

2.0 credits	15.0 h + 7.5 h	2q
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Teacher(s) :	Dehant Véronique (coordinator) ; Lampens Patricia ;
Language :	Français
Place of the course	Louvain-la-Neuve
Prerequisites :	mathematical, mechanical and general physics skills of BAC 1
Main themes :	<p>The course content is as follows:</p> <ul style="list-style-type: none"> - Astronomy and coordinate frames; astronomical location of a site on the surface of the Earth; - Introduction to the knowledge of geometry and dynamics of the Earth. Contribution of the observation of artificial satellites. Acceleration of gravity. (For details, see the Geophysics class); - The rotation of the Earth, precession, nutation, polar motion; - Orbital motion of the Earth around the Sun. Notions of time; - The solar system: structure, composition, motion, mass, dimensions and main characteristics of the planets; - Fundamental characteristics of stars. The color-magnitude diagram; - Systems of double and multiple stars; - Exoplanets; - Stellar formation and evolution; <p>Structure of the Milky Way. General structure of the Universe.</p>
Aims :	<p>The students must acquire first knowledge of the Earth and the universe in general; they must know the main foundations of astronomy, planetary science, and physics and dynamics of the Earth; they must know the main evolutions in these themes to the recent developments</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>
Evaluation methods :	written examination containing several theoretical questions on the matter given during the lectures and one exercise similar to those given to exercise session.
Teaching methods :	The class is given in a "masterful" form. It is documented with photos on slides or films. The exercises are closely linked with the lectures ; some exercises are visualized at the Planetarium. Students are invited for a session at the Planetarium as presented to the general public, but this session is followed by a session prepared especially for students.
Content :	This class provides a first knowledge of the Earth and the universe in general to the students. It describes, until recent the developments, the evolution of the knowledge on spherical astronomy, geodesy, geodynamics, Earth rotating, geophysics of the Earth and planets, and astrophysics.
Bibliography :	A syllabus is available at DUC.
Other infos :	<p>The session at the Planetarium is offered to students taking the class by the Royal Observatory of Belgium. A technician and a scientist are available at the Planetarium to students by the Royal Observatory of Belgium for this session.</p> <p>Second year of the Bachelor of Science (Physics, Mathematics, Geography) or minor for the students in Engineer or in other faculties.</p>

<p>Cycle and year of study :</p>	<ul style="list-style-type: none"> > Bachelor in Physics > Bachelor in Geography : General > Bachelor in Economics and Management > Bachelor in Mathematics > Bachelor in Engineering > Bachelor in Information and Communication > Bachelor in Philosophy > Bachelor in Pharmacy > 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 Religious Studies
<p>Faculty or entity in charge:</p>	<p>PHYS</p>