



BIO1112 General cytology and histology

[45h] 5 credits

Teacher(s): Brigitte Reusens, Philippe van den Bosch Sanchez de Aguilar
Language: French
Level: First cycle

Aims

1. To acquire the scientific and medical vocabulary used in morphological sciences and to know the definition of words used.
2. To know the definition of tissues constituting the human body and their principal localisation.
3. To know the cytological, histological and sometimes macroscopic characteristics of tissues, in other words, the criterias to recognize and to describe them.
4. To know histophysiological elements : the roles and functioning of the tissues.
5. To know how to analyze a morphological document (optical or electronic micrography, macroscopic photography, histological preparation). This implies to be capable of examining the document in its integrity and to find the different tissue constituents, describing them by giving the form, size, tinctorial affinity, their mode of association, etc# and to bring out the important tone.
6. To outline the observation data by elaborating one or several hypothesis of diagnostic.

Main themes

The biological and medical sciences are based on three fundamental disciplines :

- BIOCHEMISTRY that studies the molecules composing the organism and the many chemical reactions that take place
- MORPHOLOGY that studies the structures formed by assembling molecules,
- PHYSIOLOGY that studies the functioning of different structures composing the organism.

Cytology studies the constituents of the cell. The objectives of this course are to make students able to make links between morphology and the main functions of the cell as well as between cellular ultrastructure and the aspects of cells in optical microscopy. On the same title as cytology and anatomy, histology is a branch of morphology; it is divided in general histology and special histology. General histology is the study of tissues, associations of cells of the same type and sometimes extracellular components forming elementary constituents of organs. Special histology, also called microscopic anatomy, is seen later on. It studies the architecture of organs formed by a series of tissues.

Content and teaching methods

- 1° Bases for cytology
- 2° Lining and glandular epithelium
- 3° Non- specialized and specialized connective tissue
- 4° Blood and host defence tissue
- 5° Neural tissue
- 6° Muscle

Method: The course includes 15 audio-visual lessons of 3 hours, exercises included. This method allows to integrate the theory and the practice in order to be able to identify the different tissues aiming to prepare the student to the specific histology. Each student has an audio-visual box at one#s disposal once a week during which he can learn at his own rhythm. During the several lessons the professor is present and helps the student in his individual learning, allowing the him to answer a maximum of questions.

Exercises are given separately, and written reports that will be corrected are asked for each session. One to two examinations are performed after each chapter and will be corrected with the assistant. In order to benefit from the exercise session, the student is invited to prepare it with the hep of documents given in advance.

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

Prerequisites: thorough knowledge of french

Evaluation: includes both theoretical and practical approaches (analyse of histological preparations and morphological documents not seen during the course)

Support: syllabus, cd-rom and web site <http://www.md.ucl.ac.be/isto/>

Staff support: self-learning supervised by teachers and teaching assistant

Other credits in programs

SCA11BA	Première année polyvalente en sciences naturelles - groupe A	(5 credits)	Mandatory
VETE12BA	Deuxième année de bachelier en médecine vétérinaire	(2 credits)	