






6 credits

45.0 h + 7.5 h

Q2

Teacher(s)	Crucifix Michel ;Fichefet Thierry ;Yin Qiuzhen ;
Language :	English
Place of the course	Louvain-la-Neuve
Main themes	Numerical methods of geophysical fluids; numerical analysis tools; data and palaeo-data assimilation methods; geophysical applications of dynamical systems; meso-scale atmospheric modelling and applications. 1. Introduction to the climates of last million years 2. Modeling of interglacials 3. Coupled climate-ice sheets models
Aims	1 The course follows PHY2153. Its objective is to introduce the student to advanced notions of physical climatology in direct connexion with research activities of the academic and research staff of the university. ----- <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>
Bibliography	Berger A., 2001. Le climat et ses variations depuis l'origine de la Terre: une composante à l'évolution de la vie. "L'environnement de la Terre primitive", Gargaud M., Despois D. et Parisot J-P (eds). Presse universitaire de Bordeaux. p. 129-162. Ruddiman W., 2000. Earth's Climate, Past and Future. W.H Freeman and Company, New-York. 465 pages Yin Q. Z. and Berger A., 2012. Individual contribution of insolation and CO2 to the diversity of the interglacial climates of the past 800,000 years, Climate Dynamics, 38, 709-724.
Other infos	The course is split in a number of seminar-like activities demanding a high level of student participation. The students will be marked on the basis of personal written works. Pre-requisites : PHY2150 and PHY2153.
Faculty or entity in charge	PHYS

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Master [120] in Agricultural Bioengineering	BIRA2M	6		
Master [120] in Chemistry and Bioindustries	BIRC2M	6		
Master [120] in Environmental Bioengineering	BIRE2M	6		
Master [120] in Forests and Natural Areas Engineering	BIRF2M	6		
Master [120] in Physics	PHYS2M	6		
Master [120] in Geography : Climatology	CLIM2M	6		