

# Turbulences : Méthodes et Applications 2nd year

Master in Mechanics



Target level  
Baccalaureate  
+4



ECTS  
60 credits



Duration  
1 year



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



Language(s) of  
instruction  
French, English

## Presentation

To view the presentation of the Turbulences : Méthodes et Applications 2nd year program in French click on the following link : [🔗 Parcours Turbulences : Méthodes et Applications 2e année](#)

or to link below to access to the [🔗 English version](#)

**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](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

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

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](#)

# Useful info

---

## Contacts

### Program director

Christophe Brun

✉ christophe.brun@univ-grenoble-alpes.fr

### Program administration

Registrar's Office for the Master in Mechanics

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

---

## Course location(s) - City

📍 Grenoble

---

## Campus

🏠 Grenoble - University campus

# Program

## Master 2nd year

### Semester 9

	Nature	CM	TD	TP	Crédits
UE Physique theorique de la turbulence	Teaching Unit (UE)				3 credits
UE Ecoulements diphasiques turbulents	Teaching Unit (UE)				3 credits
UE Effet dynamo et rotation en turbulence	Teaching Unit (UE)	9h	12h		3 credits
UE Bilinguisme Anglais/Français compréhension	Teaching Unit (UE)			9h	3 credits
UE Méthodes expérimentales avancées	Teaching Unit (UE)	3h	12h	9h	3 credits
UE Méthodes numériques avancées	Teaching Unit (UE)				3 credits
UE Dynamique des plasmas astrophysiques	Teaching Unit (UE)				3 credits
UE Turbulence compressible	Teaching Unit (UE)				3 credits
UE Turbulence d'ondes	Teaching Unit (UE)				3 credits
UE Turbulence en couche limite atmosphérique	Teaching Unit (UE)				3 credits
UE Advanced Machine Learning in Earth Sciences	Teaching Unit (UE)			15h	3 credits
UE Dynamique des fluides géophysiques	Teaching Unit (UE)				6 credits
UE Controle et turbulence de paroi	Teaching Unit (UE)				3 credits
UE GPU Computing	Teaching Unit (UE)	18h		18h	6 credits
UE Data assimilation in geosciences	Teaching Unit (UE)				3 credits

UE Advanced Simulation Tools for Mechanics and the Environment	Teaching Unit (UE)		4h	6 credits
UE Transfert de chaleur	Teaching Unit (UE)	40h	40h	6 credits

## Semester 10

	Nature	CM	TD	TP	Crédits
UE Internship - 5 months	Teaching Unit (UE)				30 credits