

### MODULE DESCRIPTION (SUMMARY PROGRAM).

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|---------------------------------------------------------------|------------------------------------------------------------------------------|
| 1. Module Information Code:                                   |                                                                              |
| • Name of the Institution and School                          | Universidad Autónoma de Nuevo León,<br><u>School of Medicine</u>             |
| • Name of the Learning Unit                                   | <u>Tissue and Cell Biology.</u>                                              |
| • Total classroom hours for theory and/or practice.           | 127 hours.                                                                   |
| • Total extra classroom hours                                 | 83 hours.                                                                    |
| • Course Modality                                             | Schooled.                                                                    |
| • Type of academic period in which the module is offered      | 2nd Semester.                                                                |
| • Type of Learning Unit in the Curriculum                     | Compulsory.                                                                  |
| • Curriculum area:                                            | ACFB.                                                                        |
| • UANL credit points                                          | 7                                                                            |
| • Date of module creation:                                    | March 5, 2015.                                                               |
| • Date of last amendment:                                     | January 25, 2021.                                                            |
| • Person(s) responsible for the module design and amendments: | Dra. María de Jesús Loera Arias. / Dr. Roberto Montes de<br><u>Oca Luna.</u> |

### Personal and social interaction skills

11. Practice the values promoted by the UANL: truth, equality, honesty, liberty, solidarity, respect for life and anyone's, peace, respect for nature,

2. Purpose(s) ethics behavior and justice, within their personal and professional environment in order to make a sustainable society.

The Tissue and Cell Biology learning unit contributes to the acquisition of the graduate profile by knowing the structure and function of the human body, understanding the most common diseases that a doctor faces in first level care. During this unit, moral and ethical values are instilled,

as well as the importance and resolution of conflicts in accordance with specific techniques in the academic field and their profession for the proper decision making systems that integrate the human being in a normal way are analyzed; this knowledge serves as a basis for the understanding of Anatomy,

15. Achieve the adaptability required to use in their professional careers, in social environments of Surgery, Emergency, Dermatology, Hematology, Cardiology, Nephrology, Pediatrics, Pneumology, Rheumatology, Allergology, Infectology and Neurology.

### b. Specific competences of the graduate profile that contributes to the learning unit.

This learning unit is related to the general competences through the development of exercises previous to the discussion of the topic, search of information, use the use of different technological and considering economic, psychological, social of the area responding to the digital, which contribute to the development as a professional facilitating the understanding and expression of ideas. In addition, the students are trained in teamwork and personal development in values such as responsibility, respect and honesty.

7.- Applies the scientific method for the resolution of medical problems with an innovative, analytic and self-critical attitude for preventing, diagnosing and treating diseases. With this learning unit, it provides the student with the knowledge, skills and attitudes necessary for the holistic understanding of the human being, through scientific knowledge of the structure and normal functioning of the human body, which allows him/her to understand the alterations of the molecular, biochemical and cellular mechanisms that occur in diseases. Through the methodology employed, the development of critical and scientific thinking is promoted.

### 3. Competences of the graduate profile.

a.

b. a. General competences contributing to this learning unit.

c.

#### Instrumental skills:

1. Apply autonomous learning strategies in the different levels and fields of knowledge that allow them make appropriate and relevant decisions in the personal, academic and professional fields.

2. Use the logical, formal, mathematical, iconic, verbal and non-verbal languages according to their stage of life, in order to understand, interpret and express ideas, feelings, theories and streams of thinking with an ecumenical focus.

3. Use the information and communication technologies as access tools to information and its transformation in knowledge, as well as for learning and collaborative work with cutting-edge techniques that allow its constructive participation in society.

#### **4. Summative Evaluation**

- Resolution of cases:
- Quizzes on reading assignments\*:
- Workbook:
- CIP: Report about the analysis of histological cross-sections:
- Exam

#### **5. Course Integrative Product.**

##### **Report about the analysis of histological cross-sections:**

It consists of a written work, in teams, about the morphological application for the resolution of cases:

Elaboration of a paper where the student will look for a scientific article from PUBMED based on any specific macromolecule of a tissue of the human body. The student must analyze the abstract of the article and describe the objective and the contributions of that work.

Besides that, the student will select two images of histological cross-sections from the article where two different techniques are used and he/she will provide their description. It is worth 2%.

##### **Resolution of cases:**

The second part will consist of an exam in which the student will solve a case. It is worth 3%. Correct diagnosis of the organ or structure in 10 histological preparations and later on, the student will say which structure is affected in 4 clinical cases. The student must identify the correct altered structure within a time limit. This will be answered in teams of 5 members.

## 6. Bibliography

### Basic textbooks:

- Kierszenbaum, A. L. (2012) *Histología y Biología Celular - Introducción a la Anatomía Patológica*. Elsevier-Saunders.
- Cuaderno de trabajo del Departamento de Histología de la Facultad de Medicina de la UANL, 2015.

### Reference books:

- Welsch U. (2010) *Sobotta Histología*. Editorial Medica Panamericana,
- Gartner, L.P. y Hiatt, J.L. (2008) *Texto Atlas de Histología*. Edición Mc Graw-Hill Interamericana.
- Junqueira & Carneiro, (2005) *Histología Básica*. Elsevier Masson.
- Geneser (2015) *Histología*. Editorial Medica Panamericana.

### Websites:

- Blue Histology: <http://teaching.anhb.uwa.edu.au/mb140/>
- Virtual Microscopy: <http://histology.med.umich.edu/node/82>
- Virtual Histology: <http://www.meddean.luc.edu/lumen/MedEd/Histo/virtualhistology.htm>
- Cell and Tissue Biology: <http://www.med.uiuc.edu/histo/medium/atlas/index.htm>
- Histology: [http://www.path.uiowa.edu/virtualslidebox/histo\\_path/nlm\\_histology/content\\_index\\_db.html](http://www.path.uiowa.edu/virtualslidebox/histo_path/nlm_histology/content_index_db.html)
- Histology Tutorials: <http://www-medlib.med.utah.edu/WebPath/HISTHTML/HISTO.html>

