

2.0 credits	15.0 h + 7.5 h	2q
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Teacher(s) :	Dehant Véronique ; van Ypersele de Strihou Jean-Pascal ;
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	<p>The following topics will be discussed in this course:</p> <ul style="list-style-type: none"> - Astronomy and coordinate reference systems ; astronomical localisation of a site at the surface of the Earth. - Introduction to the geometry and dynamics of the Earth. Contribution from the observation of artificial satellites. Acceleration of gravity. (For details : see the course of Geophysics) - Rotation of the Earth, precession, nutations, the motion of the terrestrial pole. - Motion of the Earth around the Sun. Concepts of time. Consequences in terms of climat. - The solar system : structure, composition, motion, mass, dimensions and characteristics of the planets. - Fundamental characteristics of stars. The colour-magnitude diagramme. - Systems of double and multiple stars. Exo-planets. (The principal techniques of observational astronomy such as stellar photometry and spectroscopy as well as astrometry and interferometry will be discussed in the two last chapters). - Stellar formation and evolution. - Structure of the Milky Way. Global structure of the Universe.
Aims :	<p>This course will give a first knowledge of the Earth and of the universe in general to the students; it will show the evolution to the recent developments of studies related to spherical astronomy, geometrical and dynamic geodesy, Earth rotation, geophysics, and astrophysics.</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>
Content :	<p>The course will be given in a "magisterial" form. It is documented by photos on overheads and films.</p> <p>The exercises are closely related to the lectures; some of the exercises are additionally visualized at the planetarium. The students are invited at the Planetarium for a show as presented to the general public, but this session is followed by a session prepare for the student in particular.</p>
Other infos :	<p>Pre-requisite: General background in mechanics from first year of Baccalaureate, such as moment of inertia, rotation of a body, etc.</p> <p>Support: A syllabus is available at the DUC.</p> <p>Evaluation: A written examination containing several theoretical questions on the matter given during the course and one or two exercises similar to those given during the exercise sessions.</p> <p>Note:</p> <p>(1) One lecturer alternatively each year (V. Dehant (even years) / J.-P. van Ypersele de Strihou (odd years)) for the course; and for the exercises and the Planetarium session, one assistant (L. Koot, contractual at the Royal Observatory of Belgium, for 2006).</p> <p>(2) The session at the Planetarium is offered to the students following the course by the Royal Observatory of Belgium. A specialized technician and a scientist from the Planetarium are provided by the Royal Observatory of Belgium to the students for this session.</p>
Cycle and year of study :	<ul style="list-style-type: none"> > Bachelor in Mathematics > Bachelor in Physics > Bachelor in Geography : General > Bachelor in Economics and Management > Bachelor in Engineering > Bachelor in Psychology and Education: General > Bachelor in Information and Communication > Bachelor in Philosophy > Bachelor in Motor skills : General > Bachelor in Human and Social Sciences > Bachelor in Sociology and Anthropology > Bachelor in Political Sciences: General > Bachelor in History of Art and Archaeology : General > Bachelor in History > Bachelor in Biomedicine > Bachelor in Pharmacy > Bachelor in Religious Studies

Faculty or entity in charge:	PHYS
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