



Faculté des sciences

SC

PHYS2223 Physique des fluides II

[22.5h+7.5h exercises] 4.5 credits

This course is taught in the 1st semester

Teacher(s): Eric Deleersnijder
Language: french
Level: 2nd cycle course

Aims

Introducing the first and second principles of thermodynamics applied to a fluid and combining them with the material of the Fluid Physics I course to analyse the main natural and industrial fluid flowing regimes.

Main themes

1. Local equilibrium, equations of energy and entropy applicable to a fluid flow.
2. Characterization of different flow regimes (laminar flow, turbulent flow, Stokes regime, etc.)
3. Compressible flow : Bertouilli theorem generalized, wave shocks.
4. Turbulent flow, limit layer notions.
5. Fluid dynamics in a non-inertial referential, big scale rotation flow.

Other credits in programs

MAP23	Troisième année du programme conduisant au grade d'ingénieur civil en mathématiques appliquées	(4.5 credits)	
MECA23	Troisième année du programme conduisant au grade d'ingénieur civil mécanicien	(4.5 credits)	
PHYS21/G	Première licence en sciences physiques	(4.5 credits)	
PHYS21/T	Première licence en sciences physiques (Physique de la terre, de l'espace et du climat)	(4.5 credits)	Mandatory