undergraduate students and the subjects of the grade. It should serve to demonstrate the mastery of skills characteristic of the physics graduate.

The subject matter of the thesis should allow its full implementation by the student in the 150 hours that is assigned to the subject in the curriculum.

PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

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

OTHER REQUIREMENTS

To register for the Final Degree Project, it is necessary to have passed 180 ECTS credits of the degree and be registered in all the subjects that the student needs to complete the degree. It is only possible to submit the TFG if 210 credits have been passed. In the case of double degrees, these thresholds will be, respectively, 260 and 290 credits.

COMPETENCES / LEARNING OUTCOMES

1105 - Degree in Physics

Ability to collect and interpret relevant data in order to make judgements.

Basic & applied Research: acquire an understanding of the nature and ways of physics research and of how physics research is applicable to many fields other than physics, e.g. engineering; be able to design experimental and/or theoretical procedures for: (i) solving current problems in academic or industrial research; (ii) improving the existing results.

Communication Skills (written and oral): Being able to communicate information, ideas, problems and solutions through argumentation and reasoning which are characteristic of the scientific activity, using basic concepts and tools of physics.

Foreign Language skills: Have improved command of English (or other foreign languages of interest) through: use of the basic literature, written and oral communication (scientific and technical English), participation in courses, study abroad via exchange programmes, and recognition of credits at foreign universities or research centres.

Have become familiar with most important experimental methods and be able to perform experiments independently, estimate uncertainties, as well as to describe, analyse and critically evaluate experimental data according to the physical models involved. Know how to use basic instrumentation.

Knowledge and understanding of the fundamentals of physics in theoretical and experimental aspects, and the mathematical background needed for its formulation.

Learning ability: be able to enter new fields through independent study, in physics and science and technology in general.

Literature Search: be able to search for and use physical and other technical literature, as well as any other sources of information relevant to research work and technical project development.

Modelling & Problem solving skills: be able to identify the essentials of a process / situation and to set up a working model of the same; be able to perform the required approximations so as to reduce a problem to an approachable one. Critical thinking to construct physical models.

Prob. solving and computer skills: be able to perform calculations independently, even when a small PC or a large computer is needed, including the development of software programmes.

Students must be able to apply their knowledge to their work or vocation in a professional manner and have acquired the competences required for the preparation and defence of arguments and for problem solving in their field of study.

Students must be able to communicate information, ideas, problems and solutions to both expert and lay audiences.

Students must have acquired knowledge and understanding in a specific field of study, on the basis of general secondary education and at a level that includes mainly knowledge drawn from advanced textbooks, but also some cutting-edge knowledge in their field of study.

Students must have developed the learning skills needed to undertake further study with a high degree of autonomy.

Students must have the ability to gather and interpret relevant data (usually in their field of study) to make judgements that take relevant social, scientific or ethical issues into consideration.

To know how to apply the knowledge acquired to professional activity, to know how to solve problems and develop and defend arguments, relying on this knowledge.

DESCRIPTION OF CONTENTS

1. Modalities of Final Project

The following modalities are accepted:

a) Work or documentary literature search on a specific topic not developed during undergraduate studies. The orientation of the work may be theoretical, experimental, historiography, teaching, etc.

b) Exploratory work of one or more particular theoretical or experimental problems, preferably related to the subjects of fourth grade.

c) Coordinated work with the external practices of the degree.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at supplementary activities	0,00
Monitoring and tutoring of the bachelor's thesis	12,00
Presentation and defence of the bachelor's thesis	0,00
Total hours	**12,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Independent preparation of the bachelor's thesis	88,00
Preparation of the bachelor's thesis project	50,00
Total hours	**138,00**

TEACHING METHODOLOGY

Student work: Development of a project or job.

Tutoring for individual supervision.

Writing and presentation of work: writing and submission of a report. Preparation of the public presentation and defense of the work carried out.

EVALUATION

The work will be evaluated by the tutors and a commission or tribunal formed by three Dr. members of the Faculty of Physics. Students will be evaluated from a project developed under the educational content of the degree and the specific skills associated with it. To qualify the students, the ratings given by the tutors and the commission are weighted with a 25% and 75%, respectively.

For the evaluation of work shall be considered the following:

- Memory or written report on the work done will be presented in which at least an introduction and assumptions of work, theoretical or experimental development work results with a critical analysis and conclusions.

- Presentation of the work in which the most important aspects of the work is exhibited briefly, and contains the points made in the previous section. This presentation may have different formats (talk, poster, etc)

- Student responses to questions that the committee may deem appropriate to make in relation to the argument of the work or other general aspects of physics. Both in memory and in its presentation, including the response to questions from the commission or tribunal, they will be assessed: quality of work, scientific argumentation and reasoning based on the concepts and principles of physics, critical thinking about the results, adequate published references, accuracy, consistency and clarity.

The specific aspects of deposit, submission and evaluation of TFG, and the allocation of Distinction, will be established by the Commission's work to grade, according to current legislation and approved by the CAT of Physics, and will be public each academic year in good time.

REFERENCES

- Reglamento sobre la elaboración de Trabajos de Fin Grado en Física: http://www.uv.es/uvweb/fisica/ca/estudis-grau/graus/oferta-graus/treball-fi-grau/treball-fi-grau-fisica-1285867901627.html