

TEACHER'S GUIDE SHEET

MODULE	BIOMECHANICS FOUNDATIONS
DIDACTIC UNIT	F. REQUIREMENTS OF A BIOMECHANICAL ASSESSMENT SYSTEM. CONCEPTS OF VALIDITY, RELIABILITY AND ACCURACY
TITLE OF ACTIVITY/CLASS	F1. Biomechanical assessment: main applications and requirements.
OBJECTIVES	<ul style="list-style-type: none"> • Explain what is a biomechanical assessment test and its main applications in different contexts. • Briefly introduce its main requirements: validity, reliability and usability.
LENGTH	0,75 + 0,5 (autonomous + work class)
PREVIOUS KNOWLEDGE REQUIRED	No prior knowledge is required
TECHNICAL NEEDS	PC with internet access and projector. Internet access and search engine during the session for teacher and students (PC, tableto or smartphone with google access).
RESOURCES NEEDED	<p>During the session it will be necessary:</p> <ul style="list-style-type: none"> • DU F-REQUIREMENTS F1contents.pptx: the comments are the explanations that the teacher can use to present the content to the students.



DESCRIPTION OF THE CLASS/ACTIVITY

The class is developed according to the following scheme:

1. Biomechanical assessment test in different contexts, 10´
2. Exercise1: Look for new examples, 10´
3. Requirements for biomechanical tests and exercise 2: good and bad examples.5´
4. Key ideas and lessons learned. 5´

TASKS TO BE DEVELOPED BY THE STUDENT IN CLASS

1. Follow the explanations given by the teacher.
2. Participate in the activities proposed by the teacher during class related to:
 - a. New examples of biomechanical assessment.
 - b. Questions about validity, reliability and usability.

TASKS TO BE DEVELOPED BY THE STUDENT OUTSIDE OF CLASS

Students should watch some videos about biomechanical assessment using instrumented techniques that they will access from internet. There are many resources available that they can find just by searching: "**Biomechanical assessment instrumented techniques**", they can choose the most interesting for them depending of their field of interest.

They can see: <https://www.lboro.ac.uk/research/phc/performance/biomechanics/> as a good example.

They must try to identify:

- Context of use and objective of evaluation.
- Function, activity or gesture subject to assessment.
- Instrumental technique it is based on.
- Protocol.
- Results.

EVALUATION METHODOLOGY

Based on a questionnaire (true / false)

1. Biomechanical assessment tests are used as complementary medical tests, but also in other contexts. TRUE.
2. Biomechanical assessment during an activity of daily living such as weight lifting is used to assess the function of the lumbar spine. TRUE.
3. The only two important elements in a biomechanical assessment test are the instrumental technique used and the results. FALSE.
4. Biomechanical tests can be applied to sports medicine and occupational medicine. TRUE.
5. The main requirements of biomechanical assessment tests are precision and accuracy. FALSE.

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