



UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Fisica Medica

2122-1-I0102D004-I0102D013M

Aims

The general aims of the course are to provide students with basic knowledge of Physics and Medical Physics, necessary to carry out their profession.

Contents

The course aims to provide the basic principles of biophysics and medical physics needed to understand the biophysical mechanisms underlying the most relevant physiological processes.

Detailed program

Static and dynamics of fluids as applied to the circulatory and fetoplacental systems: equilibrium of fluid, continuity, Bernoulli theorem, viscosity, tension and Laplace formula

Vectors, forces and levers of interest to the delivery mechanism: definition of a scalar and vector, algebra with vectors, forces, equilibrium, levers and roto-translations

Physiology of exchanges between the respiratory system and placenta: distensibility and pulsatility of the

cardiovascular system

Ecography/ultrasonography: waves, reflections and refractions, Doppler effects, sounds and sound waves

Prerequisites

Basic knowledge of Mathematics.

Teaching form

Lectures and workshops online and in presence, use of e-learning platform for additional readings and forum discussion.

Textbook and teaching resource

Scannicchio D. Giroletti E. (2015) Elementi di Fisica Biomedica, Edises, Milano.

Semester

1st Year, 2nd Semester

Assessment method

Written exam: test with multiple choice and/or open ended questions.

Office hours

On appointment (by email).
