

3.00 credits

30.0 h

Q1

Teacher(s)	De Jaeger Dominique (coordinator) ;Dewolf Arthur ;
Language :	French
Place of the course	Louvain-la-Neuve
Prerequisites	<i>The prerequisite(s) for this Teaching Unit (Unité d'enseignement – UE) for the programmes/courses that offer this Teaching Unit are specified at the end of this sheet.</i>
Main themes	The main themes to achieve these objectives are : - biomechanics of the muscle, - electromyography and kinesiology, - strength of biological material like bones, tendons and ligaments
Learning outcomes	<p><b>At the end of this learning unit, the student is able to :</b></p> <p>1 The aim of this course is to apply the principles of biomechanics in physiotherapy. Using these principles, the student will be able to identify the mechanical causes of several pathologies of the locomotory system, et de justify therapeutic design from a biomechanical point of view.</p>
Evaluation methods	<p>The evaluation is carried out by means of a written exam consisting of</p> <ul style="list-style-type: none"> <li>• a part A with MCQ questions (80%)</li> <li>• a part B with one or more open questions (20%)</li> </ul>
Teaching methods	Theoretical course in lecture halls; illustrations based on videos or examples drawn from personal experience.
Content	<ul style="list-style-type: none"> <li>• Biorheology: the mechanical properties of muscles, ligaments and tendons</li> <li>• Muscular contraction: the physiological basis of plyometrics, the force-velocity relationship, the force-length relationship, etc.</li> <li>• Terrestrial locomotion: mechanics, energetics and efficiency (e.g. walking, running, cycling, speed skating)</li> <li>• Sports practice :                         <ul style="list-style-type: none"> <li>• impact of training on the movement coordination and efficiency in sport activities,</li> <li>• analysis of specific athletic movements such as rotational movements in gymnastics (aerial rotations and rotations around a bar), long jump, shot put and sprint mechanism.</li> </ul> </li> </ul>
Other infos	Evaluation Oral or written exam Support Books or syllabus Supervision Teachers Others
Faculty or entity in charge	FSM

<b>Programmes containing this learning unit (UE)</b>				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Bachelor in Motor skills : General	EDPH1BA	3	LIEPR1002 AND LIEPR1003 AND LIEPR1011 AND LIEPR1012	