



**The University of Jordan**

**Accreditation & Quality Assurance Center**

# **COURSE Syllabus**

1	Course title	<b>Histotechnology</b>
2	Course number	<b>0308212</b>
3	<b>Credit hours (theory, practical)</b>	<b>3( 2 theory, 3 practical )</b>
	<b>Contact hours (theory, practical)</b>	<b>2 theory, 3 practical / week</b>
4	Prerequisites/corequisites	<b>Histology (0308211 )</b>
5	Program title	<b>Medical Laboratory</b>
6	Program code	
7	Awarding institution	
8	Faculty	<b>Science</b>
9	Department	<b>Department of Medical Laboratory</b>
10	Level of course	<b>200</b>
11	Year of study and semester (s)	<b>Fall 2017/ 2018</b>
12	Final Qualification	<b>BSc</b>
13	Other department (s) involved in teaching the course	
14	Language of Instruction	<b>English</b>
15	Date of production/revision	<b>17.9.2017</b>

#### 16. Course Coordinator:

**Office numbers, office hours, phone numbers, and email addresses should be listed.**

**Office numbers :Biology Building 311**

**office hours: Mon., Wed. 8-9**

**phone numbers: 22208**

**email: zshraideh@ju.edu.jo**

#### 17. Other instructors:

*Office numbers, office hours, phone numbers, and email addresses should be listed.*

#### 18. Course Description:

*As stated in the approved study plan.*

The goals of this course are The course aims to enable the students to prepare permanent prepared slides of different animal tissues used in clinical laboratory. Course includes different types of

preparations, fixation, washing, dehydration and clearing, infiltration and embedding, microtomy or sectioning using microtome, mounting and labeling of tissues for purpose of microscopic examinations. Also it includes other techniques used to study cells and tissues for clinical purposes such as smearing, squashing and whole mount preparations, freezing (cryostat sectioning) and immunohistochemistry.

**1. 19. Course aims and outcomes:**

2.

**A- Aims:**

The course aims to introduce undergraduate student to

1. basic concepts of preparing of tissues for microscopic examinations.
2. Students will have and are expected to understand the methods for preparation of prepared slides of different animal tissues.
3. Students are expected to understand the principled underlying steps involved in preparing permanent slides of animal tissues and clinical specimens.

**B. Intended Learning Outcomes (ILOs): During learning of this course, students are expected to**

1. gain experience in preparing prepared slides of biological specimens.
2. learn experience in preparing written reports of long- term laboratory work.

**C- Student outcomes( SO ): Upon successful completion of this course students will be able to ...**

1. Understand basic concepts of histotechnology

2. Practise preparing of tissues for microscopic examinations.

3. Recognize the main steps involved in preparing permanent slides



3. Specialized microscopy and techniques
4. Fixation: Aims and objectives of fixation
5. Fixation: Nature of Fixative, choice of fixative, methods of fixation
6. Washing, dehydration and clearing
7. Infiltration, embedding and routine timing schedule for manual technique
8. Infiltration, embedding and paraffin tissue block preparation
9. Microtomy or sectioning: Microtomes and knives
10. Microtomy: Steps, problems and types of sections
11. Spreading of sections and mounting of sections to glass slides
12. Staining : Theory of staining , classification of stains, specific stains and mordants
13. Staining : Methods of staining , differentiation, metachromasy. Vital staining and procedures of staining . The metachromasy.
14. Mounting and labeling of stained sections: Mounting media . Methods of mounting
15. Smearing , squashing, whole mount , freezing methods ( Cryostat sectioning ) and photomicrography.

### **Practical Outline:**

#### **Week#**

#### **Lab.Topic**

1 <sup>st</sup>	Introduction, arrangement, use of lab . instruments. Microscopy. Safety in the Lab
1 <sup>nd</sup>	Preparation of chemicals, fixatives. Microtome
2 <sup>rd</sup>	Preparation of human blood smear
2 <sup>th</sup>	Tissue processing: Tissue extraction, and fixation
3 <sup>th</sup>	Tissue processing: Dehydration, infiltration and embedding
3 <sup>th</sup>	Tissue processing: Trimming, sectioning and mounting
4 <sup>th</sup>	Tissue processing: Trimming, sectioning and mounting
4 <sup>th</sup>	Tissue processing : Staining of sections, mounting & cleaning
5 <sup>th</sup>	Tissue processing : Staining of sections, mounting & cleaning
5 <sup>th</sup>	Examination of slides. Labeling and evaluation
6 <sup>th</sup>	Tissue processing: Staining of sections, mounting and cleaning
6 <sup>th</sup>	Submission of lab reports and slides
7 <sup>th</sup>	Cryosectioning: Instruments used
7 <sup>th</sup>	Preparation of tissues for electron microscopy: Visit to the E.M. Lab
7 <sup>th</sup>	Cleaning of glassware & instruments. Practical Final Exam.

### **4. Additional information:**

Name of Course Coordinator: Prof Dr. Ziad Shraideh-----Signature:



Date: 17.9.2017

Head of curriculum committee/Department: ----- Signature: -----

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Head of Department: ----- Signature: -----

Head of curriculum committee/Faculty: ----- Signature: -----

Dean: ----- -Signature: -----

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Head of Department  
Assistant Dean for Quality

Assurance

Course File