

7.0 credits

55.0 h + 18.5 h

1q

Teacher(s) :	Cortina Gil Eduardo ; Piraux Bernard (coordinator) ;
Language :	Français
Place of the course	Bruxelles Woluwe
Main themes :	In this first part, the course starts with some revisions of mathematics and elements of statistics. Then the following topics are treated : mechanics of the particle, mechanics of solids and fluids, periodic phenomena, thermal physics
Aims :	<p>Physics is considered as an experimental science based on the precise observation of reality and the collection of data whose interpretation is based on assumptions to be confirmed experimentally. The objective of this course is twofold. On the one hand, to instil into the students a good scientific approach and reasoning and on the other hand, to give to the students the elements necessary for a good understanding of the scientific matters the student will be confronted with later on. The course refers to many applications in medicine and biology.</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>Mathematics</p> <ul style="list-style-type: none"> -functions of one and two variables -calculus (derivation, differentiation and integration) -vectors -elements of statistics. <p>Mechanics of the particles and solids</p> <ul style="list-style-type: none"> -images and information -scanner -tomodensimetry -nuclear magnetic resonant -echography. <p>Mechanics of fluids</p> <ul style="list-style-type: none"> -hydrostatics (pressure, surface tension,) -hydrodynamics <p>Periodic phenomena</p> <ul style="list-style-type: none"> -harmonic motion -waves <p>Thermal physics</p> <ul style="list-style-type: none"> -gas -dilatation -calorimetry -thermodynamics
Other infos :	<p>Prerequisite : Notions of calculus (the students are assumed to know about derivation and integration).</p> <p>Evaluation : written exam.</p> <p>Support : syllabus, slides, software, I Campus, tutorials (labs and problems to group of 20 students)</p>
Cycle and year of study :	<p>> Bachelor in Medecine</p> <p>> Preparatory year for Master in Statistics: Biostatistics</p>
Faculty or entity in charge:	MED