

## Faculty of Medicine



### BCHM1310 Human Biochemistry and Genetics

[70h+16h exercises] 8 credits

**Teacher(s):** Louis Hue (coord.), Frédéric Lemaigre, Miikka Vikkula  
**Language:** French  
**Level:** First cycle

#### Aims

The students will be given a global and rational overview of normal and pathological aspects of human biochemistry and genetics. At the end of the course, the students will have mastered the biochemical and genetic basis required for (i) the understanding of pathological conditions and genotype diagnosis (medical students), and (ii) the continuation of their course studies (biomedical science students).

#### Main themes

The course material follows the biochemical basis for metabolic homeostasis under normal conditions and in pathological situations. The biochemical techniques needed for the analysis of human genetics will also be tackled.

#### Content and teaching methods

The lectures are a logical follow-up to the courses of General Biochemistry (BCHM1210) and Molecular Biology (SBIM1202). There are five major blocks of lectures: (i) DNA pathology and genetic analysis, and metabolism under normal and pathological conditions of (ii) carbohydrates, (iii) lipids, (iv) nitrogen-containing compounds, and (v) the biochemical integration of human metabolism.

#### Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

**Requirements:** Basic understanding of general biochemistry and molecular biology taught in the lectures of General Biochemistry (BCHM1210) and Molecular Biology (SBIM1202).

**Assessment:** By written exam. The students will be examined on their knowledge of the subject, their capacity to integrate the various parts of the course and their ability to solve problems.

**Support:** Textbooks of biochemistry and genetics.

**References:**

- Biochemistry, Champe P.C., Harvey R.A, Ferrier D.R., Lippincott's Illustrated Reviews, Lippincott Williams & Wilkins
- Principles of Biochemistry, Horton R.H., Prentice Hall

**Teaching:** Formal lectures

**Other**

Medical aspects of biochemistry and genetics are not covered in other courses.

The courses are not part of the list of minor optional courses.

#### Other credits in programs

|                |  |             |           |
|----------------|--|-------------|-----------|
| <b>MED12BA</b> | Deuxième année de bachelier en médecine  | (8 credits) |           |
| <b>MED13BA</b> | Troisième année de bachelier en médecine | (8 credits) | Mandatory |