



Università di Camerino  
Scienze e Tecnologie

# PHYSICS

University of Camerino  
**Master Degree**

**Classes are held in English**

class LM-17  
2 years total number of credits 120 ECTS  
credits  
(1 Credito Formativo Universitario CFU = 1  
ECTS)

**Location**  
Camerino

**web site**  
<http://www.phys.unicam.it>

**Contacts**  
*School of Science and Technology*

**Director**  
[direttore.scienze@unicam.it](mailto:direttore.scienze@unicam.it)

**Didactic Manager**  
Dr. Anna Maria Santroni  
[annamaria.santroni@unicam.it](mailto:annamaria.santroni@unicam.it)  
+39 0737 402849

**Course Director**  
Prof. Pierbiagio Pieri  
[pierbiagio.pieri@unicam.it](mailto:pierbiagio.pieri@unicam.it)  
+39 0737 402517

**Stage & Placement**  
Dr. Nicola Pinto  
[nicola.pinto@unicam.it](mailto:nicola.pinto@unicam.it)  
+39 0737 402515 - 402528

**International Mobility**  
Prof. Roberto Gunnella  
[roberto.gunnella@unicam.it](mailto:roberto.gunnella@unicam.it)  
+39 0737 402537

**Guidance**  
Dr. Irene Marzoli  
[irene.marzoli@unicam.it](mailto:irene.marzoli@unicam.it)  
+39 0737 402534

**Tutoring**  
Prof. Stefano Mancini  
[stefano.mancini@unicam.it](mailto:stefano.mancini@unicam.it)  
+39 0737 402577

**INTRODUCING THE MASTER**

The Master Degree Course in Physics offerings range from freshman seminars to advanced graduate classes.

Undergraduates, graduate students and postdoctoral fellows are mentored in research in condensed matter, atomic and laser physics, as well as quantum information and nuclear physics.

Our strong international programs enjoy several established connections with foreign institutions and research centres.

The master benefits of a longstanding and well appreciated didactical expertise, a friendly and skilful teaching staff, and reliable supporting structures (such as study and work rooms, computer facilities, libraries) in addition to dedicated tutorship services.

**ADMITTANCE CONDITIONS**

Students possessing a three-year university degree or equivalent foreign qualification are eligible to register for the Master degree in Physics.

The student who wants to enrol in the Master in Physics must possess a good knowledge and understanding of:

- Classical physics;
- Quantum physics;
- Calculus;
- Geometry and linear algebra;
- Basic experimental techniques;
- Use of basic computing systems and their application to data acquisition and processing.

The student must possess a good command of written and oral English, equivalent, at least, to level B1 of the Common European Framework of Reference for Languages (CEFR).

**QUALITY ASSURANCE SYSTEM**

UNICAM quality management system certificate ISO 9001:2008 (from AFAQ-France, a French leader and one of the first certification bodies at the global level) guarantees students the quality of services provided.

The guarantee is via a rigorous analysis of internal organizational procedures and the prompt addressing of any weaknesses or shortcomings whether detected or reported by the students themselves.

The Quality Management System includes the following support services for students: orientation, mentoring, international mobility, internships and placement, communication.

These integrate with and support the educational activities, so as to contribute to the complete training of the student.

Classes are held in English



## COURSE STRUCTURE

Classes are held in two different terms, from the beginning of October to the end of January, and then from the beginning of March to the middle of June. The February break is devoted to the Winter Exam Session.

<b>1st year</b>	<b>ECTS</b>
Advanced	
Electromagnetism	6
Advanced Physics	
Laboratory	12
Theoretical Physics	6

*Two courses to be chosen among:*

Many Body Physics	6
Quantum Field Theory	6
Quantum Computation	6
Statistical Mechanics	6

*Two courses to be chosen among:*

Atomic Physics	6
Nuclear Physics	6
Quantum Optics	6
Solid State Physics	6
Topics in Condensed Matter Physics	6

*Two courses to be chosen among:*

General Relativity	6
Geophysics	6
Numerical Methods of Physics	6
Physics of Nanotechnologies	6
Soft-matter Physics	6

<b>2nd year</b>	<b>ECTS</b>
Free choice activities*	12
Project/stage	6
Final dissertation (Master thesis)	42

\* Elective courses can be chosen among those offered by the master degree in Physics or other degrees in UNICAM. Up to 6 ECTS can be acquired also with 'soft-skills' training activities organized by UNICAM, language courses, etc.

## AFTER COMPLETING THE DEGREE

Students seeking further training and education can choose a Professional Master course (typically lasting one year), a Specialization School (for example, the School of Specialization in Health Physics of four year duration), or a Doctoral course. The School of Advanced Studies at the University of Camerino offers a three-year Doctoral course in Physics, enabling students to start a research activity at the international level.

A Master Degree in Physics opens up a broad range of job opportunities and professional careers, in both the public and private sectors: from higher education to R&D in industry and research institutions, and even in the financial markets. Physicists carry out technical tasks or provide professional support in monitoring and diagnostics of medical, health and environmental activities, in energy production, storing, and saving, or in the conservation and restoration of cultural heritage. They take part in quality control, by identifying and selecting the items to be checked, devising the control methods and their range of tolerance. Physicists are also employed as financial analysts and consultants.

## INFORMATION FOR ADMISSION, COURSES AND OTHER SERVICES

at [www.unicam.it/international](http://www.unicam.it/international)

### Didactic Manager

Anna Maria Santroni  
+ 39 0737 402849  
[annamaria.santroni@unicam.it](mailto:annamaria.santroni@unicam.it)

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