



# Class date announcement for Forthem UB Sports Science classes



In the Spring of 2023 Forthem UB will offer the following classes in Sports and Movement Sciences in English. The classes are open to students at the third year bachelor's level and higher (referred to as L3, M1, M2, PhD in France).

**Principles of Muscle Strengthening** 

**Emotions and Motivations in Sports** 

Muscle
Strengthening in
Basketball

The magic of object manipulation

Motor control disorders in cognitive pathologies

Neuromuscular
Disorders: Muscle Level

Neuromuscular
Disorders: Neural
Level

All classes will be online and start at 13h30 (Paris time). Break times will be decided by each professor (a brief description of each class is provided at the bottom of the page)

February 23<sup>rd</sup> Muscle Strengthening in Basketball (1.5h) Jean Luc Goldberg

March 2<sup>nd</sup> Neuromuscular Disorders: Muscle Level (3h) Maria Papaiordanou

March 16th Neuromuscular disorder: Neural level (3h) Elizabeth Thomas,

March 23<sup>rd</sup> Principles of Muscle Strengthening (3h) Nicolas Babault,

April 6th Motor control disorders in 'cognitive pathologies' (3h) Jeremie Gaveau

April 27th The magic of object manipulation (3h) Olivier White

May 4<sup>th</sup> Emotions and motivation in sports (3h) Mickael Campo

To register for a class send a message to <a href="Forthem.Staps@gmail.com">Forthem.Staps@gmail.com</a> at least two week before the class. Information to include – Name, Year at the University (Bachelor's 1st year, Master's etc etc), Study Program (Sports Science, Biology etc). A link for the class will be sent to those who register.

Students who are not Movement Science students from other departments are also welcome.

ECTS points and Forthem badges may be obtained based on the criteria of each member country.

## February 23<sup>rd</sup> Muscle Strengthening in Basketball (1.5h) Jean Luc Goldberg

Through an analysis of the activity in top players, this course presents advice from top coaches on how diet and various exercises with vertical, lateral and rotational jumps can improve players' strength. It also includes constructive criticism from some professional coaches on the role of physical preparation and the limitations of some trainers.

## March 2<sup>nd</sup> Neuromuscular Disorders: Muscle Level (3h) Maria Papaiordanou

In this course, we focus on the classification, diagnosis and functional consequences of several neuromuscular diseases. In particular, we will focus on diseases where the primary dysfunction is muscular, such as Duchenne muscular dystrophy. We will examine how physical activity counteracts the functional deficits associated with these diseases.

#### March 16th Neuromuscular disorder: Neural level (3h) Elizabeth Thomas

Although muscle contractions are absolutely essential for movement, the commands for coordinated muscle contraction come from the nervous system. The control structures extend from the motor cortex of the brain to subcortical structures such as the basal ganglia, cerebellum and brainstem, before passing to the spinal cord. This lesson briefly examines some of the most common movement disorders that result from deficits in neural control at different levels of the movement control chain.

#### March 23<sup>rd</sup> Principles of Muscle Strengthening (3h) Nicolas Babault

Improved performance is the result of both muscular and neural adaptations. Strength training is also performed with different objectives in mind, for example preparation for competition or prevention of the effects of aging. In this course, we present the principles of strength training that lead to the neuromuscular adaptations necessary for these different goals.

# April 6th Motor control disorders in 'cognitive pathologies' (3h) Jeremie Gaveau

Pathologies that have long been considered purely cognitive conditions are also associated with subtle motor deficits. This course introduces some basics of motor control and then presents the state of knowledge on sensory and motor impairments in so-called 'cognitive' conditions such as developmental dyslexia and late-onset Alzheimer's disease. We will discuss how all this fits into the framework of motor cognition.

## April 27th The magic of object manipulation (3h) Olivier White

In this presentation, we first describe the fundamental mechanical and neurocognitive mechanisms that allow us to manipulate objects. In the second part of the presentation, we highlight how this optimal behaviour is impaired by a range of peripheral and central impairments. We discuss strategies for patients to regain functional autonomy. Links are made to the integration of gravity, the presence of variability in motor control and recent research findings.

# May 4<sup>th</sup> Emotions and motivation in sports (3h) Mickael Campo

What is the role of emotions and motivation in sport? This course examines the consequences of this aspect on performance and learning in sport. Current theoretical concepts on how a teacher can optimise the teaching of sport with his/her students are presented.