

6.0 credits	45.0 h + 9.0 h	1q
-------------	----------------	----

Teacher(s) :	Fichetef Thierry ; Crucifix Michel ;
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	General characteristics of the atmosphere; diabatic processes and greenhouse effect; dry air thermodynamics ; vertical (in-)stability and convection; condensation; general equations of geophysical fluids; large-scale atmospheric dynamics; general atmospheric circulation; sea-water properties; boundary layers and sea-air interactions; wind-driven and thermohaline oceanic circulations
Aims :	Acquire fundamental notions of dynamical meteorology and physical oceanography to physically understand the main large-scale atmospheric and oceanic processes. <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>
Other infos :	General lectures preparing the students to research and applications in physical climatology. Ideally requires some prior knowledge of fluid dynamics and thermodynamics.  The course includes class-room teaching with a number of experimental demonstrations with a rotating water-tank. The student is marked after an oral examination on the lecture contents.  Reference : Marshall J. and Plumb, R.A. : Atmosphere, Ocean and Climate Dynamics, Academic Press, 2007, 319 pages
Cycle and year of study :	<a href="#">&gt; Master [120] in Geography : General</a> <a href="#">&gt; Master [120] in Geography : Climatology</a> <a href="#">&gt; Master [120] in Physics</a> <a href="#">&gt; Master [60] in Physics</a> <a href="#">&gt; Master [120] in Civil Engineering</a> <a href="#">&gt; Master [120] in Computer Science and Engineering</a> <a href="#">&gt; Master [120] in Mathematical Engineering</a> <a href="#">&gt; Master [120] in Mechanical Engineering</a> <a href="#">&gt; Master [120] in Computer Science</a> <a href="#">&gt; Master [120] in Electrical Engineering</a> <a href="#">&gt; Master [120] in Biomedical Engineering</a>
Faculty or entity in charge:	PHYS