UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

# SYLLABUS DEL CORSO

## Scienze Biomediche 1

**2627-1-I0104D001**

### Aims

**Knowledge and Understanding**
The course aims to provide the knowledge needed to provide general nursing care, including its technical, relational, and educational aspects, in accordance with applicable regulations. Specifically, the following areas of knowledge and understanding are outlined:
knowledge, understanding, and analysis of nursing competence phenomena, different contexts, and intervention modalities.
Students will develop the ability to critically evaluate information relating to the cellular, molecular, and genetic bases of human diseases, independently distinguishing between different pathogenic mechanisms.
Analysis of phenomena of interest to nursing from a theoretical perspective and in their relationship to professional practice and population health outcomes.

**Ability to apply knowledge and understanding**
The course, which provides a qualification for practicing as a nurse, aims to develop the skills necessary to provide general nursing care, including its technical, interpersonal, and educational aspects, in compliance with current legislation and applicable to specific situations and contexts.
Specifically, the following areas of application of knowledge and skills are identified:

- The student will be able to effectively communicate the acquired knowledge regarding the histological, anatomical, genetic, and biochemical bases, using appropriate and clear language, even in multidisciplinary settings and with non-specialist interlocutors.
- Demonstration of the ability and willingness to work in multidisciplinary settings.
- Ability to justify decisions regarding the care response based on their scientific rationale, the patient's condition, and the context in which the practice is performed.

**Learning Skills**

- Appropriate use of a study method to acquire and deepen knowledge on clinical and healthcare issues identified as priorities for the patient and/or for their own continuing education.

- The student will develop the skills necessary to independently delve into the topics of genetics, biology, biochemistry, and anatomy, while staying up-to-date on new discoveries and methodologies in the field of biomedical sciences.

## Contents

The course aims to provide information for understanding the organization of the human body; to explain how cells and tissues are organized to form organs and systems; to highlight the functional correlations of the micro- and macroscopic anatomy. It also aims to transmit the knowledge of the structure and function of the various components of eukaryotic cells, the molecular mechanisms involved in cell replication, the molecular mechanisms involved in gene expression; chromosomal pathologies; the concepts and methods of transmission of hereditary characteristics "non-traditional" pathogenetic mechanisms, as well as the foundations for the qualitative and quantitative knowledge of biological phenomena for a correct application of therapeutic prescriptions. Chemistry, metabolism and nutrition.

## Detailed program

Details are provided in each specific module.

## Prerequisites

none

## Teaching form

Frontal lectures. For details, check each module.

## Textbook and teaching resource

Details are provided in each specific module.

## Semester

1st year, I semester

## Assessment method

The Biomedical Sciences 1 course is divided into 4 modules: Genetics (1 CFU), Biology (1 CFU), Biochemistry (2 CFU) and Anatomy/Histology (4 CFU).
The exam consists of a 2-hourand 30 minutes written test consisting of:

Biology, Genetics and Biochemistry Quiz (4 CFU). Total 32 questions relating to the three modules . Multiple answer each value 1. Time: 1 hour
Anatomy/Histology Quiz (4 CFU). Total 29 multiple choice questions (value 1) and one open question (short assay- 4 points). Time: 1 hour and 30 minutes
The final grade will be given by grade point average

## Office hours

On appointment. Based on the need, please reach out the teacher of each specific module.

## Sustainable Development Goals

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION | GENDER EQUALITY