



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## COURSE SYLLABUS

### Clerkship 1

2324-1-H4102D006

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#### Aims

Chemistry and Propaedeutic Biochemistry II : Practical laboratory activities useful for medical students.

Cellular and Molecular Biology: The course will provide the essential basic theoretical knowledge of biology focusing on future applications in the biomedical field.

Basic Computer Science: Practical laboratory activities with computers and personal applications.

#### Contents

Chemistry and Propaedeutic Biochemistry II : To learn basic practical laboratory activities useful for medical students, including basic knowledge and practical aspects of clinical proteomics.

Cellular and Molecular Biology: The content of the course will involve relevant biotechnological techniques and their applications in the biomedical field.

Basic Computer Science: Practice the knowledge of computer-related methodologies and technologies employed in medical informatics and to apply those methods in solving problems arising in different areas of medicine and the health-care system (starting from personal use).

#### Detailed program

Chemistry and Propaedeutic Biochemistry II : To become acquainted with safety rules for laboratory activities. To learn basic activities useful for medical students, such as: prepare solutions, measure the pH, modify the pH,

prepare buffers, make correct aliquots and make dilutions. To learn basic knowledge and practical aspects of protein identification strategies and of tissue molecular imaging done by mass spectrometry oriented to clinical applications.

**Cellular and Molecular Biology:** The course will involve the study of commonly used and innovative cell and molecular biology techniques and their applications in biomedical research. This will be done by reading and discussing particularly significant scientific articles that employ such methodologies in order to answer specific biological questions.

**Basic Computer Science:** Using the Computer and Managing Files. Word processing. Spreadsheets. Using Databases. Presentation. Web Browsing and Communication

## **Prerequisites**

The attended Chemistry, cell biology and propedeutical biochemistry courses.

**Cellular and Molecular Biology:** Basic scientific knowledge (basic biology, chemistry, physics)

**Basic Computer Science:** Basic knowledge in the use of computers. Attendance of the Basic Computer Science course

## **Teaching form**

**Chemistry and Propaedeutic Biochemistry II :** Laboratory activity and lectures done during the Clerkship.

**Cellular and Molecular Biology:** Introductory classes followed by presentations and group discussions.

**Basic Computer Science:** Laboratory activity and lectures with exercises and projects

## **Textbook and teaching resource**

**Cellular and Molecular Biology:** Primary research articles and reviews

**Basic Computer Science:** Flora R. Heathcote, O.H.U Heathcot, Pat M. Heathcote, R.P. Richards, Pass ECDL 5 Units 1-7 Paperback, Editor Alex Sharpe;

## **Semester**

First semester

## **Assessment method**

The final grade is ELIGIBLE / NOT ELIGIBLE. Eligibility is achieved by having obtained the eligibility of all the three modules of Clerkship 1.

Chemistry and Propaedeutic Biochemistry II : Assignments will be given based on discussion of the laboratory activity.

Cellular and Molecular Biology: Evaluation of presentations and related group discussions

Basic Computer Science: To have Clerkship1 - BCS module eligibility, the student must attend 70% of the Clerkship1 - BCS module lessons.

If the student is unable to attend the course (e.g. due to late enrolment), eligibility will be acquired upon passing the BCS module exam (course number: 2324-1-H4102D004-H4102D010M).

## **Office hours**

Upon appointment

## **Sustainable Development Goals**

GOOD HEALTH AND WELL-BEING

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