

TISHK INTERNATIONAL UNIVERSITY
FACULTY OF APPLIED SCIENCE
Department of MEDICAL ANALYSIS,
-2022 Fall
Course Information for MA 505 MICROTECHNIQUES

Course Name: MICROTECHNIQUES					
Code MA 505	Regular Semester 7	Theoretical 3	Practical -	Credits 3	ECTS 4
Name of Lecturer(s)- Academic Title:	Muzhda Saber - MSc				
Teaching Assistant:	No assistant (theory)				
Course Language:	-				
Course Type:	Area Elective				
Office Hours	10-12 am on Wednesday				
Contact Email:	muzhda.haydar@tiu.edu.iq Tel:07507725801				
Teacher's academic profile:	MSc				
Course Objectives:	This combined Theoretical and Practical course provides medical laboratory sciences students with knowledge and practical skills required for processing tissues for histologic examination. This includes tissue acquisition, fixation, sectioning, and staining.				
Course Description (Course overview):	The goal of this course is to provide students with a focused exploration of the regulatory guidance and how they are applied in the medical Analysis field, devices, combination and biotechnology industries. This course will provide students the opportunity to understand the application of the regulations to Quality systems and their relationship to the Quality Assurance and Quality Control functions supporting manufacturing processes.				

COURSE CONTENT

Week	Hour	Date	Topic
1	3	4-7/10/2021	introduction to microtechnique
2	3	10-14/10/2021	Principles, types of fixatives
3	3	17-21/10/2021	mechanism of fixation
4	3	24-28/10/2021	common fixatives in the lab
5	3	31/10-4/11/2021	Monitoring Dehydration in Tissue Processing
6	3	7-11/11/2021	Monitoring Clearing in Tissue Processing
7	3	14-18/11/2021	Midterm Exam
8	3	21-25/11/2021	Midterm Exam
9	3	28/11-2/12/2021	Microtomy or section cutting
10	3	5-9/12/2021	An Introduction to Routine and Special Staining in Histopathology
11	3	12-16/12/2021	Histopathological slide mounting
12	3	19-23/12/2021	Artefacts in histopathology
13	3	26-30/12/2021	Problems and Solutions in Histological Technique
14	3	2-5/1/2022	Factors Affecting Tissue Processing
15	3	9-13/1/2022	Final Exam
16	3	16-20/1/2022	Final Exam

COURSE/STUDENT LEARNING OUTCOMES

- 1 Fixation of tissue
- 2 dehydration of tissue
- 3 clearing agents
- 4 imbedding
- 5 staining

COURSE'S CONTRIBUTION TO PROGRAM OUTCOMES

(Blank : no contribution, I: Introduction, P: Profecient, A: Advanced)

Program Learning Outcomes

Cont.

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|----|--|---|
| 1 | Evaluate clinical laboratory data by interpreting laboratory results and relating the data to various disease states. | I |
| 2 | apply principles of evidence-based medicine to determine clinical diagnoses. | I |
| 3 | apply the basic principles of gross and microscopic anatomy, physiology, biochemistry, immunology, microbiology/virology. | P |
| 4 | formulate and implement acceptable treatment modalities to various disease states. | P |
| 5 | use technology effectively in the delivery of instruction, assessment, and professional development. | I |
| 6 | exhibit essential employability qualities by demonstrating laboratory safety, analyzing laboratory results, and displaying professional conduct. | P |
| 7 | exhibit organizational skills, accountability, and ethical behavior. | P |
| 8 | apply skills needed in operating laboratory equipment for testing, assessing quality assurance for lab equipment, and adhering to standard safety practices in the laboratory environment. | A |
| 9 | apply problem-solving and decision-making skills. | I |
| 10 | apply and promote health policies and regulatory standards in the field career. | P |
| 11 | develop research in the field of medical analysis using qualitative and quantitative methods. | P |

Prerequisites (Course Reading List and References):

Basic and Advanced Laboratory Techniques in Histopathology and Cytology" by Pranab Dey

Student's obligation (Special Requirements):

Textbook: Bancroft's Theory and Practice of Histological Techniques

Course Book/Textbook:

Basic and Advanced Laboratory Techniques in Histopathology and Cytology" by Pranab Dey

Other Course Materials/References:

Textbook: Bancroft's Theory and Practice of Histological Techniques

Teaching Methods (Forms of Teaching):

Lectures, Presentation, Seminar, Assignments, , ,

COURSE EVALUATION CRITERIA

Method	Quantity	Percentage (%)
Seminar	1	10
Attendance	1	5
Homework	1	5
Project	1	10
Midterm Exam	1	30
Final Exam	1	40
Total		100

Examinations: Essay Questions, Short Answers, Matching, , ,

Extra Notes:

ECTS (ALLOCATED BASED ON STUDENT) WORKLOAD

Activities	Quantity	Workload Hours for 1 quantity*	Total Workload
Theoretical Hours	16	3	48
Practical Hours	16	0	0

Final Exam	1	7	7
Seminar	1	10	10
Attendance	1	5	5
Homework	1	2	2
Project	1	10	10
Midterm Exam	1	10	10
Total Workload			92
ECTS Credit (Total workload/25)			3.68

Peer review

Signature:
Name:
Lecturer

Signature:
Name:
Head of Department

Signature:
Name:
Dean