

8.0 credits	52.5 h + 22.5 h	1+2q
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Teacher(s) :	Defrance Pierre (coordinator) ; Willems Patrick ;
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	The principal topics approached to meet these objectives will be: - mathematical bases of mechanics: algebra, vectorial algebra, trigonometry, functions, derivation, integration; - kinematics: movement with one or two dimensions; - the dynamics of the point: force, work, energy, power, linear moment, impulse oscillations and waves; - the dynamics of the solid: translation, centre of mass, rotation around a fixed axis, rotation around the centre of mass, balances, elastic properties of the solid; - the dynamics of the deformable or articulated solid; - statics and dynamics of the fluids.
Aims :	At the end of this entity of teaching, the student will be able to use mechanical principles to analyze a physical activity and the operation of the human body. Moreover, it will have the elements of mathematics and mechanics necessary to biomechanics and the analysis of the movement. <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>
Content :	1. KINEMATICS - Functions and graphs - Kinematics in one dimension - Vectors - Three-dimensional kinematics 2. DYNAMIC POINT - The laws of dynamics of point - Bilans forces - Repositories in motion - Work, energy, power - Fluid mechanics - Collisions 3. DYNAMIC SOLID - Translation solids - Moment of force and angular momentum - Rotation around a fixed axis - General Dynamics solids
Other infos :	Pre-necessary written or oral Examination Evaluation and/or elements of evaluation continue Support Syllabus and/or book Encadrement Holder and/or assistant, aidé(s) possibly by student Autres monitor
Cycle and year of study :	<a href="#">&gt; Bachelor in Motor skills : General</a> <a href="#">&gt; Bachelor in Physiotherapy and Rehabilitation</a>
Faculty or entity in charge:	FSM