



# Syllabus. Injury and rehabilitation kinetics and kinematics



## SYLLABUS

---

- ☰ Justification
- ☰ Objectives of the program
- ☰ Skills
- ☰ Criteria for participation and approval

## TOPICS

---

- ☰ Module 1. Force diagnostics
- ☰ Module 2. Kinetic in ACL injury, rehabilitation and RTS
- ☰ Module 3. Kinematics in anterior cruciate ligament injury



# Justification

---

Technology has been part of sports science practitioner's daily basis for a while now. However, most of the time the focus is in the devices per se instead of in the way that such devices can optimise training or rehabilitation processes.

This is why we have decided to create this program where the focus will be in kinematics and force in sports performance, involving healthy and injured athletes' management. Thus, force plates (technology) become a key asset, pursuing answers to many questions that constantly appear during such processes.

In this program, we will give you the tools to master decision-making based on biomechanics and sports performance.

[CONTINUE](#)

# Objectives of the program

---

By establishing objectives, we give ourselves a clear idea of what we want to achieve once the teaching and learning process of this course has finished. But our aims are even more specific: we also want to establish what you will need to accomplish in order for this new knowledge to contribute to your educational goals.

To achieve these objectives, you must complete the entire process laid out in the different stages of the course.

Thus, if you work in the way suggested, you will be well-positioned to meet the following objectives:

## General objective

To learn to understand force plate assessment results in order to use the data in training or rehabilitation processes management.

## Specific objectives

1

Specific objective 1: Learning the basics for kinematics fundamentals and force assessment.

---

2

Specific objective 2: Understanding kinematics for injury rehabilitation.

3

Specific objective 3: Developing a toolbox that allows the student to assess in performance, injury and rehabilitation.

**CONTINUE**

# Skills

---

The skills we hope you will develop throughout this course are:

## General skills

- 1** **Group and collaborative work:** the ability to work with colleagues in order to accomplish shared goals and to achieve the synergy typical of a high performance group.
- 2** **The capacity of analysis/reflection:** the capacity to methodically examine the different aspects of a certain reality or situation and to carry out an assessment of that situation.
- 3** **Creativity and innovative, knowledge-based solutions:** the capacity to find alternative solutions to existing problems based on formal knowledge.

## Specific skills

- 1** Specific skill 1: Kinematics understanding for force assessment.
  - 2** Specific skill 2: Management of force assessment as a key asset in rehabilitation.
-

3

Specific skill 3: Capacity of adapting injury and rehabilitation framework to each specific case.

**CONTINUE**

# Criteria for participation and approval

---

## Participation criteria

During the month of course, the student is expected to:

- Browse the multimedia contents of each of the modules that make up the course.
- Solve the evaluations assigned in each module.
- Carry out the proposed activities, whether group or individual.
- Take the final exam.

## Approval criteria

For the approval of the course, the student is required to complete the (4) proposed activities in the course and pass the final exam. The student must obtain a final score of 70% or more. This grade will be the average between the activities and the final exam.

[CONTINUE](#)

# Module 1. Force diagnostics

---

CONTINUE

## Module 2. Kinetic in ACL injury, rehabilitation and RTS

---

CONTINUE

## Module 3. Kinematics in anterior cruciate ligament injury

---

CONTINUE

# Module 4. Kinetics & kinematics in lower limb muscle and tendon injury and rehabilitation

---

CONTINUE