Jordan University of Science and Technology

Faculty of Medicine

Doctor Of Medicine (Md) Department

MED114 Cell Biology & Histology - JNQF Level: 7

Second Semester 2022-2023

Course Catalog
3 Credit Hours. This course is intended for first-year medical students, and it is a general introduction to basic histology and cell structure. The students will be introduced to the basic structure of the human cell and its organelles and cell division, and more emphasis will be placed on the cell membrane and cytoskeleton. The general structure and functions of the cell will be related to different basic medical sciences and relevant points integrated with clinical applications. The different steps in the preparation of microscopic slides will be discussed. As research is a principal pillar of medical education, the basic principles of morphological and functional (Molecular) methods of tissues will be discussed. To keep up with advancements in new medical applications and discoveries, the basic principles of cloning and stem cells will be studied so students are encouraged to think about how to apply basic knowledge in clinical aspects. The origin of basic tissues related to embryo development will be discussed and the histology of the four basic tissue types will be studied in detail. Relevant medical applications to each tissue type will be studied and integrated with other basic medical sciences and clinical aspects. The theory session goes hand in hand with the laboratory part, so students acquire the skills of studying and identifying different tissues based on characteristic features of each type.

Text Book	
Title	Junqueira's basic histology : text and atlas
Author(s)	Anthony L. Mescher
Edition	14th Edition
Short Name	Ref # 1
Other Information	or the latest edition

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref # 2	Textbook of Histology	Leslie P. Gartner	5th Edition	or the latest edition

Instructor	
Name	د. **Fadhil Wasfi**
Office Location	-
Office Hours	

Email	fadwas@just.edu.jo

Instructor	
Name	**Dr. Qasim El-Dwairi**
Office Location	M4 L0
Office Hours	
Email	eldwairi@just.edu.jo

Class Schedule & Room

Section 1:
Lecture Time: Sun, Tue : 11:30 - 12:30
Room: مدرج الفاروق

Section 2:
Lecture Time: Mon, Wed : 09:30 - 10:30
Room: مدرج الفاروق

Section 3:
Lecture Time: Mon, Wed : 11:30 - 12:30
Room: مدرج الفاروق

Section 4:
Lecture Time: Sun, Tue : 13:30 - 14:30
Room: MIDDLE HALL

Section 5:
Lecture Time: Sun, Tue : 09:30 - 10:30
Room: مدرج الفاروق

Teaching Assistant

Mrs. Malak Shatnawy(Sections 1, 2, 3, 4, 5), Miss Duha Al-Khasawneh(Sections 1, 2, 3, 4, 5), Mrs. Esraa Ghozlan(Sections 1, 2, 3, 4, 5)

Tentative List of Topics Covered

Weeks	Topic	References
Week 1	General Introduction to the course of Basic Histology and Cell Biology	From **Ref # 1**, From **Ref # 2**
Week 2	The cell (I)	From **Ref # 1**, From **Ref # 2**
Week 2	The cell (II)	From **Ref # 1**, From **Ref # 2**
Week 3	The cell (III)	From **Ref # 1**, From **Ref # 2**
Week 3	Cell division and cell cycle	From **Ref # 1**, From **Ref # 2**

Week 4	Epithelial tissues (I)	From **Ref # 1**, From **Ref # 2**
Week 4	Epithelial tissues (II)	From **Ref # 1**, From **Ref # 2**
Week 5	Histology Techniques & Microscopy	From **Ref # 1**, From **Ref # 2**
Week 5	Medical Research Methods	From **Ref # 1**, From **Ref # 2**
Week 6	Connective tissue (I)	From **Ref # 1**, From **Ref # 2**
Week 6	Connective tissue (II)	From **Ref # 1**, From **Ref # 2**
Week 7	Connective tissue (III)	From **Ref # 1**, From **Ref # 2**
Week 7	Fatty tissue	From **Ref # 1**, From **Ref # 2**
Week 8	Blood (I)	From **Ref # 1**, From **Ref # 2**
Week 8	Blood (II)	From **Ref # 1**, From **Ref # 2**
Week 9	Cartilage (I)	From **Ref # 1**, From **Ref # 2**
Week 9	Cartilage (II)	From **Ref # 1**, From **Ref # 2**
Week 10	Bone (I)	From **Ref # 1**, From **Ref # 2**
Week 10	Bone (II)	From **Ref # 1**, From **Ref # 2**
Week 11	Muscle tissue (I)	From **Ref # 1**, From **Ref # 2**
Week 11	Muscle tissue (II)	From **Ref # 1**, From **Ref # 2**
Week 12	Nervous Tissue (I)	From **Ref # 1**, From **Ref # 2**
Week 12	Nervous Tissue (II)	From **Ref # 1**, From **Ref # 2**
Week 13	Stem Cells & Cloning	From **Ref # 1**, From **Ref # 2**

Week 13	Cytoskeleton	From **Ref # 1**, From **Ref # 2**
Week 14	Gametogenesis (I)	From **Ref # 1**, From **Ref # 2**
Week 14	Gametogenesis (II)	From **Ref # 1**, From **Ref # 2**

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Students will describe human cell structure, organelles, cell membrane, cell division, and cytoskeleton organization, placing the foundation for advanced studies in cell biology. [1PLO1] [1L7K1, 1L7S1, 1L7S2, 1L7S3, 1L7C2, 1L7C3, 1L7C4]	20%	
Students will recognize the various steps in microscopic slide preparation, types of microscopes, and basic principles of molecular and histological methods used in medical research, introducing them to the methodologies employed in biomedical research. [1PLO1, 1PLO9] [1L7K1, 1L7S1, 1L7S2, 1L7S3, 1L7C2, 1L7C3, 1L7C4]	10%	
Students will explain the histology of epithelium and connective tissues, enabling them to comprehend tissue structure-function relationships crucial for understanding organ physiology and pathology. [1PLO1] [1L7K1, 1L7C2, 1L7C3]	40%	
Students will identify the histology of muscular and nervous tissues, enabling them to understand tissue structure-function relationships crucial for understanding organ physiology and pathology. [1PLO1] [1L7K1, 1L7C2, 1L7C3]	30%	

Relationship to Program Student Outcomes (Out of 100%)													
PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	PLO12	PLO13	PLO14
95								5					

Relationship to NQF Outcomes (Out of 100%)						
L7K1	L7S1	L7S2	L7S3	L7C2	L7C3	L7C4
27.62	4.29	4.29	4.29	27.62	27.62	4.29

Policy	
Methods of instruction	1. Lectures are interactive sessions to have a general overview of the objectives and discuss certain areas. 2. Lectures and/or handouts - are not to replace the recommended textbook, which must be the main resource. 3. Labs are group activities where: A. Students prepare lists of microscopic structures to be identified. B. Supervised identification will be carried out. C. Group discussions are very much encouraged.

Attendance Policy:	1. The students are expected to attend all classes and lab sessions. 2. Repeated tardiness and leaving labs prior to dismissal is a set-up for failure. 3. Absence in excess of 20% is defined as unsatisfactory progress and will be reported to the Dean's office.
Examination misconduct	Students must obey to JUST regulations entitled "STUDENT TEST DECLARATION FORM".

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