

Complex matter living matter

Master in Physics



Duration
2 years



Component
UFR PhITEM
(physique,
ingénierie, terre,
environnement,
mécanique)



Language(s) of
instruction
English

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

International education : Internationally-oriented programmes

Admission

Access conditions

- **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)

Candidature / Application

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

Fees

Tuition fees 2019-2020 : 243 €

And after

Professional integration statistics

According to the 2014-15 survey, two graduate respondents were on the labour market (employment+research). Of these, 100% were in employment 30 months after graduation.

Useful info

Contacts

Program director

Judith Peters

✉ Judith.Peters@univ-grenoble-alpes.fr

Program administration

Application

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

Program administration

Registrar's Office for the Master in Physics

✉ phitem.master.physique@univ-grenoble-alpes.fr

Course location(s) - City

📍 Grenoble

Campus

🏠 Grenoble - Scientific Polygon

🏠 Grenoble - University campus

Know more

Master website

🔗 <https://master-physique.univ-grenoble-alpes.fr/>

Program

Master 1st year (in French)

Semester 7 (in French)

	Nature	CM	TD	TP	Crédits
UE Quantum mechanics and atomic physics	Teaching Unit (UE)	33h	24h		6 credits
UE Solid state physics, magnetism and semiconductors	Teaching Unit (UE)	31,5h	25,5h		6 credits
UE Dynamic systems, chaos and applications	Teaching Unit (UE)	24h	15h	10h	6 credits
UE Nuclear physics and particles	Teaching Unit (UE)	22,5h	15h	12h	6 credits
UE Optics I: Lasers & Spectroscopy	Teaching Unit (UE)	22,5h	15h	12h	6 credits

Semester 8 (in French)

	Nature	CM	TD	TP	Crédits
UE Statistical physics	Teaching Unit (UE)	27h	21h		6 credits
UE English	Teaching Unit (UE)				3 credits
UE Occupational integration	Teaching Unit (UE)				3 credits
UE Fields and fluids	Teaching Unit (UE)				3 credits
UE Optical II: imaging and microscopy	Teaching Unit (UE)				3 credits
UE Advanced data analysis	Teaching Unit (UE)				3 credits
UE Structure and stellar evolution	Teaching Unit (UE)				3 credits
UE General relativity and cosmology	Teaching Unit (UE)				3 credits

UE Quantum relativistic mechanics	Teaching Unit (UE)			3 credits
UE Solid state physics 2: electronic structure	Teaching Unit (UE)		8h	3 credits
UE Magnetism and nanosciences	Teaching Unit (UE)		8h	3 credits
UE Semiconductors 2	Teaching Unit (UE)		12h	3 credits
UE Nanophysics with local probes	Teaching Unit (UE)			3 credits
UE Matter radiation interaction	Teaching Unit (UE)	19,5h	9h	3 credits
UE Waves and dynamics of the earth	Teaching Unit (UE)			3 credits

Master 2nd year

Semester 9

	Nature	CM	TD	TP	Crédits
UE Physics of biological systems	Teaching Unit (UE)				3 credits
UE Soft matter	Teaching Unit (UE)				3 credits
UE Complex fluids	Teaching Unit (UE)				3 credits
UE Large scale facilities	Teaching Unit (UE)				3 credits
UE Research project and professional integration	Teaching Unit (UE)				6 credits
UE Out-of-equilibrium statistical physics	Teaching Unit (UE)				3 credits
UE Fundamentals of structural biology	Teaching Unit (UE)				3 credits
UE Numerical methods	Teaching Unit (UE)				3 credits
UE Nano-pores and membranes technologies	Teaching Unit (UE)				3 credits

Semester 10

	Nature	CM	TD	TP	Crédits
UE Internship	Teaching Unit (UE)				27 credits
UE English	Teaching Unit (UE)				3 credits
UE Transversal teaching of choice	Teaching Unit (UE)				3 credits