TEACHER'S GUIDE SHEET

MODULE	BIOMECHANICS OF GAIT
DIDACTIC UNIT	D: INTRUMENTED ANALYSIS OF GAIT
TITLE OF ACTIVITY/CLASS	USEFULNESS OF BIOMECHANICAL INSTRUMENTED ANALYSIS OF GAIT
OBJECTIVES	• To study the clinical application of instrumented biomechanical gait analysis and the different research designs in which it is used. • To analyze the application of the instrumented biomechanical gait analysis in the sports field and the information it provides to athletes and coaches. • To study the practical application in the area of ergonomics and exemplify how the instrumented biomechanical gait analysis can improve jobs conditions. • To study how the instrumented biomechanical gait analysis is applied in legal medicine where a dysfunction must be characterized to determine a degree of incapacity for work or financial compensation.
LENGTH	1h20' - PowerPoint presentation of the contents + Reinforcement activity
PREVIOUS KNOWLEDGE REQUIRED	In order to fully understand the concepts explained during class, the student should previously revise the biomechanical tools for gait assessment (Didactic Unit D.1)
TECHNICAL NEEDS	PC with software for the power point presentation. Projector and screen to show contents appropriately to all the students during class. You can give the activity material to students online or print.
RESOURCES NEEDED	PowerPoint file of class material presentation and the reinforcement activity pdf file, print or online version. Each student needs one copy.

DESCRIPTION OF THE CLASS/ACTIVITY

Part 1: Teacher's theoretical explanation

The teacher introduces the didactic unit explaining that not only in the medical area, the instrumental assessment of gait is useful. The teacher can start the class by asking the students in which situations biomechanical gait analysis could provide useful information.

Then, the teacher explains each of the slides where four areas are mentioned where gait analysis is useful: medicine, sports science, ergonomics and legal medicine. In each one of the areas, practical research examples are mentioned where the usefulness of the different biomechanical assessment techniques is demonstrated.

Finally, the teacher can conclude with the main ideas of the class.

Part 2: Practical activities for students

Students will carry out a review activity in which they must fill in a proposed data template. They will first choose a study topic of interest. The topic to look for can be a pathology, an age group of interest or an innovative treatment. Then, they should do a search in Pubmed with the keywords of the chosen topic and the words gait and biomechanics. From the results found, they will choose an article and extract the information that is proposed in the file.

TASKS TO BE DEVELOPED BY THE STUDENT IN CLASS

In order to fully understand the concepts explained during class, the student should afterward resolve the 'Reinforcement activity' pdf.

TASKS TO BE DEVELOPED BY THE STUDENT OUTSIDE OF CLASS (If required)

After the class and concept presentation, the students should revise the PDF with the contents of the didactic unit or the PowerPoint presentation (what the teacher prefer to provide).

EVALUATION METHODOLOGY

The teacher can use the evaluation method that she/he considers. The correct answers for the Reinforcement activity are in the same document.