



5 credits

22.5 h + 7.5 h

Q1

Teacher(s)	Bergeot Nicolas ;Dehant Véronique ;
Language :	English
Place of the course	Louvain-la-Neuve
Main themes	The topics/themes covered in the teaching unit are the structure and physics of the Earth and of the other terrestrial planets, their rotations, their evolutions, their own overall characteristics, and the global geodynamics of the Earth and terrestrial bodies (planets and moons) in the solar system.
Aims	<p>a. Contribution of the teaching unit to the learning outcomes of the programme (PHYS2MA and PHYS2M1) AA1: A1.1, A1.2, A1.3, A1.4, A1.5, A1.6 AA2: A2.1, A2.2 AA3: A3.1, A3.2, A3.4 AA6: A6.1 1 AA7: A7.3 AA8: A8.1, A8.2</p> <p>b. Specific learning outcomes of the teaching unit At the end of this teaching unit, the student will be able to:</p> <ol style="list-style-type: none"> 1. present the main mechanisms that govern the internal structure of the solid Earth and the geophysical techniques used to observe them at global scale ; 2. Apply these concepts to the knowledge of the terrestrial planets in the solar system. <p>----- <i>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".</i></p>
Evaluation methods	Due to the COVID-19 crisis, the information in this section is particularly likely to change.
Teaching methods	Due to the COVID-19 crisis, the information in this section is particularly likely to change. Lectures and exercises, with a visit of a geophysical site.
Content	<ol style="list-style-type: none"> 1. Internal structure of the Earth and terrestrial planets 2. Free oscillations of the Earth and terrestrial planets 3. Seismology, plate tectonics and earthquakes 4. Geomagnetism of the Earth and terrestrial planets 5. Short introduction to geodesy and GNSS (GPS) 6. Tides (solid) of the Earth and terrestrial planets 7. Gravitational force, gravitational potential of the Earth and terrestrial planets 8. Heat flux from the Earth and terrestrial planets 9. "Geophysical" habitability of terrestrial bodies of the solar system
Bibliography	Syllabus préparé pour l'unité d'enseignement / Syllabus prepared for the teaching unit
Other infos	Targeted students: Students in Master of Physics, Mathematics and Geographical Science and Engineers
Faculty or entity in charge	PHYS

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Master [120] in Geography : Climatology	CLIM2M	5		
Master [120] in Physics	PHYS2M	5		
Master [60] in Physics	PHYS2M1	5		