



PHYS2140 Internal geophysics

[22.5h+15h exercises] 3 credits

This course is taught in the 1st semester

Teacher(s): Véronique Dehant
Language: French
Level: Second cycle

Aims

The course in internal geophysics is a general introduction that covers a set of domains of the physics of the Earth interior. It must give a general overview of geophysics and provide the necessary background for the management of personal work and the taking of more specialized courses on the subject.

Main themes

The course must cover the essential aspects of geodesy, seismology, and gravimetry: internal and superficial Earth structure, Earth vibration and rotation, tides, space geodesy, etc.

Content and teaching methods

- Earth internal structure. - Seismology and tectonic plate motions. - Earth normal modes. - Geomagnetism. - Heat flux. - Gravity force representation and gravitational potential. - Space geodesy. - Tidal theory. - Earth rotation. Exercises: set of instrumental techniques in geodesy, seismology, and gravimetry.

Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

Prerequisites: candidatures in PHYS or MATH.

Support: syllabus. Other references: A list will be given during the course.

Openings: specialized teaching and thesis in internal geophysics.

Other credits in programs

FSA3DA	Diplôme d'études approfondies en sciences appliquées	(3 credits)	
MATH21/G	Première licence en sciences mathématiques (Général)	(3 credits)	
MATH22/G	Deuxième licence en sciences mathématiques	(3 credits)	
PHYS21/T	Première licence en sciences physiques (Physique de la terre, de l'espace et du climat)	(3 credits)	Mandatory