


5 credits

30.0 h

Q2

Teacher(s)	Bergeot Nicolas ;Dehant Véronique ;
Language :	French
Place of the course	Louvain-la-Neuve
Main themes	Space geodesy for the Earth and the planets with a particular focus on the Global Navigation Satellite System (GNSS) and their applications in geophysics.
Aims	<p>1 To be able to present geodetic techniques (especially those that use GPS or equivalent) that allow to observe the main mechanisms governing the deformation of the solid Earth at the local, regional or global scales, including rotation Earth. To be able to apply the concepts of space geodesy to the knowledge of the Earth and terrestrial planets in the solar system</p> <p>-----</p> <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>
Teaching methods	
Content	Chapter 1: Classical and space geodesy; Chapter 2: GPS system; Chapter 3: European Galileo system and other satellite navigation systems; Chapter 4: Applications of GPS in Earth Sciences; Chapter 5: Study of deformation of the Earth synthetic aperture radar (SAR); Chapter 6: Celestial systems and frames; Chapter 7: Terrestrial systems and frames; Chapter 8: Earth rotation; Chapter 9: Space geodesy techniques other than GNSS; Chapter 10: Space Geodesy around other planets of the solar system; Chapter 11: Motion of an artificial satellite around a planet and geophysical information;
Bibliography	Notes de cours disponibles
Other infos	<div style="border: 1px solid black; padding: 5px;"> <p>> Master in sciences-geography</p> <ul style="list-style-type: none"> > First year of master [120] in sciences-geography, climatology orientation, research focus > First year of master [120] in sciences-geography, general orientation, research focus > First year of master [120] in sciences-geography, general orientation, teaching focus > Second year of master [120] in sciences-geography, climatology orientation, research focus > Second year of master [120] in sciences-geography, general orientation, research focus > Second year of master [120] in sciences-geography, general orientation, teaching focus <p>> Master in sciences-physics</p> <ul style="list-style-type: none"> > First year of master [120] in sciences-physics, research focus > First year of master [120] in sciences-physics, teaching focus > First year of master [120] in sciences-physics, professional focus in medical physics <p>> Master in applied sciences</p> <ul style="list-style-type: none"> > Second year of master [120] : civil Engineer, Engineer in chemistry, Engineer in material science, and Engineer with professional focus in medical physics </div>
Faculty or entity in charge	PHYS

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