

MSc IN PHYSICS AND PHYSICAL TECHNOLOGIES

Duration: 1 year full time. 60 ECTS.

Language: Spanish.

Program aims:

This Master Program aims to provide students with the ability to solve problems in new environments, integrate knowledge, develop theories or models from observational data and be able to work both independently and collaboratively. The graduates will acquire the research skills in one of the fields of Physics, in terms of the ability to conceive, design and carry out a research process and to communicate that knowledge to the scientific community and society.

Its main objectives are twofold:

- To train researchers with the capacity to join competitive research teams and be able to develop their own research activity.
- To form technologists with high scientific and technical skills, that enable them to contribute to applications of Physics in industry, technology and other scientific fields and to join companies of the technological innovation sector.

Structure:

The student must enroll in the following subjects (more information on Master's Degrees in Physics and Physical Technologies [website](#)):

Subject	ECTS	Semester
<u>60025 - Research methodology in physics</u> ^{ELF}	6	S1
<u>60026 - Advanced topics in physics</u> ^{ELF}	6	S2
60027 - Master's Dissertation * ^{ELF}	18	YL

They must also select 6 subjects from the following list:

Subject	ECTS	Semester
<u>60028 - Optics in the industrial environment</u>	5	S1
<u>60029 - Relativistic Astrophysics, Astroparticles and Cosmology</u> ^{ELF}	5	S1
<u>60030 - Material science</u> ^{ELF}	5	S1
<u>60036 - Intelligent Instrumentation</u> ^{ELF}	5	S1
<u>60037 - Interaction of radiation and matter</u> ^{ELF}	5	S1
<u>60038 - Nanoscience and nanotechnology</u> ^{ELF}	5	S1
<u>60039 - Security and industrial processes with laser</u> ^{ELF}	5	S1
<u>60042 - Quantum theory of condensed matter</u> ^{ELF}	5	S1
<u>60031 - Low temperature physics and quantum technologies</u> ^{ELF}	5	S2
<u>60032 - Communication physics</u> ^{ELF}	5	S2

<u>60033 - Physics of magnetic materials</u> ^{ELF}	5	S2
<u>60034 - Particle physics</u> ^{ELF}	5	S2
<u>60035 - Statistical physics of critical phenomena and complex systems</u> ^{ELF}	5	S2
<u>60040 - Radiation detection systems</u> ^{ELF}	5	S2
<u>60041 - Imaging techniques and radiophysics</u> ^{ELF}	5	S2
60043 - Internship	5	YL

***Master's Dissertation**

The Master's Dissertation (MD) is a 450 hours compulsory project on some of the subjects of the degree.