

3.00 credits

22.5 h + 15.0 h

Q2

Teacher(s)	Bastien Guillaume ;Penta Massimo ;
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	<ul style="list-style-type: none"> • Exploration of technological devices used in rehabilitation. • Exploration of different types of signals (e.g. force, angle, position, trigger, square-wave, quadrature, analogue and digital signals, conversions from one type to another). • Signal processing and interpretation (hardware and software). • Hardware: general concepts relating to the acquisition and processing of the signals explored (filtering, counting, digitisation, calibration, etc.). • Software: general concepts relating to the acquisition and interpretation of the signals investigated (analysis, measurement, storage, user interface and biofeedback using IT tools).
Learning outcomes	<p>At the end of this learning unit, the student is able to :</p> <ul style="list-style-type: none"> • Describe the technological devices used to measure human movement in physiotherapy and rehabilitation (force platform, instrumented treadmill, movement capture system, EMG, etc.). (11, 2.1, 2.2, 6.1) • Describe and explain the basic principles of operation of equipment used in physiotherapy (such as biofeedback, electromyogram, isokinetic equipment, etc.) (11, 7.2, 7.3, 6.2). • Use the basic principles of movement analysis programming (7.2, 7.3,11.3)
Other infos	This course is strictly reserved for FSM students. It is not open to other UCLouvain students.
Faculty or entity in charge	FSM

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Bachelor in Physiotherapy and Rehabilitation	KINE1BA	3	LFSM1105	