



Course Specifications

Course Title:	Histopathological Techniques
Course Code:	373312-3
Program:	Bachelor's in Clinical Laboratory Sciences
Department:	Clinical Laboratory Sciences
College:	Applied Medical Sciences
Institution:	Taif University

Table of Contents

A. Course Identification	3
6. Mode of Instruction (mark all that apply).....	3
B. Course Objectives and Learning Outcomes	4
1. Course Description.....	4
2. Course Main Objective	4
3. Course Learning Outcomes.....	4
C. Course Content.....	Error! Bookmark not defined.
D. Teaching and Assessment.....	5
1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods.....	5
2. Assessment Tasks for Students	6
E. Student Academic Counseling and Support	6
F. Learning Resources and Facilities	7
1. Learning Resources.....	7
2. Facilities Required	7
G. Course Quality Evaluation.....	7
H. Specification Approval Data	8

A. Course Identification

1. Credit hours:	3
2. Course type	
a.	University <input type="checkbox"/> College <input type="checkbox"/> Department <input checked="" type="checkbox"/> Others <input type="checkbox"/>
b.	Required <input checked="" type="checkbox"/> Elective <input type="checkbox"/>
3. Level/year at which this course is offered:	Level 5/Third Year
4. Pre-requisites for this course (if any):	General and systemic pathology (373238-2)
5. Co-requisites for this course (if any):	None

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	2 hours /week= 30 hours/semester	50%
2	Blended		
3	E-learning	N/A	
4	Correspondence	N/A	
5	Other Laboratory practical	2 hours /week= 30 hours/semester	50%

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contact Hours		
1	Lecture	30
2	Laboratory/Studio	30
3	Tutorial	N/A
4	Others (specify)	N/A
	Total	60
Other Learning Hours*		
1	Study	42
2	Assignments	4
3	Library	None
4	Projects/Research Essays/Theses	None
NA	Others (Presentations)	5
	Total	111

* The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

B. Course Objectives and Learning Outcomes

1. Course Description

This course will provide the students with Basic knowledge of the theoretical and applied aspects of tissue specimen's collection and preparation techniques, ability to perform the different histopathological techniques as well as the knowledge and ability to perform routine and special tissue staining techniques.

2. Course Main Objective

By the end of this course, students should be able to:

1. Gain proper knowledge about different techniques used in tissue preparation and staining for diagnostic purposes
2. Choose the proper histopathological techniques and proper stain for each pathological situation.
3. Perform the paraffin sections, frozen sections, decalcification, fixation and routine as well as special staining

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	Knowledge:	
1.1	Identify histopathological techniques, decalcification, frozen section, embedding media, tissue processing and different methods of preparation of tissue	K2
1.2	Describe the principle and purposes of fixation, and methods of staining of tissues	K2
1.3	Recognize the differences between routine and special stain techniques as nucleoprotein, carbohydrate, lipids, connective tissue and pigment	K2
2	Skills :	
2.1	Select the proper techniques and staining methods for tissues preparation	S1
2.2	Demonstrate and identify faults and remedy during tissue preparation	S2
2.3	Interpret the results of histopathological techniques special staining	S2
3	Competence:	
3.1	Perform tissue fixation, processing and tissue cutting as well as routine and special staining in safety manner	C1

C. (a) Course Content (Theory)

No	List of Topics	Contact Hours
1	Introduction (types of tissue biopsies)	2
2	Fixation and fixatives	2
3	Tissue processing & paraffin wax techniques	4
4	Decalcification techniques	2
5	Frozen section technique and cryostat	2

6	Theory of stain	2
7	Mounting media	2
9	Haematoxylin and eosin routine tissue stain	2
10	Nucleic acid demonstration	2
11	Carbohydrates and mucoid substance demonstration	2
12	Lipids histochemistry	2
13	Pigments and minerals	3
14	Immunohistochemistry	3
Total		30

(b) Course Content (Practical)

No	List of Topics	Contact Hours
1	Introduction to histopathology lab and histopathology request form	2
2	Practicing tissue fixation	2
3-3	Practicing tissue processing and use tissue processor	2
5	Use of microtome and tissue cutting	2
6-7	Practicing decalcification	2
8	Preparation of Haematoxylin and Eosin	2
9	Practicing routine tissue staining Haematoxylin and Eosin	2
10	Practicing frozen section and use cryostat	2
11	Practicing carbohydrate staining using periodic acid Schiff method	2
12	Practicing mucin staining using Alcian blue method	2
13	Collagen fiber staining using Vangieson method	4
14	Perls Prussian blue for iron demonstration	3
Total		30

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	Knowledge		
1.1	Identify histopathological techniques, decalcification, frozen section, embedding media, tissue processing and different methods	- Lectures. • - Practical sessions.	- Exams - Lab reports
1.2	Describe the principle and purposes of fixation,	• Lectures.	• Exams

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
	and methods of staining of tissues	<ul style="list-style-type: none"> Practical sessions. 	<ul style="list-style-type: none"> Lab reports
1.3	Recognize the differences between routine and special stain techniques as nucleoprotein, carbohydrate, lipids, connective tissue and pigment	<ul style="list-style-type: none"> Lectures. Practical sessions. 	<ul style="list-style-type: none"> - Exams - Lab reports.
2.0	Skills		
2.1	Select the proper techniques and staining methods for tissues preparation	<ul style="list-style-type: none"> Lectures. Practical sessions. 	<ul style="list-style-type: none"> Exams Assignments.
2.2	Demonstrate and identify faults and remedy during tissue preparation	<ul style="list-style-type: none"> Lectures. Practical sessions 	Written Exams
2.3	Interpret the diagnostic terms used in histopathological reports	<ul style="list-style-type: none"> Lectures. Practical sessions 	<ul style="list-style-type: none"> - Written Exams. - OSPE
3.0	Competence		
3.1	Perform fixation, processing, tissue cutting as well as routine and special staining in safety manner	<ul style="list-style-type: none"> Lectures. Practical sessions. 	<ul style="list-style-type: none"> - Exams - Lab reports

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Mid-Term Exam	8 th Week	15%
2	Activity	Throughout the semester	5%
3	Practical Report	Throughout the semester	10%
4	Final Practical Exam	14 th Week	20%
5	Final Exam	17 th /18 th Week	50%
6	Total		100%

*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

- Course instructors are available for individual consultation in their free time. They are usually full-time permanent members present on-campus from 8:00 am to 2:30 pm on all working days. Appointments can be made in person with the instructor through email etc. Days and time availability of each instructor are posted on their doors. Course instructors provide a range of academic and course management advice including course planning and its progression.
- Each student at the department of Clinical Laboratory Sciences has an academic adviser who is available for individual consultation and guidance. Appointments can be made in person with the instructor through email etc. Days and time availability of each adviser are posted on their doors. The academic adviser can provide support with time management, exam preparation, clarification of subject requirements, feedback on performance and dealing with personal issues as well.

F. Learning Resources and Facilities

1. Learning Resources

Required Textbooks	1- Theory and Practice of Histological Techniques. John D. Bancroft. Churchill Livingstone Elsevier .last edition 2012 2- Carleton's Histological technique.
Essential References Materials	N/A
Electronic Materials	Websites, Search engines (Saudi Digital Library, PubMed, Google Scholar)
Other Learning Materials	Histology lab.ccnmtl.columbia.edu/histological techniques...

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	Classrooms
Technology Resources (AV, data show, Smart Board, software, etc.)	Data show, Blackboard and A/V
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or -	<ul style="list-style-type: none"> -Teaching microscope - Microtomes -Tissue processing machine - Tissue strainer - Cryostat -Pathology slides teaching sets for histopathology

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Student's feedback on effectiveness of teaching and quality of courses.	Students	Questionnaire Survey at the end of each semester.
Alignment map of course ILOs with that of program ILOs.	Development and accreditation committee	Consistency of Intended Learning Outcomes of program and courses with that of mission and vision of the program.
Availability of learning resources, facilities and equipments related to	Students and faculty	Questionnaire Survey at the end of each semester.

Evaluation Areas/Issues	Evaluators	Evaluation Methods
each course.		
Evaluation of teaching	Peer evaluators	Peer evaluation
Standard of student achievement	Examination Committee	Students grads
Periodical review of course effectiveness and planning for its improvement.	Teaching staff/ Development and accreditation committee	Review by Department Committee

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)

Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	Department Meeting
Reference No.	Meeting No.10
Date	10-9-1440