

WAPE Master's program:
Water, Air, Pollution and Energy
at local and regional scales

in partnership with *Université Pierre et Marie Curie*

Academic year 2011-2012

Program Directors

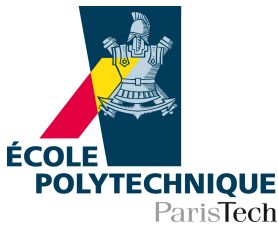
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<http://www.enseignement.polytechnique.fr/mecanique/PA-MPE/WAPE.html>

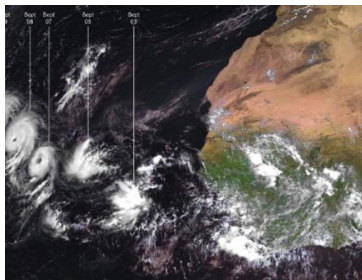
Presentation

- Second-year specialty program (M2) in advanced mechanics and physics of the environment.
- Courses during Semester S3 (September–February)
- Six-month internship during Semester S4 in France or abroad, followed by the defense of a Master's thesis.
- All courses are taught in English by internationally recognized scholars.
- The program is based on the research and tutorial resources of the Dynamic Meteorology Laboratory (LMD) at École Polytechnique and of the Institut Pierre Simon Laplace (IPSL).
- Lectures take place in the Paris area, either at École Polytechnique (EP) or at Université Pierre et Marie Curie (UPMC).



Expected benefits

- Sound understanding of environmental mechanics and physics.
- Design of effective models for a great variety of facets of the environment.
- Development of efficient numerical algorithms of fundamental or engineering interest.
- Ability to select pertinent parameters and measurement techniques that are relevant to impact studies or societal demand.



Employment opportunities

- Career in the academic or industrial world at the Master or PhD level.
- Further graduate studies towards the completion of a PhD degree leading to a research career.



Program of courses (*Pending official accreditation*)

ECTS	Title	Instructor(s)	Affiliation
3	An introduction to atmospheric dynamics and energetics	H. Le Treut	EP & UPMC
3	Clouds and precipitations	H. Chepfer	UPMC
3	Regional meteorology and environment	Ph. Drobinski	EP & CNRS/LMD
3	Air pollution modelling at urban and regional scales	L. Menut S. Turquety	CNRS/LMD UPMC
3	Water sciences and environment	J.M. Chomaz	EP & CNRS/LadHyX
3	Continental hydrology and water resources	A. Ducharne	CNRS/Sisyphé
3	Continental Biosphere and Atmosphere: Two-ways Interactions	N. de Noblet E. Personne	CNRS/LSCE Agro ParisTech
3	Principles and practice of numerical modelling	F. Hourdin Th. Dubos	CNRS/LMD EP
3	Ocean Atmosphere interactions	TBD	
3	Elective science course in French or in English from EP or UPMC		

The M2 program is open to highly qualified French and international students already holding 60 ECTS in the field of interest.
 Annual registration fee: 237 Euros. Year M2 tuition fees: 4400 Euros.
 Extensive program of tuition waivers and fellowships available