



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## COURSE SYLLABUS

### Knowing Physiology, Diagnosis and Treatment Basics of Postural Defects

2526-3-I0101D129

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#### Aims

Acquire fundamental knowledge of human physiology, develop the ability to diagnose major posture vices and learn relevant treatment methodologies in order to apply a critical and evidence-based approach in the analysis and management of postural disorders.

The specific objectives, formulated according to the Dublin Descriptors, are as follows:

1. Knowledge and Understanding:  
know the physiological foundations underlying posture and its vices, along with a clear understanding of diagnostic and therapeutic methodologies for their management.
2. Application of Knowledge and Understanding:  
develop the ability to apply theoretical knowledge to identify and critically analyze posture vices in simulated clinical settings.
3. Autonomy of Judgment:  
independently evaluate information related to posture vices, making critical and evidence-based judgments for framing and choosing intervention strategies.
4. Communication Skills:  
communicate information about posture vices clearly and effectively with both specialists and non-experts, using appropriate and understandable language.
5. Learning Skills:  
develop the skills necessary for continuous independent learning in the field of posture and its disorders, using a variety of sources and constantly updating their knowledge

## Contents

Physiology of posture, major changes in posture, diagnosis and therapeutic approach

## Detailed program

Introduction to posturology  
Physiology and main postural defects  
Diagnostic and therapeutic approach  
Visit to a dedicated clinic

## Prerequisites

Enrolment in the third year of the Degree in Nursing

## Teaching form

The lesson takes place in the dispensing mode in presence through frontal lesson and practical demonstration

## Textbook and teaching resource

Aubonnet R, Shoykhet A, Jacob D, Di Lorenzo G, Petersen H, Gargiulo P. *Physiol Meas.* (2022) Postural control paradigm (BioVRSea): towards a neurophysiological signature. 3;43(11). doi: 10.1088/1361-6579/ac9c43.

Baudry S, Penzer F, Duchateau, (2014) Vision and proprioception do not influence the excitability of the corticomotoneuronal pathway during upright standing in young and elderly adults. *J.Neuroscience* ;268:247-54. doi: 10.1016/j.neuroscience.2014.03.026.

Efstathiou MA, Giannaki CD, Roupa Z, Hadjisavvas S, Stefanakis M.. (2022) Evidence of distorted proprioception and postural control in studies of experimentally induced pain: a critical review of the literature. *Scand J Pain*; 22(3):445-456. doi: 10.1515/sjpain-2021-0205.

Henry M, Baudry S. (2019) Age-related changes in leg proprioception: implications for postural control. *J Neurophysiol*,122(2):525-538. doi: 10.1152/jn.00067.2019.

Moon KM, Kim J, Seong Y, Suh BC, Kang K, Choe HK, Kim K.. (2021) Proprioception, the regulator of motr function, *BMB Reports*;54(8):393-402. doi: 10.5483/BMBRep.2021.54.8.052.

Pollock AS, Durward BR, Rowe PJ, Paul JP..(2000) What is balance?; *Clin Rehabil* 14(4):402-6. doi: 10.1191/0269215500cr342oa.

Proske U, Gandevia SC. (2012), The proprioceptive senses: their roles in signaling body shape, body position and movement, and muscle force. *Physiological reviews*; 92(4):1651-97. doi: 10.1152/physrev.00048.2011.

## **Semester**

second semester

## **Assessment method**

Frequency

## **Office hours**

By appointment

## **Sustainable Development Goals**

GOOD HEALTH AND WELL-BEING

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