

SCIENCES, TECHNOLOGIES AND HEALTH

Applied Mechanics 1st year

Master in Civil engineering



Target level
Baccalaureate
+4



ECTS
120 credits



Duration
1 year



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



Language(s) of
instruction
English

Presentation

The 1st international year, 'Applied Mechanics', totally common to both programmes of Civil Engineering and Mechanics and which opens on three international courses, including GCER for the second year.

This Master Course gives you the opportunity to apply to the UGA Graduate School and one of its 15 thematic programs. The Graduate School@UGA is a new training program through and for research which was launched in 2021 within the Université Grenoble Alpes, and which concerns all the schools and components of the UGA.

The objective of these thematic programs is to offer interested students an interdisciplinary training program and academic excellence combining university studies and laboratory internships. Each thematic program develops a specific line of research, allowing then to embark on a PhD, or to have a direct professional insertion.

The program regroups students registered in different mentions, master programs or engineer school tracks and working together in specific courses.

Participation in the Graduate School@UGA is for two years (M1 and M2) and may open the possibility of obtaining an

academic scholarship for two years for the best international students (non-French baccalaureate holders).

For more information : <https://www.univ-grenoble-alpes.fr/education/graduate-school/>

International education : Internationally-oriented programmes

International dimension

Study abroad as an exchange student

As part of this track, you have the opportunity to study for a semester or a year at a UGA partner University abroad.

The International Relations Officers of your faculty will be able to provide you with more information.


More information on : <https://international.univ-grenoble-alpes.fr/partir-a-l-international/partir-etudier-a-l-etranger-dans-le-cadre-d-un-programme-d-echanges/>

Admission

Access conditions


The first year of master's degree is accessible on file (and / or interview) to candidates with a national diploma conferring the degree of license in a field compatible with that of the master or via a validation of studies or acquired according to the conditions determined by the university or training. The second year is accessible on file (and / or interview) to candidates who have validated the 1st year of a compatible course or through a validation of studies or acquired under the conditions determined by the university or training

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

You want to apply and sign up for a master ? Please be aware that the procedure differs depending on the diploma you want to take, the diploma you have already obtained and, for foreign students, your place of residence

Let us be your guide – simply follow this  link

Fees

Tuition fees 2021-2022 : 243 €

Useful info

Contacts

Program director

Christian Geindreau

✉ Christian.Geindreau@univ-grenoble-alpes.fr

Program administration

Registrar's Office for the Master in Civil Engineering

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

Program administration

Application

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

Continuing education manager

Laura DI RUZZA

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Course location(s) - City

 Grenoble

Campus

 Grenoble - University campus

Program

Specifics of the program

Program under construction - awaiting CFVU

Master in Applied mechanics 1st year

Semester 7

| | Nature | CM | TD | TP | Crédits |
|---|--------------------|-----|----|-----|-----------|
| UE Solid mechanics | Teaching Unit (UE) | 24h | | | 3 credits |
| UE Experimental techniques and methods 1 | Teaching Unit (UE) | | | | 3 credits |
| UE Numerical methods in solid and fluid mechanics 1 | Teaching Unit (UE) | | | 12h | 3 credits |
| UE Image and signal processing | Teaching Unit (UE) | | | | 3 credits |
| UE Fluid mechanics | Teaching Unit (UE) | | | 6h | 3 credits |
| UE English | Teaching Unit (UE) | | | | 3 credits |
| UE French as a foreign language | Teaching Unit (UE) | | | | 3 credits |
| UE Mechanics of material | Teaching Unit (UE) | | | | 3 credits |
| UE Physics of granular media | Teaching Unit (UE) | | | | 3 credits |
| UE Multiphysical couplings (THCM) | Teaching Unit (UE) | | | | 3 credits |
| UE Convection in industrial and geophysical flows | Teaching Unit (UE) | | | | 3 credits |
| UE Instabilities and turbulence | Teaching Unit (UE) | | | | 3 credits |
| UE Basic geomechanics | Teaching Unit (UE) | | | | 3 credits |

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|---|--------------------|-----|-----|-----------|
| UE Wave in fluids | Teaching Unit (UE) | | | 3 credits |
| UE Environmental flows | Teaching Unit (UE) | 16h | 8h | 3 credits |
| UE Introduction of geophysical fluids dynamics | Teaching Unit (UE) | | | 3 credits |
| UE Plastic analysis of structures | Teaching Unit (UE) | | | 3 credits |
| GS_GREEN_UE Climate and Energy for a Sustainable Transition | Teaching Unit (UE) | | | 3 credits |
| UE Research project 1 | Teaching Unit (UE) | | 30h | 6 credits |
| GS_Soft-Nano_UE-Research Methodologies | Teaching Unit (UE) | | | 6 credits |

Semester 8

| | Nature | CM | TD | TP | Crédits |
|---|--------------------|----|-----|----|-----------|
| UE Experimental techniques and methods 2 | Teaching Unit (UE) | | | | 3 credits |
| UE Numerical methods in solid and fluid mechanics 2 | Teaching Unit (UE) | 5h | 10h | 9h | 3 credits |
| UE English | Teaching Unit (UE) | | | | 3 credits |
| UE French as a foreign language | Teaching Unit (UE) | | | | 3 credits |
| UE Mechanics of material | Teaching Unit (UE) | | | | 3 credits |
| UE Physics of granular media | Teaching Unit (UE) | | | | 3 credits |
| UE Multiphysical couplings (THCM) | Teaching Unit (UE) | | | | 3 credits |
| UE Convection in industrial and geophysical flows | Teaching Unit (UE) | | | | 3 credits |
| UE Instabilities and turbulence | Teaching Unit (UE) | | | | 3 credits |

| | | | | |
|--|-----------------------|-----|-----|------------|
| UE Basic geomechanics | Teaching Unit (UE) | | | 3 credits |
| UE Wave in fluids | Teaching Unit (UE) | | | 3 credits |
| UE Environmental flows | Teaching Unit (UE) | 16h | 8h | 3 credits |
| UE Introduction of geophysical fluids dynamics | Teaching Unit (UE) | | | 3 credits |
| UE Plastic analysis of structures | Teaching Unit (UE) | | | 3 credits |
| GS_GREEN_UE_Energy Systems for the Transition | Teaching Unit (UE) | | | 3 credits |
| UE Research Internship M1 AM | Teaching Unit (UE) | | | 6 credits |
| GS_Soft-Nano_UE_Internship | Teaching Unit (UE) | | | 6 credits |
| UE Research project 2 | Teaching Unit (UE) | | 60h | 12 credits |