



COURSE SPECIFICATION

Immunohistochemistry

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course.	Master degree of Histology & Cytology
(2) Department offering the programme.	Histology & Cell biology
(3) Department responsible for teaching the course.	Histology & Cell biology
(4) Part of the programme.	Second part Semester-4
(5) Date of approval by the Department's council	30/4/2016
(6) Date of last approval of programme specification by Faculty council	9-8-2016
(7) Course title.	Histology & Cell biology
(8) Course code.	HIST 502 IH
(9) Total credit.	2 hours

(10) Total teaching hours.	30 (28 lecture–2 seminars)
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(B) Professional information

(1) Course Aims.

The broad aims of the course are as follows.

The aim of this course is to prepare the candidate to be professional in the field of Immunohistochemistry through increasing his/ her awareness about:

1. The various techniques that are used in the preparation of immunohistochemistry (IHC) stains.
2. Principals of sample handling for IHC staining procedures
3. Appropriate quality control (QC) used while performing IHC procedures.
4. Role of IHC in the Histology Laboratory, advanced histopathological diagnosis and medical research.

(2) Intended Learning Outcomes (ILOs):

Intended learning outcomes (ILOs); Are four main categories: knowledge & understanding to be gained, intellectual qualities, professional/practical and transferable skills.

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

- A. 1- Identify the immunohistochemistry (IHC), antigens, antibodies, antigen-antibody binding.
- A. 2- Classify the immunohistochemical Methods.
- A. 3- Discuss the tissue and cytological preparation for immunohistochemical stains.
- A. 4- Recognize the different antigen retrieval techniques.
- A. 5- Demonstrate the methods of blocking of non Specific site during immunohistochemical stains.
- A. 6- Discuss the immunohistochemistry Staining procedures.
- A. 7- Explain the immuno-Fluorescence techniques.
- A. 8- Describe the immuno-Electron microscopic techniques.
- A. 9- Enumerate the factors affecting the reliability of IHC stain.
- A. 10- Demonstrate the role of IHC in the histology Laboratory, advanced histopathological diagnosis and medical research.

B- Intellectual skills

- B 1 Detect the proper method that can be used during Immunohistochemical research
- B2- Recognize the positive control of choice to use during immunohistochemical staining

Course content.

Subjects	Lectures	Seminars	Total Teaching Hours
• Introduction and Immunohistochemical theory	2		2
• Immunohistochemical Methods	3	1	4
• Sample preparation for immunohistochemical stains	4		4
• Antigen Retrieval techniques	3	1	4
• Methods of blocking of non specific site during IHC	2		2
• Immunohistochemistry (IHC) Staining procedures	2		2
• Immuno-Fluorescence techniques	4		4
• Immuno-Electron microscopic techniques	2		2
• Appropriate quality control used while performing IHC procedures	4		4
• Application of IHC in the histology Laboratory, advanced histopathological diagnosis and medical research	2		2
Total	28	2	30

(3) Teaching methods.

- 4.1. Lectures
- 4.2. problem-based exercises
- 4.3. Seminars
- 4.4. Self learning (internet search for specific topics)

(4) Assessment methods.

- 5.1. Assessment MCQs exam..... 20 Marks: 20%
- 5.2. Final Written exam..... 80 Marks: 80%
- 5.3. Other assessment without marks: seminars

(5) References of the course.

6.1: Text books:– Theory and Practice of Histological Techniques
–Modern Immunohistochemistry

6.2: Journals: Applied Immunohistochemistry & Molecular Morphology
Journal, Journal of Biomedical Science, J Histochem Cytochem, Egyptian
Journal of Histology and Cytology

6.3: Websites: www.ihcworld.com/introduction.htm,
<http://www.ncbi.nlm.nih.gov/pubmed/?term=immunohistochemistry+review>
<http://www.labce.com/immunohistochemistry-ihc-basics-in-histology.aspx>

(6) Facilities and resources mandatory for course completion.

7.1–Data show for power point presentations

7.2–Library

7.3–Computers

7.4–Internet connection

Course coordinator: – Dr. Zenab Sakkara

– Dr. Amal Mohamed Moustafa

Head of the department: Dr. Salwa Gawish

Date: