


Master in Physics

Complex Matter Living Matter

Presentation

The mission of the master CMLM is to educate experimentalists in physics for soft matter (glasses, complex fluids,...) and life sciences with solid knowledge in fundamental physics. CMLM includes teaching units on large scale facilities (Neutrons, Synchrotron), the physics of living systems, soft matter, phase transitions and optics. This master aims to prepare students for a PhD study in biophysics or soft matter.

 **Attention: The lessons of the first year of the master are taught in French; courses are fully taught in English from the second year**

More detailed information on the programme is available from: <https://master-physique.univ-grenoble-alpes.fr/master-mcmv/>

Registration and scholarships

For the first year: holders of a general scientific degree with a specialisation in physics, or equivalent diploma.

For the second year: students who have completed the first year of a compatible programme or one of equivalent level.

For candidates whose country of residence is not included in the "Studies in France" portal (PEF) scheme, the calendar for the eCandidat application campaigns is available [here](#).

Public continuing education : You are in charge of continuing education:

- if you resume your studies after 2 years of interruption of studies,
- or if you followed a formation under the regime formation continues one of the 2 preceding years
- or if you are an employee, job seeker, self-employed.

If you do not have the diploma required to integrate the training, [you can undertake a validation of personal and professional achievements \(VAPP\)](#).

Would you like to apply and register?

Be aware that the procedure differs depending on the diploma, the degree obtained, or the place of residence for foreign students. Let us guide you simply by following this link : <https://www.univ-grenoble-alpes.fr/candidater-et-s-inscrire/>

Practicals informations :

- > **School :** UFR PhITEM (physique, ingénierie, terre, environnement, mécanique)
- > **Duration :** 2 years
- > **Course type :** Initial and Continuing Education
- > **Location(s) :** Grenoble - Scientific Polygon
- > **Contacts :**

Programme director

Judith Peters
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Programme administration

Application
phitem.candidature.etudiant@univ-grenoble-alpes.fr

Registrar's Office for the Master in Physics
phitem.master.physique@univ-grenoble-alpes.fr

Program

Master 1st year (in French)

Semester 7 (in French)

UE Quantum mechanics and atomic physics	6 ECTS	57h
UE Solid state physics, magnetism and semiconductors	6 ECTS	57h
UE Dynamic systems, chaos and applications	6 ECTS	49h
UE Nuclear physics and particles	6 ECTS	49,5h
UE Optics I: Lasers & Spectroscopy	6 ECTS	49,5h

Semester 8 (in French)

UE Statistical physics	6 ECTS	48h
UE English	3 ECTS	
UE Occupational integration	3 ECTS	
UE Fields and fluids	3 ECTS	27h
UE Optical II: imaging and microscopy	3 ECTS	27h
UE Advanced data analysis	3 ECTS	27h
3 option (s) to choose from 9		
UE Structure and stellar evolution	3 ECTS	27h
UE General relativity and cosmology	3 ECTS	27h
UE Quantum relativistic mechanics	3 ECTS	27h
UE Solid state physics 2: electronic structure	3 ECTS	27,5h
UE Magnetism and nanosciences	3 ECTS	27,5h
UE Semiconductors 2	3 ECTS	27h
UE Nanophysics with local probes	3 ECTS	27h
UE Matter radiation interaction	3 ECTS	28,5h
UE Waves and dynamics of the earth	3 ECTS	27h

UE Physics of biological systems	3 ECTS	22,5h
UE Soft matter	3 ECTS	22,5h
UE Complex fluids	3 ECTS	22,5h
UE Large scale facilities	3 ECTS	22,5h
UE Research project and professional integration	6 ECTS	
4 option (s) to choose from 4		
UE Out-of-equilibrium statistical physics	3 ECTS	22,5h
UE Fundamentals of structural biology	3 ECTS	22,5h
UE Numerical methods	3 ECTS	22,5h
UE Nano-pores and membranes technologies	3 ECTS	20h

Semester 10

UE Internship	27 ECTS	
1 option (s) to choose from 2		
UE English	3 ECTS	22h
UE Transversal teaching of choice	3 ECTS	

Master 2nd year

Semester 9