UCL Université catholique de Louvain

LPHY2160

2015-2016

Internal Geophysics of the Earth and planets

5.0 credits	30.0 h	1q

Teacher(s) :	Dehant Véronique (coordinator) ; Bergeot Nicolas ;
Language :	Anglais
Place of the course	Louvain-la-Neuve
Prerequisites :	Basic knowledge in Physics and Mathematics at the level of BAC in science or applied science.
Main themes :	The topics include the structure and physics of the Earth and of the other terrestrial planets, their rotations, their evolution, their own overall characteristics, global geodynamics of the Earth and the planets and terrestrial bodies in the solar system.
Aims :	To be able to present the main mechanisms that govern the internal structure of the solid Earth and the geophysical techniques used to observe them at global scale. To be able to apply these concepts to the knowledge of the terrestrial planets in the solar system. *The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".*
Teaching methods :	Lectures on the board with the help of transparencies or video-projection
Content :	Chapter 1: Structure of the Earth; Chapter 2: Free Oscillations of the Earth; Chapter 3: Seismology, Plate tectonics and earthquakes; Chapter 4: Geomagnetism; Chapter 5: Short introduction to geodesy and GNSS (GPS); Chapter 6: earth tides; Chapter 7: gravity, gravitational potential; Chapter 8: heat flow; Chapter 9: Geophysics terrestrial planets and terrestrial bodies in the solar system; Chapter 10: Habitability including its "geophysical" topics of planets and terrestrial bodies in the solar system.
Bibliography :	Lecture notes available
Other infos :	Targeted students: Students in Master of Physics, Mathematics and Geographical Science and Engineers
Faculty or entity in charge:	PHYS

Programmes / formations proposant cette unité d'enseignement (UE)				
Intitulé du programme	Sigle	Credits	Prerequis	Acquis d'apprentissage
Master [120] in Physics	PHYS2M	5	-	
Master [120] in Geography : Climatology	CLIM2M	5	-	
Master [60] in Physics	PHYS2M1	5	-	