كلية الطب
وحدة ضمان الجودة

Faculty of Medicine
Quality Assurance Unit

Medical Doctorate (M.D.) Degree Program and Courses Specifications for Pathology

(According to currently applied Credit point bylaws)

Department of Pathology
Faculty of medicine
Assiut University
2022-2023

Contents

M. D. degree of Pathology

A. Basic Information

- **Program Title: … M.D degree of Pathology**
- **Nature of the program: Single.**
- **Responsible Department: Department of Pathology**
- **Program Director (Head of the Department):**

Prof Dr Dalia El Sers

- **Coordinator (s):**
- **Principle coordinator: Dr Noha Abd El Rahim Abu Elhagag**
- **Internal evaluators:**

Prof Dr Nermeen Abd elmoneim Kamel

- **External evaluator (s):**

Prof Dr Hussein Abd El Moneam: Al Azhar University

- **Date of Approval by the Faculty of Medicine Council of Assiut University: 23-9-2014**
- **Date of most recent approval of program specification by the Faculty of Medicine Council of Assiut University: 27-11-2022**
- **Total number of courses: 5 courses + 2 elective courses**

B. Professional Information

1- Program aims

1-Aquire in-depth experience of the diagnostic techniques required to become technically competent in practical work, and to master the underlying analytical and clinical principles.
2-Demonstrate the diagnostic skills required for ethical and effective patient care and will demonstrate effective consultation skills with respect to patient care, education and legal opinions. The level of knowledge in all areas will reflect the needs of community or regional laboratories.
3 - Develop a systematic understanding and critical awareness of, and high level of skills in specialist areas of pathology, either histopathology or cytopathology and acquire management skills to lead a department providing an effective service.
4- Enable candidates to start professional careers as consultant in Egypt in pathology but recognized abroad.
5- Acquire high level of training in the communication and teaching skills necessary for effective practice.
6- Acquire life-long habits of reading, literature searches, and consultation with colleagues, attendance at scientific meetings, and the presentation of scientific work that is essential for continuing professional development.
7- Enable to work effectively, in partnership with other health professionals, support staff, patients and service users.
8- To enable candidates to perform high standard scientific medical research and how to proceed with publication in indexed medical journals.
9- To enable candidates to master different research methodology and do their own.

2- Intended learning outcomes (ILOs) *for the whole program*:

2/1Knowledge and understanding:

A. Demonstrate in-depth knowledge and understanding of theories, basics and updated biomedical clinical epidemiological and socio behavioral science relevant to Pathology as well as the evidence – based application of this knowledge to practice including patient care.
B. Explain basics, methodology, tools and ethics of scientific medical, clinical research.
C. Mention ethical, medico logical principles and bylaws relevant to his practice in the field of Pathology.
D. Mention principles and measurements of quality assurance and quality improvement in medical education and in practice of the concerned Pathology.
E. Mention public health and health policy issues relevant to this speciality and principles and methods of system –based improvement of related to his practice in the field of Pathology.

2/2- Intellectual

A. Apply the basic and clinically supportive sciences which are appropriate to pathologic related conditions / problem / topics.
B. Demonstrate an investigatory and analytic thinking "problem – solving "approaches to relevant situations related to Pathology.
C. Plan research projects.
D. Write scientific paper.
E. Participate in clinical or laboratory risk management activities as a part of clinical governance.
F. Plan for quality improvement in the field of medical education and practice in Pathology.

G. Create / innovate plans, systems, and other issues for improvement of performance in his practice.

H. Present and defend his / her data in front of a panel of experts.

I. Formulate management plans and alternative decisions in different situations in the field of Pathology.

2/3 skills

2/3/1 practical skills

A. Master practical skills relevant to Pathology for all common techniques and /or experiments.
B. Master practical skills with non-routine, laboratory skills and techniques and under increasingly difficult circumstances, while demonstrating, appropriate and effective competency
C. Master proficiency in performing available complex laboratory techniques and handling unexpected complications in pathological diagnosis.
D. Gather essential and accurate information about practical/laboratory skills essential for pathologist.
E. Make informed decisions about diagnostic laboratory tests in pathology related conditions.
F. Develop and carry out diagnostic and teaching plans for all Pathology related conditions / skills.
G. Use information technology to support practical decisions and students education in pathology related practical situations.
H. Provide health care or any relevant services aimed at preventing the Pathology related health problems.
I. Lead other professionals, including those from other disciplines, to provide practical/laboratory-focused care in Pathology related conditions.
J. Write competently all forms of professional reports (lab reports, experiments reports,) including reports evaluating these charts and sheets.

2/3/2 General skills

Including:

- Practice-based Learning and Improvement
- Interpersonal and Communication Skills
- Professionalism
- Systems-based Practice

Practice-Based Learning and Improvement

A. Demonstrate the competency of continuous evaluation of different types of practice including service provision to patients in the different areas of his field.
B. Appraise scientific evidence.
C. Continuously improve his practice including service provision to patients based on constant self-evaluation and life-long learning.
D. Participate in medical audits and research projects.
E. Practice skills of evidence-based Medicine (EBM).
F. Educate and evaluate students, mentors and other health professionals.
G. Design logbooks.
H. Design guidelines and standard protocols for different techniques and procedures.
I. Apply knowledge of study designs and statistical methods to the appraisal of Pathology related studies
J. Use information technology to manage information, access on- line medical information; for the important topics.

Interpersonal and Communication Skills

K- Master interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals, including:-

- Present a case.

- Write a consultation note.
- Inform patients of a diagnosis and therapeutic plan, Completing and maintaining comprehensive timely and legible medical records.
- Teamwork skills.

L- Create and sustain a therapeutic and ethically sound relationship with patients.

M. Elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.

N. Work effectively with others as a member or leader of a health care team or other professional group.

Professionalism

O. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society.

P. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.

Q. Demonstrate sensitivity and responsiveness to others' culture, age, gender, and disabilities.

Systems-Based Practice

R. Work effectively in academic and health care delivery settings and systems related to pathology including good administrative and time management.

S. Practice cost-effective services provision and resource allocation that does not compromise quality.

T. Advocate for quality patient care and assist patients in dealing with system complexities.

U. Design, monitor and evaluate specification of under and post graduate courses and programs.

V. Act as a chairman for scientific meetings including time management

3- Program Academic Standards (Annex 2)

Academic standards for Medical Doctorate (MD) degree in Pathology

Assiut Faculty of Medicine developed MD degree programs' academic standards for different academic specialties.
In preparing these standards, the General Academic Reference Standards for post graduate programs (GARS) were adopted. These standards set out the graduate attributes and academic characteristics that are expected to be achieved by the end of the program.
These standards were approved by the faculty council on 3/2010. These standards were revised and approved without changes by the Faculty Council on 23-9-2014.These standards were recently revised and reapproved without changes by the Faculty Council on 27-11-2022.

4- Program External References (Benchmarks)

1. ACGME (Accreditation Council for Graduate Medical Education).
http://www.acgme.org/acWebsite/navPages/nav_Public.asp
2. Royal collage of Pathology, England
http://www.rcpath.org/

5- Program Structure

A. Duration of program: 4-6 years

B. Structure of the program:

Total number of credit points: = 420 CP
Master degree: 180 credit point
Didactic #: 37 CP (23.1%), practical 123 (76.9%), total 160 CP
Thesis and researches: 80 CP (33.3%)
First Part

Didactic 10 (100%), practical 0 (0 %), total 10 CP
Second part
Didactic 24, (16.3 %), practical 123 (83.7 %), total 147 CP
Elective courses: 3 credit points
#Didactic (lectures, seminars, tutorial)
According the currently applied bylaws:
Total courses: 160 credit point
Compulsory courses: 157 credit point (98.1%)
Elective courses: 3 credit point (1.9%)

	Credit points	% from total
Basic science courses	10	4.1%
Humanity and social courses	3	1.2%
Speciality courses	147	61.3%
Others (Computer, …)	-	0
Field training	123	51.3%
Thesis	40	16.7%
2 published researches	40	16.7%
Master degree	180	

Program Time Table

A-Duration of program 4 years divided into

- **Part 1**

  Program-related basic science courses

  Program-related basic science courses

  - Medical statistic
  - Research methodology
  - Medicolegal Aspects and Ethics in Medical Practice and Scientific Research

  Students are allowed to sit the exams of these courses after 6 months from applying to the M D degree.

  Students are allowed to sit the exams of the remaining basic science courses after 12 months from applying to the MD degree.

Thesis and 2 published researches

For the M D thesis;

MD thesis subject should be officially registered within 1 year from application to the MD degree,

Discussion and acceptance of the thesis should not be set before 24 months from registering the M D subject;

It could be discussed and accepted either before or after passing the second part of examination

Two elective courses can be set during either the 1st or 2nd parts.

The students pass if they get 50% from the written exams and 60% from oral exams, 60% from clinical/practical exams of each course and 60% of summation of the written exams, oral and clinical /practical exams of each course

Total degrees 1700 marks.

500 marks for first part

1200 for second part

Written exam 40% - 70%.

Clinical /practical and oral exams 30% - 60%.

Curriculum Structure: (Courses):

Levels and courses of the program:

Courses and student work load list	Course Code	Core Credit points		
		didactic #	training	total
First Part				
Basic science courses (10 CP) Course 1: Medical Statistics Course 2: Research Methodology Course 3: Medicolegal Aspects & Ethics in Medical Practice and Scientific Research Course 4: Pathology 1 Unit 1:Immunohistochemisty Unit 2: Basics of molecular Pathology	 FAC309A FAC309B FAC310C PAT305A	 **1** **1** **1** 3 4	 	 1 1 1 3 4
Elective courses*	3 CP			
- Elective course 1 - Elective course 2				
Thesis	40 CP			
Published researches**	40 CP			
Second Part	Speciality courses 24 CP Speciality Practical Work (log Book) 123 CP			
Speciality Courses Course 5 Pathology 2	**PAT305B**	**24**		**24**
Speciality Practical Work (123 CP) Pathology 2	**PAT305B**		**123**	**123**
Total of second part		**24**	**123**	**147**

#Didactic (lectures, seminars, tutorial)

* Elective courses can be taken during either the 1st or 2nd parts.

Student work load calculation:

Work load hours are scheduled depending on the type of activities and targeted competences and skills in different courses

Elective Courses#:

- Advanced medical statistics.
- Evidence based medicine.
- Advanced infection control.
- Quality assurance of medical education.
- Quality assurance of clinical practice.
- -Hospital management

Two of the above mentioned courses are prerequisites for fulfillment of the degree.

3. Thesis / Researches:

40 CP are appointed to the completion and acceptance of the thesis.

**Another 40 points are appointed to acceptance or publication of one research from the thesis in international indexed medical journals or publication of 2 researches from the thesis in local specialized medical journals.

Unit	Level (Year)	Credit points		
		Didactic	Training	Total
Unit 1: General Pathology	1	3	10	13
Unit 2 :GIT and Liver pathology	1,2,3,4	3	15	18
Unit 3: Pathology of female genital organs and breast	1,2,3,4	3	15	18
Unit 4: Genitourinary Pathology	1,2,3,4	3	15	18
Unit 5: Head and Neck Pathology	1,2,3,4	2	15	17
Unit 6 : Pathology of intrathoracic organs	1,2,3,4	2	15	17
Unit 7: Haematopoietic and lymphatic Pathology	1,2,3,4	2	10	12
Unit 8 : Soft tissue and Bone Pathology	1,2,3,4	2	10	12
Unit 9 : Neuropathology	1,2,3,4	1	5	6
Unit 10 : Endocrine organs pathology	1,2,3,4	1	5	6
Unit 11: DermatoPathology	1,2,3,4	1	4	5
Unit 12: Cytology	1,2,3,4	1	4	5
Total		24	123	147

6. Courses Contents (Annex 1)

The competency based objectives for each course/module/rotation are specified in conjunction with teaching/training methods, requirements for achieving these objectives and assessment methods.

See Annex 1 for detailed specifications for each course/ module
Annex 6 II: Program Matrix

7-Admission requirements

- **Admission Requirements (prerequisites) if any :**
- **Admission Requirements (prerequisites) if any :**

I. General Requirements:

- Master degree in the speciality.

II. Specific Requirements:

- Fluent in English (study language)

VACATIONS AND STUDY LEAVE

The current departmental policy is to give working candidate 2 week leave prior to first/ second part exams.

FEES:

As regulated by the postgraduate studies rules and approved by the faculty vice dean of post graduate studies and the faculty and university councils.

8-Progression and completion requirements

- Examinations of the first part (Medical statistic, Research methodology and Medicolegal Aspects and Ethics in Medical Practice and Scientific Research) could be set at 6 months from registering to the MD degree.
- Students are allowed to sit the exams of the remaining essential courses of the first part after 12 months from applying to the MD degree.
- Examination of the second part cannot be set before 4 years from registering to the degree.

- Discussion of the MD thesis could be set after 2 years from officially registering the MD subject, either before or after setting the second part exams.
- The minimum duration of the program is 4 years.

The students are offered the degree when:

1. Passing the exams of all basic science, elective and speciality courses of this program as regulated by the post graduates approved rules by the faculty council.
2. Completing all scheduled CP and log book (minimum 80%).
3. Discussion and acceptance of the MD thesis.
4. Acceptance or publication of one research from the thesis in international indexed medical journals or publication of 2 researches from the thesis in local specialized medical journals.

9-Program assessment methods and rules (Annex IV)

Method	ILOs measured
Written examinations: Structured essay questions Objective questions MCQ Problem solving	K & I
Practical : OSPE	K ,I, P &G skills
Structured oral	K ,I &G skills
Logbook assessment	All
Research assignment	I &G skills

Weighting of assessments:

Courses		Degrees			
	Course code	Written Exam	Oral and/or Practical l Exam		Total
First Part					
Basic science courses:					
Medical Statistics	FAC309A	35	15		50
Research Methodology	FAC309B	35	15		50
Medicolegal Aspects & Ethics in Medical Practice and Scientific Research	FAC310C	35	15		50
Course 4 Pathology 1 Immunohistochemisty &Basics of molecular Pathology	PAT305A	175	85	90	350
Total		280	130	90	500
Second Part					
	Course code	written	oral	Practical	Total
Speciality Courses Pathology 2 Paper 1 Paper 2 Paper 3 Paper 4	PAT305B	480 120 120 120 120	300	420	1200
Total of the second part					1200
Elective course 1		50		50	100
Elective course 2		59		50	100

*** 25% of the oral exam for assessment of logbook**

500 marks for first part

1200 for second part

Written exam 44.7% (760 marks).

Clinical/practical and oral exams 55.3 % (940 marks)

Two elective courses 200

Examination system:

➢ First part:

- Written exam 2 hours in Medical Statistics and Research Methodology + oral examination
- Written exam 1 hours in Medicolegal Aspects and Ethics in Medical Practice and Scientific Research + oral examination
- Written exam 3 hours in Pathology 1 + oral & Practical examination

➢ Second part:

- Written exam four paper 3 hours for each in Pathology 2 + oral & Practical examination

➢ Elective courses

- Written exam one paper 1 hour in Elective course 1 + Oral & Practical exam
- Written exam one paper 1 hour in Elective course 2 + Oral & Practical exam

10-Program evaluation

By whom	method	sample
Quality Assurance Unit	Reports Field visits	#
Internal evaluators	Report	1
External Evaluator (s):According to department council External Examiner (s): According to department council	Reports Field visits	#
Stakeholders	Reports Field visits Questionnaires	#
Senior students	Questionnaires	#
Alumni	Questionnaires	#

#Annex 5 contains evaluation templates and reports (joined in the departmental folder)

11-Declaration

We certify that all of the information required to deliver this program is contained in the above specification and will be implemented.
All course specifications for this program are in place.

Contributor	Name	Signature	Date
Program Principle Coordinator:	**Dr Noha Abd El Rahim Abulhagag**		**4/2022**
Head of the Responsible Department (Program Academic Director):	**Prof Dr. Dalia Elsers**		**4/2022**

Annex 1, Specifications for Courses / Modules

Annex 1: specifications for courses/ modules

First Part

1) **Course 1: Medical Statistics**
2) **Course 2: Research Methodology**
3) **Course 3: Medicolegal Aspects and Ethics in Medical Practice and Scientific Research**
4) **Course 4: Pathology 1**

Unit 1: Immunohistochemisty

Unit 2: Basics of molecular Pathology

Course 1: Medical statistics

Name of department: Public Health and Community Medicine

Faculty of medicine

Assiut University

2022-2023

1. Course data

- **Course Title: Medical statistics**
- **Course code: FAC309A**
- **Specialty: offered to all clinical and academic specialties**
- **Number of credit points: 1 credit point**
- **Department (s) delivering the course:** Pubic Health and Community Medicine
- **Coordinator (s):**
  - Course coordinator: Prof. Farag Mohammed Moftah
  - Assistant coordinator (s): Prof. Medhat Araby Khalil Saleh
- Date last reviewed: January -2022
- **Requirements (pre-requisites) if any:**
  - Completed Master degree in any of the academic or clinical departments of Medicine.

2. Course Aims

Enable gradute students to use statistical principles to improve their professional work and develop the concept of critical interpretation of data

3. Intended learning outcomes (ILOs):To be able to use statistical principals to manage data

A knowledge and understanding

ILOS	Methods of teaching/ learning	Methods of Evaluation
A. List the types of variables	Lecture and discussion	Written examination
B. Identify the methods of data collection	Lecture and discussion	Written examination
C. Describe the different sampling strategies	Lecture and discussion	Written examination
D. Identify types of tabular and graphic presentation of data	Lecture and discussion	Written examination
E. Identify measures of central tendency and dispersion	Lecture and discussion	Written examination
F. Identify the characters of normal distribution curve.	Lecture and discussion	Written examination
G. Detect the difference between parametric and non-parametric tests	Lecture and discussion	Written examination
H. Identify the concepts of correlation and regression	Lecture and discussion	Written examination

B. intellectual

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Describe the normal curves.	Lecture& Discussions	Written examination
B. Describe and summarize data	Lecture& Discussions	Written examination
C. Select the proper test of significance	Lecture& Discussions	Written examination
D. Interpret the proper test of significance	Lecture& Discussions	Written examination
E. Describe the difference between parametric and non-parametric tests	Lecture& Discussions	Written examination

C. Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Design data entry files.	Tutorial on SPSS	Assignments SPSS exam
B. Validate data entry.	Tutorial on SPSS	Assignments SPSS exam
C. Manage data files.	Tutorial on SPSS	Assignments SPSS exam
D. Construct tables and graphs.	Tutorial on SPSS	Assignments SPSS exam
E. Calculate measures of central tendency and dispersion.	Tutorial on SPSS	Assignments SPSS exam
F. Select, apply and interpret the proper test of significance.	Tutorial on SPSS	Assignments SPSS exam

D general skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Appraise scientific evidence	Discussions	Research assignment
B. Use information technology to manage information, access on-line medical information; for the important topics.	tutorial	Research and audits' assignment

4. Course contents (topic s/modules/rotation
Course Matrix

Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skills C	General Skills D
Introduction	A-F	A-D	-	A&B
Tables and graphics	D	A-D	-	A&B
Sampling	C	-	-	A&B
Methodology of data collection	B	-	-	A&B
Type of variables	A	-	-	A&B
Proportion test& Chi-square test	E,F	C&D	-	A&B
Student T test& Paired T test	E,F	C&D	F	A&B
ANOVA test	E,F	C&D	F	A&B
Non parametric tests	E,F	C&D	F	A&B
Discrimination analysis factor analysis	E,F	C&D	-	A&B
SPSS Introduction	A-F	A-D	-	A&B
Data entry and cleaning of data	A	A-D	A-C	A&B
Transforming of variables	A	A&B	A-C	A&B
Descriptive statistics	D	A-D	D&E	A&B
Graphic presentation	D	A&B	D	A&B
Chi square and interpretation of results	E,F	C&D	F	A&B
Correlation Regression	E,F	C&D	F	A&B
Multiple and logistic Regression	E,F	C&D	F	A&B

5. Course Methods of teaching/learning

1. Lectures
2. Assignments
3. Discussions
4. Exercises
5. Tutorial on SPSS v.16

6. Course assessment methods:

i. Assessment tools:

1. Attendance and active participation
2. Assignment
3. Practical SPSS examination
4. Written exam

ii. Time schedule: After 6 months from applying to the M D degree.

iii. Marks: 50 (35 for written exam and 15 for practical exam).

7. List of references

i. Lectures notes

Department lecture notes

ii. Essential books

- Medical Statistics: Book by Ramakrishna HK 2016
- Janet Peacock and Philip Peacock. Oxford Handbook of Medical Statistics (second edition.) Publisher: Oxford University Press, Print Publication Date: Nov 2010 Print ISBN-13: 9780199551286, Published online: Jun 2011. DOI: 10.1093/med/9780199551286.001.0001
- Leslie E. Daly MSc, PhD, Hon MFPHM,, Geoffrey J. Bourke MA, MD, FRCPI, FFPHM, FFPHMI, Interpretation and Uses of Medical Statistics, Fifth Edition, First published:1 January 2000, Print ISBN:9780632047635 |Online ISBN:9780470696750 |DOI:10.1002/9780470696750
- Marcello Pagano, Kimberlee Gauvreau: Principles of Biostatistics second edition published in 2000 by Brooks/Cole and then Cengage Learning. CRC Press, Feb 19, 2018 - Mathematics - 584 pages.

Iii- Recommended books

- Ji-Qian Fang (Sun Yat-Sen University, China) Handbook of Medical Statistics: https://doi.org/10.1142/10259 | September 2017.Pages: 852
- Robert H. Riffenburgh: Statistics in Medicine 4th Edition (2020). EvidenceEvidence Based Medicine How to practice and teach EBM.
- Discovering Statistics Using IBM SPSS Book by Andy Field, 2013.

iii. Periodicals, Web sites, etc

iv. **Periodicals , etc** Statistics in Medicine - Wiley Online Library

v. **Web sites** https://www.phc.ox.ac.uk/research/medical-statistics

8. Signatures

Course Coordinator: Farag Mohammed Moftah	**Head of the Department:** Prof. Eman Morsy Mohamed
Date: 10-1-2022	**Date**: 10-1-2022
Associated Coordinator: Prof. Medhat Araby Khalil Saleh	
Date: 10-1-2022	

Course 2: Research Methodology

Name of department: Public Health and Community Medicine Faculty of medicine
Assiut University
2021-2022

1. Course data

- **Course Title: Research methodology**
- **Course code: FAC309B**
- **Specialty: Offered to all clinical and academic specialties**
- **Number of credit points: 1 credit point**
- **Department (s) delivering the course: Department of public health**
- **Coordinator (s):**
  - **Course coordinator:** Prof. Mahmoud Attia

Assistant coordinator (s): Prof. Ekram Mohamed

Prof. Medhat Araby Khalil

- **Date last reviewed:** January 2022
- **Requirements (prerequisites) if any:**
  - **Completed Master degree in any of the academic or clinical departments of Medicine.**

2. Course Aims

To provide graduate students with the skills of:

- planning and implementing sound research
- writing a scientific research proposal

3. Intended learning outcomes (ILOs)

A knowledge and understanding

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Explain differences between different study designs.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments Practical exam
B. Identify sources and types of bias in research.	Lecture and discussion Practical sessions	Written exam Log book assignments Practical exam
C. Identify methods of data collection.	Lecture and discussion Practical sessions	Written exam Log book assignments
D. Select and design valid measurement tools for research.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments Practical exam
E. Explain ethical issues in conducting research on human subjects.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments
F. List the steps involved in proposal writing.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments Practical exam
G. Identify a research problem within a conceptual framework.	Lecture Discussion	Written exam Log book assignments

		Practical exam
H. Use the web sources to do a literature search	Practical tutorial on web	Log book assignment
I. Describe the rules of authorship in scientific writing.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments
J. Select the appropriate study design for the research question.	Lecture Practical sessions	Written exam Practical exam
K. Minimize bias in designing research.	Lecture	Written exam
L. Screening & theoretical background	Lectures	Written exam Practical exam
M. Mention the basic ethics for conducting a research and medicolegal principles relevant to data confidentiality.	lectures seminar	Written exam Practical exam

B. intellectual

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A- Apply basic science & knowledge for appraising scientific literature.	Discussions &seminars	Written exam Practical exam
B- Design research and present study data, in seminars.	lecture seminar	log book assignments
C- Design suitable epidemiological study.	lecture seminar	log book assignments
D- Design strategies for resolving ethical concerns in research, law, and regulations.	lecture Workshops	Written exam log book assignments
E- Apply coherently synthesize ideas and integrate lateral and vertical thinking.	lecture Workshops	log book assignments
F- Evaluate screening tests and interpreting their uses in different population.	lecture	Written exam Practical exam

C. Practical skills

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A- Conduct epidemiological studies, screening and surveys.	lectures seminar	written exam log book assignments
B- Identify steps required in fielding the study.	Lecture	Assignments Written exam
C- Managing data collection team.	lectures seminar	log book assignments
D- Identify steps required for calculation sensitivity, specificity, positive predictive value, negative predictive value, accuracy of a screening test.	Lecture Practical sessions	Assignments Written exam Practical exam
E- Be able to define and apply the epidemiologic criteria of causality and be able to distinguish between a measure of association and evidence of causality.	Lecture Practical sessions	Assignments Written exam Practical exam
F- Synthesize information from multiple sources for research writing and the ability to perform paper critique .	Lecture Practical sessions	Assignments Written exam Practical exam
G- Identify bias and confounding in epidemiological study designs, their types and ways to control them in various types of biases.	Lecture Practical sessions	Assignments Written exam Practical exam

D General skills
Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A- Scientific paper and proposal writing skills: be able to write an introduction, objectives and the methodological section.	Tutorial	Written examination
B- Learn authorship ethical rules.	Tutorial	Written examination
C- Perform practice-based improvement activities using a systematic methodology (audit, logbook, critical appraisal)	- Lectures -Practical sessions - Discussion - Readings	critical appraisal
D- Appraise evidence from scientific studies(journal club)	- Lectures -Practical sessions - Discussion - Readings	critical appraisal
E- Conduct epidemiological studies, screening and surveys.	- Lectures -Practical sessions - Discussion - Readings	attendance and participation
F- Facilitate training of junior students and other health care professionals in different screening activities.	Field work Participation in projects	attendance and participation

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
G- Maintain ethically sound relationship with community members.	- Lectures -Practical sessions - Discussion - Readings	Written exams
H- Provide information using effective nonverbal, explanatory, questioning, and writing skills.	- Lectures -Practical sessions - Discussion - Readings	Written exams Practical exams
I- Present results of researches in seminars.	- Lectures -Practical sessions - Discussion - Readings	Log book assignments

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
J- Demonstrate respect, compassion, and integrity to the needs of society.	- Lectures - Discussion - Readings	Written exams
K- Manage potential conflicts of interest encountered by practitioners, researchers, and organizations.	- Lectures - Discussion - Readings	Written exams
L- Design strategies for resolving ethical concerns in research, law, and regulations.	Lectures - Discussion - Readings	Written exams Practical exams
M- Demonstrate ways to control for confounding in the analysis phase of a study	Lectures - Discussion - Readings	Written exams Practical exams
N- Demonstrate a commitment to ethical principles including confidentiality of participants' information and informed consent.	Lectures - Discussion - Readings	Written exams
O- Assess ethical considerations in developing communications and promotional initiatives.	- Lectures - Discussion - Readings	Written exams

4. Course contents (topic s/modules/rotation
Course Matrix

Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge A	**Intellectual B**	**Practical skills C**	**General Skills D**
Over view on research conduction and research ethics	A&E	A-D	A-C	C-G, I,L&M-O
How to write a research proposal	F,I	E	F	A-C&H
Observational study design	A& D	B & C	D	E & F
Experimental study design	A& D	B & C	B	E & F
Evaluation of diagnostic tests (Screening)	L	A	B& E	F
Systematic reviews and meta analysis	G, H & M	E& F	F	C, D
Confounding, bias & effect modification	B & K	D	E & G	M

5. Course Methods of teaching/learning:

1. Lectures
2. Assignments
3. Discussion
4. Exercises

6. Course assessment methods:

i. Assessment tools:

1. Attendance and participation
2. Log book assignments
3. Written examination
4. Practical examination

ii. Time schedule: After 6 months from applying to the M D degree.

iii. Marks: 50 (35 for written exam and 15 for practical exam).

7. List of references

i. Lectures notes

- Department lecture notes

ii. Essential books

- Research Design: Qualitative, Quantitative and Mixed Methods Approaches 4th Edition by John W. CreswellSAGE Publications, Inc; 4th edition (January 1, 2014)
- Research methodology: A step – by – step Guide for Beginners. Ranjit Kumar, 2020. Second edition https://books.google.com.eg/books?
- Medical Research Essentials Rania Esteitie, McGraw Hill Professional, third edition, Feb 5, 2014 - Medical - 104 pages
- Research Methodology in the Medical and Biological Sciences Petter Laake, Haakon Breien Benestad, Bjorn R. Reino Olsen, 4th edition , Academic Press, Nov 5, 2007 - Science - 512 pages

iv. Recommended books

- Research Methods in Education 7th Edition, by Louis Cohen, Lawrence Manion, Keith Morrison Publisher: Routledge; (April 22, 2011) www.routledge.com/textbooks/cohen7e.
- Research Methodology: A Practical and Scientific Approach Vinayak Bairagi, Mousami V. Munot · 2019, Research Methodology: A Practical and Scientific Approach - Google Books
- Based Medicine How to practice and teach EBM. David Sachett, Sharon E. Straus, W. Scott Richardson , William Rosenberg R.Brain Haynes
- Dissertation workshop open courseware JHSPH

8. Signatures

Course Coordinator: Prof.Mahmoud Attia	**Head of the Department:** Prof. Eman Morsy Mohamed
Date: 10-1-2022	**Date**: 10-1-2022

Course 3: Medicolegal Aspects and Ethics in Medical Practice and Scientific Research

Name of department: Forensic medicine and clinical toxicology
Faculty of medicine
Assiut University

1. Course data

- **Course Title: Medicolegal Aspects and Ethics in Medical Practice and Scientific Research**
- **Course code: FAC310C**
- **Speciality: All Academic Departments (1st part).**
- **Number of credit points: 1 credit point**
- **Department (s) delivering the course: Forensic Medicine and Clinical Toxicology**
- **Coordinator (s):**
  - **Course coordinator:** Prof. Ghada Omran
  - **Assistant coordinator (s)**. Prof. Zaghloul Thabet

- **Date last reviewed: 17/4/2022.**

- **Requirements (prerequisites) if any :**
  - **Completed Master degree.**

2. Course Aims

To describe the basic ethical and medicolegal principles and bylaws relevant to practice in the field of academic specialties

3. Intended learning outcomes (ILOs):

A. knowledge and understanding

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A. Mention medical ethics.	Lecture and discussion	Oral &Written exam
B. Explain ethics in research.(human and animal)	Lecture and discussion	Oral &Written exam
C. Mention medical laws.	Lecture and discussion	Oral &Written exam
D. List causes of medical responsibilities.	Lecture and discussion	Oral &Written exam

B. intellectual

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A-Design and present case , seminars in common problem In medical responsibilities, medical ethics and ethics in research-	Lecture and discussion	Oral &Written exam

C. Practical skills

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A. Write medical and legal reports.	Discussion	Discussion
B. Identify ethics in research.	Discussion	Discussion
C. Identify medical laws.	Discussion	Discussion
D. Identify medical responsibilities.	Discussion	Discussion

D. General skills

Practice-Based Learning and Improvement

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A. Make timely and legible medical records	Lecture and discussion	Global rating logbook
B. Acquire the teamwork skills	Lecture and discussion	Global rating logbook

4. Course contents (topic s/modules/rotation Course Matrix

Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skills C	General Skills D
1. Medical ethics	A,C,D	A	A,C,D	A,B
2. Ethics in research	B,C,D	A	B, ,C,D	A,B

5. Course Methods of teaching/learning:

1. Lectures.
2. Discussions.
3. Exercises.

6. Course assessment methods:

i. Assessment tools:

1. Written examination.
2. Attendance and active participation.
3. Oral examination.

ii. Time schedule: After 6 months from applying to the M D degree.

iii. Marks: 50 (35 for written exam and 15 for oral exam).

7. List of references

i. Lectures notes

- Course notes.
- Staff members print out of lectures and/or CD copies.

ii. Essential books

- Bernard Knight and Pekka Saukko (2015: Knight Forensic Pathology. Hodder Arnold press
- Goldfrank, Lewis R.; Howland, Mary Ann; Hoffman, Robert S.; Nelson, Ewis S.; Lewin, Neal A (2019): Goldfrank's Toxicologic Emergencies, 11th ed. McGraw Hill / Medical.
- Medical Ethics Manual. World medical association. Third edition 2015.
- Medical ethics and law. Dominic Wilkinson, 3rd edition 2019.

iii. Recommended books

- Biswas Gautam (2021): Review of Forensic Medicine & Toxicology. 5th ed. Jaypee Brothers Medical Pub.

iv. Journal and web site

- Journals of all Egyptian Universities of Forensic Medicine and Clinical Toxicology.
- All International Journals of Forensic Medicine and Clinical Toxicology which available in the university network at www.sciencedirect.com. As :
  - Forensic Science International Journal.
  - Toxicology Letter.

v. others

8. Signatures

Course Coordinator: **Prof. Ghada Omran**	**Head of the Department:** **Prof. Randa Hussein Abdelhady**
Date: 17-4-2022	**Date: 17-4-2022**

Course 4 Pathology I

Department of Pathology: **Pathology**
Faculty of medicine
Assiut University
2022-2023

1. Course data

- **Course Title:** Pathology 1
- **Course code:** PAT305A
- **Speciality:** Pathology.
- **Department (s) delivering the course: Department of Pathology**
- **Number of credit points: Didactic 7 point (100 %)**
- **Coordinator (s):**
  - **Course coordinator: Dr Noha Abd El Rahim**
  - **Assistant coordinator (s) Dr Heba El Deek**

- **Date last Reviewed: April 2022**
- **Requirements (prerequisites) if any :**

  According to regulatory roles
- **Requirements from the students to achieve course ILOs are clarified in the joining log book.**

2. Course Aims:

- Acquire the basics of preparation and staining techniques for common specimen types by immunohistochemistry and when to use them
- Acquire basic knowledge about molecular pathology and cytogenetics techniques
- Realize cost-benefit issues when considering the use of additional techniques.

Unit 1 Immunohistochemistry

A- Knowledge and Understanding

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A- Demonstrate principles& details of the following 1- The principles of immunohistochemical methods and when to resort to them. 2. The basics of preparation and staining techniques for common specimen types 3. The panels of antibodies for particular diagnostic applications 4. The pitfalls in diagnosis & limitations	--Didactic (lectures, seminars, tutorial)- Case study Departmental teaching sessions: These occur on a regular basis	Log book Written, oral examination
B. Mention the details of different diagnostic tools of diseases related to the course.	Didactic	Log book Written, and oral examination
C. State update and evidence based Knowledge related to the course: Role of immunohistochemistry and new markers available	Didactic	Log book Written, and oral examination

Unit 2—Basics of molecular Pathology

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A- Demonstrate principles of **- Basics of molecular Pathology** 1- Introduction, DNA structure, features and methods of analysis 2- PCR, principles, types and applications 3- Mutations, types and methods of detection 4- DNA microarray 5- Epigenetic changes in diseases and neoplasia 6- Applied molecular pathology in diseases and cancers **Basics of cytogenetics** 1) Introduction, chromosomal structure and morphology and preparation 2) Chromosomal aberrations 3) FISH, principles and applications	--Didactic (lectures, seminars, tutorial) -Case study	book Written and oral examination
B. State update and evidence based Knowledge related to the course: Applied chromosomal analysis in diseases and cancer	--Didactic (lectures, seminars, tutorial) - journal club,	Written and oral examination

B. Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Apply the basic (Imunohistochemistry) supportive sciences which are appropriate to Pathology related problems.	-Didactic (lectures, seminars, tutorial)	-Written and oral examination - Log book
B. Demonstrate an investigatory and analytic thinking (problem solving) approaches to common clinical situations related to Immunohistochemistry.		

C-Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Perform the following : preparation and staining techniques for common specimen types	-Observation and supervision -Written and oral communication	Oral exam Logbook Practical exam

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Use information technology to manage information, access on-line medical information; and support their own education	-Observation and supervision -Written and oral communication	Oral exam Logbook

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
B. Write a report in common condition mentioned in A.A	-Clinical round -Seminars -Lectures	-Log book -Chick list Oral exam

Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
C. Demonstrate a commitment to ethical principles.	- Observation and supervision Written & oral communication	Logbook Oral Exam

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D. Work effectively in different health care delivery settings and systems.	-Observation -Senior staff experience	-360o global rating

4. Course contents (topic s/modules/rotation
Course Matrix

Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge A	**Intellectual** B	**Practical skills** C	**General Skills** D
Unit 1 Immunohistochemistry				
Basics of molecular Pathology 1- Introduction, DNA structure, features and methods of analysis 2- PCR, principles, types and applications 3- Mutations, types and methods of detection 4- DNA microarray 5- Epigenetic changes in diseases and neoplasia 6- Applied molecular pathology in diseases and cancers	A	A&B	A	A-D
Basics of cytogenetics 1) Introduction, chromosomal structure and morphology and preparation 2) Chromosomal aberrations FISH, principles and applications	A	A&B	A	A-D
Applied chromosomal analysis in diseases and cancer	B	A&B	A	A-D

Unit 2 Basics of molecular Pathology				
1- The principles of immunohistochemical methods and when to resort to them.	A	A&B	A	A-D
2. The basics of preparation and staining techniques for common specimen types	A	A&B	A	A-D
3. The panels of antibodies for particular diagnostic applications	A	A&B	A	A-D
4. The pitfalls in diagnosis & limitations	A	A&B	A	A-D

5. Course methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Observation and supervision
3. Written & oral communication
4. Senior staff experience
5. Case study

6. Course methods of teaching/learning: for students with poor achievements

Extra didactic (lectures, seminars, tutorial)

7. Course assessment methods:

i. Assessment tools:

1. Written , oral Practical examination
2. Log book

ii. Time schedule: After 12 months from applying to the M D degree.

iii. Marks: 350

8. List of references

i. Lectures notes

ii. Essential books

- KUMAR, V., COTRAN, R.S., and ROBBINS, S.L. Robbins Basic Pathology. 10th ed. Saunders Publisher (2017)

iii. Recommended books

- Rosai and Ackerman's Surgical Pathology Juan Rosai, Mosby 2018
- Sternberg's Diagnostic surgical Pathology 4th edition, Lippincott Williams and Wilkins 2021

iv. Periodicals, Web sites, … etc

- Human pathology
- Histopathology
- American Journal of surgical pathology

Web sites

- http:// http://www.pathmax.com/
- http://www-medlib.med.utah.edu/WebPath/LABS/LABMENU.html#2
- http://www.med.uiuc.edu/PathAtlasf/titlePage.html
- http://www.medscape.com/pathologyhome
- http://pathology2.jhu.edu/cytopath/masterclass/Homepage.htm
- http://www.gotpath.com/

Course Coordinator	
Course Coordinator: : Dr Noha Abd El Rahim	**Head of the Department: Prof Dr Dr Dalia Elsers**
Date: 4/2022.	**Date: 4/2022**

Second Part

Course 5 Pathology 2

Department of Pathology: Pathology
Faculty of medicine
Assiut University
2022-2023

1. Course data

- **Course Title: Pathology 2**
- **Course code: PAT305B**
- **Speciality: Pathology.**

- **Department (s) delivering the course: Department of Pathology**
- **Number of credit points:** 147 credit point - didactic 24 credit point (16.3%) - practical 123 credit point (83.7%)

- **Coordinator (s):**
  - **Course coordinator:** Dr Noha Abd El Rahim
  - **Assistant coordinator (s)** Dr Heba El Deek

- **Date last reviewed: April 2022**
- **Requirements (prerequisites) if any :**
  According to regulatory roles
- **Requirements from the students to achieve course ILOs are clarified in the joining log book.**

2. Course Aims:

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

- Provide consultant opinion in histopathology.
- Acquire Professional experience of the diagnostic techniques required to become technically competent in practical work, and to master the underlying analytical and clinical principles.
- Provide the indepth knowledge for each diseases process within the following eight categories: Epidemiology, aetiology, pathogenesis, clinical features, pathological features (macroscopic and microscopic, natural history, management options, and major complications of therapy.
- Integrate clinical information and microscopic findings or other investigations into diagnosis.
- Be able to draw essential conclusions from these gross and microscopic findings.
- Acquire experience of research and development projects
- Realize cost-benefit issues when considering the use of additional techniques.
- Be able to diagnose cytological materials and ability to use this diagnostic information in a clinical setting.
- Write an accurate report that gives clinicians the information needed for management.

3. Intended learning outcomes (ILOs):

Unit 1:
(General Pathology)

A- Knowledge and Understanding

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A. Demonstrate details of : -Cellular adaptation cell injury and cell death cell death - Acute and chronic inflammation and repair - Heamodynamic disorders - Neoplasia and tumors - infections : bacterial, fungal , viral , parasitic - Immunity - Genetic disorders - Environmental and nutritional disorders - Diseases of infancy and childhood	Lectures -Tutorials - Seminars - Journal - Books	Written and oral examination
B. Mention the details of different diagnostic tools of diseases related to pathologic basis of disease.		
C. State update and evidence based Knowledge related to the course topics		
D. Memorize the facts and principles of the other relevant basic and clinically supportive sciences related to pathology including: histology and microbiology		
E. Mention the basic ethical and medico legal principles revenant to Pathology.		
F. Explain the basics of quality assurance to ensure good professional skills in his field.		
G. Mention the ethical and scientific principles of medical research		
H. Explain the impact of common health problems in the field of Pathology on the society		

Unit 2: GIT and Liver Pathology

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A. Demonstrate details of pathology of diseases related to Esophagus -Diseases and tumors of Esophagus Stomach -Congenital anomalies -Gastritis -Peptic ulcer -Gastric polypi -Gastric tumours Benign- malignant Small and large Intestine -Infections -Inflammatory bowel disease (Crohns and ulcerative colitis) -Intestinal obstruction -Intestinal polypi -Tumors of the small and large intestine Appendix and anal canal. **Liver.** -Jaundice -Liver failure -Hepatitis -Cirrhosis -Metabolic disorders -Biliary obstruction -Tumors and tumor like conditions of the liver	Didactic Lectures -Tutorials - Seminars -Journal - Books -Case study Departmental teaching sessions: These occur on a regular basis	Log book Written, and oral examination

-Gall bladder and extrahepatic biliary tree - Diseases and tumors of the pancreas		
B. Mention the details of different diagnostic tools of diseases related to topics of the course.	participate in case multi-heademicroscope seminars	
C. State update and evidence based Knowledge related to the course:	-Tutorials - Seminars -Case study Departmental teaching sessions:	
D. Memorize the facts and principles of the other relevant basic and clinically supportive sciences related to pathology	Didactic	Log book Written, and oral examination
E. Mention the basic ethical and medico legal principles revenant to the pathology.		
F. Explain the basics of quality assurance to ensure good professional skills in his field.		
G. Mention the ethical and scientific principles of medical research		

Unit3: Pathology of female genital organs and breast

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A. Describe different clinical conditions and diseases related to details of Pathology of - Diseases and tumours of the vulva and Vagina Cervix - Cervicitis - Polyps - Cervical intraepithelial neoplasia - Tumours of the cervix Uterine corpus - normal endometrium and mensterual cycle - endometritis - endometrial hyperplasia - dysfunctional uterine bleeding - endometrial polyp - endometrial tumors Ovaries - non neoplastic ovarian cysts - Ovarian tumors classification and types Fallopian tubes Disorders of pregnancy - ectopic pregnancy - Pathology of the placenta - Gestational trophoblastic tumors Breast -Inflammatory and proliferative conditions - Benign tumors - Malignant tumors - Diseases of male breast	Lectures -Tutorials - Seminars - Journal - Books	Written and oral examination Written and oral examination
B. Mention the details of different diagnostic tools of diseases related to the course/speciality.	Didactic	Written and oral examination

Unit 4: Genitourinary pathology

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A. Demonstrate details of pathology of **Kidneys** Clinical manifestations of renal disease. The pathology of renal failure. Glomerular diseases - Renal infarction. Transplantation. Tubulo-interstitial diseases. pyelonephritis Renal stones Renal tumors of adult and childhood **Bladder and Ureter** Inflammation obstruction calculi congenital lesions. Neoplasms of the bladder and ureter **Prostate Gland** Prostatitis Prostate carcinoma **Testis** Cryptorchidisim hydrocoele, haematocoele, torsion and orchitis. Neoplasms of the testis. **Epididymis** Cysts, spermatocoele, epididymo - orchitis. **Penis and Scrotum** Congenital anomalies, inflammations including sexually transmitted diseases, venereal warts, carcinoma of the penis and scrotum. Causes of male infertility.	Lectures -Tutorials - Seminars - Journal -Books	Written and oral examination Written and oral examination
B. Mention the details of different diagnostic tools of diseases related to the course	Didactic	Written and oral examination

C. State update and evidence based Knowledge related to the course topics	Didactic	Written and oral examination
D. Memorize the facts and principles of the other relevant basic and clinically supportive sciences related to Pathology		
E. Mention the basic ethical and medico legal principles revenant to the pathology.		
F. Explain the basics of quality assurance to ensure good professional skills in his field.		
G. Mention the ethical and scientific principles of medical research		
H. Explain the impact of common health problems in the field of speciality on the society	Didactic	Log book

Unit 5 Head and Neck Pathology

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A. Demonstrate details of : - Diseases of the Jaw and oral cavity - Tumors of the jaw and oral cavity classification, subtypes and differential diagnosis - Diseases of salivary glands Tumors of salivary glands - Diseases and tumors of Nose, paranasal sinuses nasopharynx and Larynx - Diseases and tumors of the Eye and occular adenexa - Diseases of the ear	Lectures -Tutorials - Seminars - Journal -Books	Written and oral examination
B. Mention the details of different diagnostic tools of diseases related to the course	Didactic	Written and oral examination
C. State update and evidence based Knowledge related to the course		
D. Memorize the facts and principles of the other relevant basic and clinically supportive sciences related to pathology		
E. Mention the basic ethical and medico legal principles revenant to pathology practice.		
F. Explain the basics of quality assurance to ensure good professional skills in his field.		
G. Mention the ethical and scientific principles of medical research		

Unit 6: Pathology of Intrathoracic organs

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A. Demonstrate Details of pathology of Nonneoplastic pulmonary diseases Pulmonary infections Lung abscess and its complications. Pulmonary tuberculosis. Restrictive lung diseases and acute interstitial lung disease (and chronic interstitial lung disease. Obstructive pulmonary disease: Emphysema: (COPD). Bronchiectasis Neoplasms of the lung: bronchiogenic carcinoma Other primary neoplasms, benign and malignant. Metastatic lung tumours - Diseases of the pleura: pleurisy, effusions, fibrosis, pleural plaques, neoplasms. - Diseases of The Mediastinum Thymus and thymoma Diseases of the heart and the blood vessels. Ischaemic heart disease: Hypertension: Valvular disease: Pericardial disease: Tumours of the heart Vascular diseases aneurysms, Vasculitis. Miscellaneous disorders (Tumours and tumour-like lesions of vessels	Lectures -Tutorials - Seminars - Journal -Books	Written and oral examination
B. Mention the details of different diagnostic tools of diseases Pathology	Didactic	Written and oral examination

C. State update and evidence based Knowledge related to the course topics	Didactic	Written and oral examination
D. Memorize the facts and principles of the other relevant basic and clinically supportive sciences related to speciality including: anatomy and histology	Didactic	Written and oral examination
E. Mention the basic ethical and medico legal principles revenant to the pathology.		
F. Explain the basics of quality assurance to ensure good professional skills in his field.		
G. Mention the ethical and scientific principles of medical research		
H. Explain the impact of common health problems in the field of Speciality on the society		

Unit 7 : Pathology of haematopoitic and lymphatic organs

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A. Describe different clinical conditions and diseases related to - Non hodgkins lymphoma classification, morphology, molecular pathology - Hodgkin's disease - classification and morphology. Clinical features, staging and survival. Reactive hyperplasia Morphology and causes of follicular hyperplasia, paracortical hyperplasia and sinus histiocytosis. Lymphadenitis, non-specific and specific forms. **Spleen** -Causes of splenomegaly. -Tumors of the spleen	Lectures -Tutorials - Seminars - Journal -Books	Written and oral examination Written and oral examination
B. Mention the details of different diagnostic tools of diseases related to the course/speciality.	Didactic	Written and oral examination
C. State update and evidence based Knowledge related to the course:	Didactic	Written and oral examination
D. Memorize the facts and principles of the other relevant basic and clinically supportive sciences related to speciality including:	Didactic	Written and oral examination
E. Mention the basic ethical and medico legal principles revenant to the speciality.		
F. Explain the basics of quality assurance to ensure good professional skills in his field.		
G. Mention the ethical and scientific principles of medical research		

Unit 8: Soft tissue and bone pathology

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A. Demonstrate details of Pathology of - Nonneoplastic disorders and tumor like conditions of the soft tissue - Soft tissue tumors Classification , pathology and differential diagnosis - Tumor like lesions of the soft tissue - Non neoplastic diseases of bone - Bone tumors: classification, pathology and differential diagnosis and Tumor like lesions of the Bone - Diseases of the joints -Tumors of joints. Diseases and tumors of the muscles	Lectures Books -Tutorials - Seminars - Journal	Written and oral examination
B. Mention the details of different diagnostic tools of diseases related to the course/speciality.	Didactic	Written and oral examination
C. State update and evidence based Knowledge related to the course:	Didactic	Written and oral examination
D. Memorize the facts and principles of the other relevant basic and clinically supportive sciences related to speciality	Didactic	Written and oral examination
E. Mention the basic ethical and medico legal principles revenant to the speciality.		
F. Explain the basics of quality assurance to ensure good professional skills in his field.		
G. Mention the ethical and scientific principles of medical research		

Unit 9: Neuro pathology

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A. Demonstrate details of Pathology of - Diseases of brain tissue Intracranial space-occupying lesions Cerebrovascular disease **Neoplasms:** classification. Clinicopathological features. Characteristics of the various types of Peripheral nervous system:	Lectures -Tutorials - Seminars - Journal -Books	Written and oral examination
B. Mention the details of different diagnostic tools of diseases related to the course/speciality.	Didactic	Written and oral examination
C. State update and evidence based Knowledge related to the course:	Didactic	Written and oral examination
D. Memorize the facts and principles of the other relevant basic and clinically supportive sciences related to Pathology	Didactic	Written and oral examination
E. Mention the basic ethical and medico legal principles revenant to the Pathology		
F. Explain the basics of quality assurance to ensure good professional skills in his field.		
G. Mention the ethical and scientific principles of medical research		

Unit 10: Endocrine organs pathology

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A. Demonstrate details of Pathology of details of Pathology of **Thyroid** Hyperthyroidism. thyrotoxicosis . Grave's disease Other causes thyrotoxicosis - functioning adenoma and toxic nodular goitre. Hypothryoidism. Myxoedema and cretinism. Hashimotos's thyroiditis - Solitary nodules - Neoplasms. Adenoma. Carcinomas - classification, pathogenesis including genetic and environmental factors and pre-existing thyroid disease. Morphology of the different types, spread, and clinical features including differences in prognosis. Lymphoma of the thyroid **Parathyroids** **Adrenals** **The Endocrine Pancreas**. **Diabetes mellitus:** Islet cell tumours.	Lectures -Books -journals -Tutorials - Seminars	Written and oral examination Written and oral examination
B. Mention the details of different diagnostic tools of diseases related to the course/speciality.	Didactic	Written and oral examination
C. State update and evidence based Knowledge related to the course:	Didactic	Written and oral examination
D. Memorize the facts and principles of the other relevant basic and clinically supportive sciences related to speciality		
E. Mention the basic ethical and medico legal principles revenant to the speciality.		
F. Explain the basics of quality assurance to ensure good professional skills in his field.		
G. Mention the ethical and scientific principles of medical research		

Unit 11: Dermatopathology

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A-Demonstrate details of Pathology of The vocabulary of skin diseases: clinical and histological terms. Principles of skin biopsy. Acute inflammatory dermatoses: urticaria, dermatititis and erythema multiforme. Chronic inflammatory dermatoses: psoriasis and lichen planus. Bullous diseases: pemphigus, bullous pemphigoid and dermatitis herpetiformis. Eczema, psoriasis and lichenoid eruptions; Common benign epithelial tumours. Squamous and basal cell carcinoma epidermal tumours; soft tissue tumours; cutaneous lymphoma; appendageal tumours. Naevi and dysplastic naevi. Malignant melanoma	Lectures -journals -Books -Tutorials - Seminars	Written and oral examination Written and oral examination
A. Mention the details of different diagnostic tools of diseases related to Pathology	Didactic	Written and oral examination
B. State update and evidence based Knowledge related to the course:	Didactic	Written and oral examination
C. Memorize the facts and principles of the other relevant basic and clinically supportive sciences related to speciality including:	Didactic	Written and oral examination
D. Mention the basic ethical and medico legal principles revenant to the Pathology		
E. Explain the basics of quality assurance to ensure good professional skills in his field.		
F. Mention the ethical and scientific principles of medical research		

Unit 12: Cytopathology

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A. Describe different conditions and diseases related to - Basic knowledge of preparation and staining techniques for common specimen types. Knowledge of use of special techniques immunocytochemistry. - Diagnosis Features of malignancy in sites commonly investigated with cytopathology. - Features of specific non-malignant diagnoses, e.g. infection	Lectures -Books -journals -Tutorials - Seminars	Written and oral examination Written and oral examination
B. Mention the details of different diagnostic tools of diseases related to cytology	Didactic	Written and oral examination
C. State update and evidence based Knowledge related to the course:	Didactic	Written and oral examination
D. Memorize the facts and principles of the other relevant basic and clinically supportive sciences related to speciality including:	Didactic	Written and oral examination
E. Mention the basic ethical and medico legal principles revenant to the speciality.		
F. Explain the basics of quality assurance to ensure good professional skills in his field.		
G. Mention the ethical and scientific principles of medical research		

B-Intellectual outcomes for the whole course

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Design / present case , seminars in common problem related to pathology	Seminar presentation senior staff experience	Log book Oral examination
B. Apply the basic and clinically supportive sciences which are appropriate to the Pathology related conditions / problem / topics.	Cases presentation Scientific meetings	Log book Oral, practical and written examination
C. Demonstrate an investigatory and analytic thinking "problem – solving "approaches to clinical situation related to Pathology as generate a differential diagnosis, explain clinical-pathologic correlations, and evaluate scientific and clinical laboratory data of diseases studied in the course	Departmental teaching sessions: Hand on workshops seminars, tutorial	Log book Oral, practical and written examination
D. Conduct or share in research projects.	Work shops senior staff experience journal clubs	Log book
E. Write scientific papers.	seminars journal clubs	Log book
F. Participate in the management of risky conditions related to speciality.	Departmental teaching sessions senior staff experience	Log book oral exam

G. Plan for quality improvement in the field of medical education and professional practice in speciality.	Departmental teaching sessions	Log book oral exam
H. Create / innovate plans, systems, and other issues for improvement of performance in his practice.	Seminars tutorial	Log Book
I. Present and defend his / her data in front of a panel of experts	Case presentation	Log book oral exam
J. Formulate management plans and alternative decisions in different situations in the field of Pathology.	Departmental teaching sessions seminars, tutorial	Log book oral exam

C-Practical skills for the whole course

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Perform the following basic lab skills essential to the course: - Sufficient manual dexterity to perform dissection safely and accurately, without damage to tissues. - Principles of specimen dissection, macroscopic description and block selection in neoplastic and nonneoplastic disease. - Principles of dissection of all major cancer resection specimens - Special techniques. - Recognition of histological features of histochemical and immunohisto-chemical stains in normal and diseased tissues - Preparation and staining techniques for common specimen types - Correct specimen orientation. - Open fresh specimen. - Obtaining fresh tissue for touch preparation, freezing, electron microscopy etc. - Inking of excision margins. - Lymph node anatomy and dissection in cancer specimens. <u>Ability to describe and take appropriate</u>	supervision Written & oral communication. Discussions in seminars Scientific meetings participate in seminars Routine work: The most important learning experience will be day-to-day work. Trainees will be closely supervised during training. This close supervision allows for frequent short episodes of teaching.	Log book Procedure/case presentation Practical and oral examination

<u>blocks from:</u> -Mastectomy. -Wide local excision for macroscopic tumour. -Axillary lymph node dissection -Radical oesophagectomy. -Radical gastrectomy. -Antrectomy -Colectomy/proctectomy for cancer or inflammatory bowel disease. - Appendicectomy. -Polypectomy - Open biopsy of lung. Pneumonectomy or lobectomy. Appropriate handling of orientated or complex skin specimens. Lymph node for neoplastic and nonneoplastic disease. Taking tissue for supplementary techniques (e.g. flow cytometry.(Mucosal biopsy. Tonsillectomy. Nasal polypectomy. Salivary gland tumour. Hysterectomy and/or salpingooophorectomy for malignant or benign disease. Cervical loop/ cone biopsy Open biopsy of liver. Resections for metastatic tumour. Cholecystectomy Vas deferens. Prostate biopsies and chippings. Orchidectomy and prostatectomy	Routine work: The most important learning experience will be day-to-day work. Trainees will be closely supervised during training. This close supervision allows for frequent short episodes of teaching.	

specimens. Thyroidectomy. Parathyroidectomy Soft tissue tumour resection, simple (i.e Lumpectomy). Neurosurgical tumour resection and biopsy specimens. Renal biopsies. Bladder biopsies. Nephrectomy specimens Handling a trephine bone-biopsy. Use of calcified versus de-calcified Section		
B. Perform the following advanced lab skills essential to the course: - Recognition of the microscopic features of tissue structure in normality and disease, as appropriate to one's level of experience - Proficiency in histopathological examination of a wide range of surgical specimens including non neoplastic and neoplastic conditions of different organs and to reach a final diagnosis. - the ability to diagnose material from all specimen types prepared by all methods and stains and ability to use this diagnostic information in a clinical setting - Smear-taking technique in cytology. Technical aspects of spreading and fixing a smear. - Liquid-based cytopathology (LBC) techniques, if appropriate.	-Observation Post graduate teaching - participate in cases multi-header microscope seminars	Log book

C. Use instruments and devices in evaluation of - Being able to set up a microscope with ergonomic safety and operate it effectively. - Digital camera and photography	Observation Post graduate teaching	Log book
D. Interpret the following non invasive/invasive procedures/ experiments - Reporting means producing data for cancer report with staging data - Correct interpretation of pathological features in the context of available clinical information and other laboratory findings. - Data from molecular analyses in the context of the clinical situation and morphological appearances when undertaking diagnostic surgical pathology - Being able to source and request appropriate molecular tests, as clinically required. - Developing the practice of integrating clinical, radiological and pathological data in formulating accurate pathological diagnoses	Observation Post graduate teaching	Log book
E. Perform the following non invasive/invasive procedures/ experiments - The use of departmental protocols for the handling; of specimens including identification, documentation, entering	Observation Post graduate teaching	Log book

patient data on to computer and measures to prevent specimen mix-ups. - Training in the Laboratory aspects of the Fixation preparation, cutting and staining of histological sections - Gross dissection, cutting and block selection of all human resection specimens		
F. Perform the following basic experiments in related basic sciences to be utilized in the research work: - Routine tissue processing: fixation and staining	- Observation Post graduate teaching - participate in cases multi-header microscope seminars	Log book
G. Use information technology to support decisions in common situations related to Pathological diagnosis	Senior staff experience	Log book
H. Develop and carry out diagnostic and teaching plans for conditions / skills related to pathological diagnosis	Senior staff experience	Log book
I. Counsel and educate: ➢ Patients and their family about investigation procedures alternatives and infection control ➢ Students, technicians and junior staff, about conditions related to Pathology; including handling of samples, devices, safety and maintenance of laboratory equipments.	Senior staff experience	Log book
J- Use information technology to support decisions in common conditions related to histopathological diagnosis	Senior staff experience	Log book

K. Provide health care services aimed at preventing the following conditions Infectious diseases	Senior staff experience	Log book
L. Work with health care professionals, including those from other disciplines, to provide patient-focused care.	Senior staff experience -Cases presentation participate in cases multi-header microscope seminars	Log book
M. Write and evaluate competently all forms of professional reports related to pathology as - Write a final gross and microscopic report with suitable summaries - Be able to create a final report that incorporates both morphological and molecular data where appropriate - Report means producing data for cancer report with staging data	Observation Post graduate teaching	Log book Practical examination

D-General Skills *for the whole course*

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Perform practice-based improvement activities using a systematic methodology in the common problems (plan and conduct audit cycles)	Observation Post graduate teaching participate in multi-header microscope seminars	Log book and practical exam
B. Locate, appraises, and assimilates evidence from scientific studies related to health problems.	seminars, tutorial -Journal club, -Critically appraised topic	Log book
C. Apply knowledge of study designs and statistical methods to the appraisal of clinical studies	seminars, tutorial -Journal club, -Critically appraised topic	Log book
D. Use information technology to manage information, access on-line medical information; and support their own education	Senior staff experience	Log Book
E. Lead the learning of students and other health care professionals.	Observation Post graduate teaching Senior staff experience	Log book

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
F. Create and sustain a therapeutic and ethically sound relationship with patients	Senior staff experience	Log book
G. Perform the following oral communications: - communicate with other members of the pathology department, other departments and other members of the multidisciplinary team - communicate in writing, through letters and reports - when to phone a general practitioner - Act as consultants to clinical colleagues on the interpretation and relevance of pathological findings, with particular regard to their significance in the management of the patient.	-Routine work - Senior staff experience	Log book
H. Fill the following reports: Produce accurate reports with clear conclusions and other written correspondence.	Routine work Senior staff experience	Log book
I. Work effectively with others as a member or leader of a health care team e.g. Multidisciplinary team meetings	Routine work Senior staff experience	Log book

Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
J. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest.	Routine work Senior staff experience	1. Objective structured Practical examination 2. Patient survey
K. Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.	Routine work Senior staff experience	1. 360o global rating
L. Demonstrate sensitivity and responsiveness to others' culture, age, gender, and disabilities	Routine work Senior staff experience	Log book

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
M. Work effectively in different health care delivery settings and systems.	Routine work Senior staff experience	1. 360o global rating
N. Practice cost-effective health care and resource allocation that does not compromise quality of care	Routine work Senior staff experience	1. Check list evaluation of live or recorded performance
O. Advocate for quality patient care and assist patients in dealing with system complexities		1. 360o global rating 2. Patient survey
P. Partner with health care managers and health care providers to assess, coordinate, and improve health care and predict how these activities can affect system performance	Routine work Senior staff experience	

Course contents (topic s/modules/rotation
Course Matrix

Time Schedule: Second part

Topic	Covered ILOs			
	Knowledge	Intellectual	Practical skill	General Skills
Unit 1: General Pathology	A-B	A-J	A-M	A-P
Unit 2 :GIT and Liver pathology	A-G	A-J	A-M	A-P
Unit 3: Pathology of female genital organs and breast	A-B	A-J	A-M	A-P
Unit 4: Genitourinary Pathology	A-H	A-J	A-M	A-P
Unit 5: Head and Neck Pathology	A-G	A-J	A-M	A-P
Unit 6 : Pathology of intrathoracic organs	A-H	A-J	A-M	A-P
Unit 7: Haematopoietic and lymphatic Pathology	A-G	A-J	A-M	A-P
Unit 8 : Soft tissue and Bone Pathology	A-G	A-J	A-M	A-P
Unit 9 : Neuropathology	A-G	A-J	A-M	A-P
Unit 10 : Endocrine organs pathology	A-G	A-J	A-M	A-P
Unit 11: DermatoPathology	A-F	A-J	A-M	A-P
Unit 12: Cytology	A-G	A-J	A-M	A-P

5. Course Methods of teaching/learning:

1) Lectures
2) Course notes
3) Multihead microscopic slide seminars
4) Scientific meetings
5) Case studies (problem solving).
6) Seminars**.**
7) Senior staff experience
8) Observation

6. Course Methods of teaching/learning: for students with poor achievements

1. Extra Didactic (lectures, seminars, tutorial) according to their needs
2. Extra training according to their needs

7. Course assessment methods:

i. Assessment tools:

- written, oral , practical examination and log book
- Examination MCQ – A standardized examination using multiple-choice questions (MCQ). The in-training examination and written board examinations are examples.
- Examination Oral – Uses structured realistic cases and patient case protocols in an oral examination to assess clinical decision-making.

ii. Time schedule: At the end of second part

iii. Marks 1200

8. List of references

i. Lectures notes

ii. Essential books

- KUMAR, V., COTRAN, R.S., and ROBBINS, S.L. Robbins Basic Pathology. 10th ed. Saunders Publisher (2017)

iii. Recommended books

- Rosai and Ackerman's Surgical Pathology Juan Rosai, Mosby 2018
- Sternberg's Diagnostic surgical Pathology 4th edition, Lippincott Williams and Wilkins 2021

iv. Periodicals, Web sites, … etc

- Human pathology
- Histopathology
- American Journal of surgical pathology

Web sites

- http:// http://www.pathmax.com/
- http://www-medlib.med.utah.edu/WebPath/LABS/LABMENU.html#2
- http://www.med.uiuc.edu/PathAtlasf/titlePage.html
- http://www.medscape.com/pathologyhome
- http://pathology2.jhu.edu/cytopath/masterclass/Homepage.htm
- http://www.gotpath.com/

9. Signatures

Course Coordinator: **Dr Noha Abd El Rahim**	**Head of the Department:** **Prof Dr. Dalia Else**
Date: 4/2022	**Date: 4/2022**

ANNEX 2
Program Academic Reference Standards (ARS)

1- Graduate attributes for medical doctorate

***The Graduate (after residence training and medical doctorate years of study) must*:**

1- Demonstrate competency and mastery of basics, methods and tools of scientific research and medical audit in the chosen field of Pathology.

2- Have continuous ability to add knowledge to the speciality through research and publication.

3- Appraise and utilise relevant scientific knowledge to continuously update and improve practical skills.

4- Acquire excellent level of medical knowledge in the basic biomedical, behavioural and related clinical sciences, medical ethics and medical jurisprudence and apply such knowledge in practical skills and scientific research.

5- Function as a leader of a team to provide appropriate, effective and compassionate reaction when dealing with problems related to Pathology.

6- Identify and create solutions for health problems related to his Pathology.

7- Acquire an in depth understanding of common areas of Pathology, from basic practice and related clinical care to application, and possession of required skills to manage independently all problems in these areas.

8- Demonstrate leadership competencies including interpersonal and communication skills that ensure effective information exchange with other health professions, the scientific community and the public.

9- Function as teacher in relation to colleagues, medical students and other health professions.

10- Master decision making capabilities in different situations related to his field of practice.

11- Show leadership responsiveness to the larger context of the related health care systems, including the organisation, partnership with health care providers and managers, and resource allocations.

12- Demonstrate in depth awareness of public health and related health policy issues including independent ability to improve health care, and identify and carryout system-based improvement of care.

13- Show model attitudes and professionalism.

14- Demonstrate commitment for lifelong learning and maintenance of competence and ability for continuous medical education and learning in subsequent stages and in the Pathology or one of its subspecialties.

15- Use recent technologies to improve his practice in the Pathology field.

16- Share in updating and improving practical practice in the Pathology field.

2- Competency based Standards for medical doctorate

2.1- Knowledge and understanding

By the end of the program, the graduate should demonstrate satisfactory knowledge and understanding of

2-1-A- Established, updated and evidence-based theories, basics and developments of Pathology and relevant sciences.

2-1-B- Basic, methods and ethics of medical research.

2-1-C- Ethical and medicologal principles of medical practice related to Pathology field.

2-1-D- Principles and measurements of quality in the speciality field.

2-1-E- Principles and efforts for maintaining and improvements of public health.

2- Intellectual skills

By the end of the program, the graduate should be able to demonstrate the following

2-2-A- Application of basic and other relevant science to solve Pathology related problems.

2-2-B- Problem solving based on available data.

2-2-C- Involvement in research studies related to the speciality.

2-2-D- Writing scientific papers.

2-2-E- Risk evaluation in the related clinical practice.

2-2-F- Planning for performance improvement in the Pathology field.

2-2-G- Creation and innovation in the Pathology field.

2-2-H- Evidence – based discussion.

2-2-I- Decision making in different situations related to the Pathology fields.

2.3- Practical skills/Clinical skills

By the end of the program, the graduate should be able to

- ***Competency-based outcomes for(Practical skills) Patient Care:-***

2-3-A- Provide extensive level of practical and or laboratory services that can help patient care ,solving health problems and better understanding of the normal structure and function extensive level means in depth understanding from basic science to evidence – based clinical application and possession of skills to manage independently all problems in his field of practice.

2-3-B- Master practical / laboratory skills relevant to Pathology.

2-3-C- Write and evaluate reports for situations related to the field of Pathology.

2.4- General skills

By the end of the program, the graduate should be able to

- ***Competency-based outcomes for Practice-based Learning and Improvement***

2-4-A- Master practice-based learning and improvement skills that involves investigation and evaluation and improvements of their own practice, appraisal and assimilation of scientific evidence and risk management.

2-4-B- Use competently all information sources and technology to improve his practice.

2-4-C- Master skills of teaching and evaluating others.

- ***Competency-based objectives for Interpersonal and Communication Skills***

2-4-D- Master interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, technicians and other health professionals.

- ***Competency-based objectives for Professionalism***

2-4-E- Master Professionalism behavior, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

- ***Competency-based objectives for Systems-based Practice***

2-4-F- Demonstrate the ability to effectively use system resources to provide relevant services and care that is of optimal value.

2-4-G- Participate in improvement of the education system.

2-4-H- Demonstrate skills of leading scientific meetings including time management.

2-4-O- Demonstrate skills of self and continuous learning.

Annex 3, Methods of teaching/learning

Annex 3, Methods of teaching/learning

	Patient care	**Medical knowledge**	**Practice-based learning/ improvement**	**Interpersonal and communication skills**	**Professionalism**	**Systems-based practice**
Didactic (lectures, seminars, tutorial)	X	X		X	X	X
journal club,	X	X	X			
Educational prescription	X	X	X	X	X	X
Present a case (true or simulated) in a grand round	X	X	X	X	X	
Observation and supervision	X		X	X	X	X
conferences		X	X	X		X
Written assignments	X	X	X	X	X	X
Oral assignments	X	X	X	X	X	X

Teaching methods for knowledge

- ❖ Didactic (lectures, seminars, tutorial)
- ❖ journal club
- ❖ Critically appraised topic
- ❖ Educational prescription (a structured technique for following up on clinical questions that arise during rounds and other venues).
- ❖ Present a case (true or simulated) in a grand round
- ❖ Others

Teaching methods for patient care

- ❖ Observation and supervision /Completed tasks procedure/case logs
- ❖ On-the-job" training without structured teaching is not sufficient for this skill (checklists).
- ❖ Simulation is increasingly used as an effective method for skill/ teamwork training.

Teaching methods for other skills

- ❖ Written communication (e.g., orders, progress note, transfer note, discharge summary, operative reports, and diagnostic reports).
- ❖ Oral communication (e.g., presentations, transfer of care, interactions with patients, families, colleagues, members of the health care team) and/or non verbal skills (e.g., listening, team skills)
- ❖ Professionalism, including medical ethics, may be included as a theme throughout the program curriculum that includes both didactic and experiential components (e.g., may be integrated into already existing small group discussions of vignettes or case studies and role plays, computer-based modules) and may be modeled by the faculty in clinical practice and discussed with the resident as issues arise during their clinical practice.

Annex 4, Assessment methods

Annex 4, competency evaluation methods for residency training.

	Patient care	**Medical knowledge**	**Practice-based learning/ improvement**	**Interpersonal and communication skills**	**Professionalism**	**Systems-based practice**
Record review	X	X		X	X	X
Checklist	X			X		
Global rating	X	X	X	X	X	X
Simulations	X	X	X	X	X	
Portfolios	X	X	X	X		
Standardized oral examination	X	X		X		X
Written examination	X	X				X
Procedure/ case log	X	X				

Annex 4, Glossary of MD doctors assessment methods

- Record Review – Abstraction of information from patient records, such as medications or tests ordered and comparison of findings against accepted patient care standards.
- Chart Stimulated Recall – Uses the MD doctor's patient records in an oral examination to assess clinical decision-making.
- Mini clinical evaluation: Evaluation of Live/Recorded Performance (single event) – A single resident interaction with a patient is evaluated using a checklist. The encounter may be videotaped for later evaluation.
- Standardized Patients (SP) – Simulated patients are trained to respond in a manner similar to real patients. The standardized patient can be trained to rate MD doctor's performance on checklists and provide feedback for history taking, physical examination, and communication skills. Physicians may also rate the MD doctor's performance.
- Objective Structured Clinical Examination (OSCE) – A series of stations with standardized tasks for the MD doctors to perform. Standardized patients and other assessment methods often are combined in an OSCE. An observer or the standardized patient may evaluate the MD doctors.
- Procedure or Case Logs – MD doctors prepare summaries of clinical experiences including clinical data. Logs are useful to document educational experiences and deficiencies.
- PSQs – Patients fill out Patient Survey questionnaires (PSQs) evaluating the quality of care provided by a MD doctors.
- Case /problems – assess use of knowledge in diagnosing or treating patients or evaluate procedural skills.
- Models: are simulations using mannequins or various anatomic structures to assess procedural skills and interpret clinical findings. Both are useful to assess practice performance and provide constructive feedback.
- 360 Global Rating Evaluations – MD doctors, faculty, nurses, clerks, and other clinical staff evaluate MD doctors from different perspectives using similar rating forms.

- Portfolios – A portfolio is a set of project reports that are prepared by the MD doctors to document projects completed during the MD study years. For each type of project standards of performance are set. Example projects are summarizing the research literature for selecting a treatment option, implementing a quality improvement program, revising a medical student clerkship elective, and creating a computer program to track patient care and outcomes.
- Examination MCQ – A standardized examination using multiple-choice questions (MCQ). The in-training examination and written board examinations are examples.
- Examination Oral – Uses structured realistic cases and patient case protocols in an oral examination to assess clinical decision-making.
- Procedure or Case Logs – MD doctors prepare summaries of clinical experiences including clinical data. Logs are useful to document educational experiences and deficiencies.
- PSQs – Patients fill out Patient Survey questionnaires (PSQs) evaluating the quality of care provided by MD doctors.

Annex 5, Program evaluation tools

By whom	Method	sample
Quality Assurance Unit	Reports Field visits	#
External Evaluator (s):According to department council External Examiner (s): According to department council	Reports Field visits	#
Stakeholders	Reports Field visits questionnaires	#
Senior students	questionnaires	#
Alumni	questionnaires	#

Annex 6

Program correlations

مصفوفة توافق المعايير القو مية القياسية العامة لبرامج الدكتوراة مع المعايير الأكاديمية
المعتمدة من كلية الطب جامعة أسيوط لدرجة الدكتوراة
في الباثولوجيا الطبية

I-General Academic reference standards (GARS) for postgraduates versus Program ARS

1- Graduate attributes

Faculty ARS	NAQAAE General ARS for Postgraduate Programs
1- Demonstrate competency and mastery of basics, methods and tools of scientific research and medical audit in the chosen field of Pathology.	1-إتقان أساسيات و منهجيات البحث العلمي
2- Have continuous ability to add knowledge new developments in pathology through research and publication.	2-العمل المستمر علي الإضافة للمعارف في مجال التخصص
3- Appraise and utilise scientific knowledge to continuously update and improve practical skills	3-تطبيق المنهج التحليلي والناقد للمعارف في مجال التخصص و المجالات ذات العلاقة
4- Acquire excellent level of medical knowledge in the basic biomedical, related clinical, behavioural and clinical sciences, medical ethics and medical jurisprudence and apply such knowledge in practical skills and scientific research.	4-دمج المعارف المتخصصة مع المعارف ذات العلاقة مستنبطا و مطورا للعلاقات البينية بينها
5- Function as a leader of a team to provide appropriate, effective and compassionate reaction when dealing with problems related to Pathology 7- Acquire an in depth understanding of common areas of Pathology from basic practice and related clinical care to application, and possession of skills to manage independently all problems in these areas.	5-إظهار وعيا عميقا بالمشاكل الجارية و النظريات الحديثة في مجال التخصص

6- Identify and create solutions for health problems related to Pathology.	6–تحديد المشكلات المهنية و إيجاد حلولا مبتكرة لحلها
5- Function as a leader of a team to provide appropriate, effective and compassionate reaction when dealing with problems related to Pathology. 7- Acquire an in depth understanding of common areas of Pathology, from basic practice and related clinical care to application, and possession of skills to manage independently all problems in these areas.	7–إتقان نطاقا واسعا من المهارات المهنية في مجال التخصص
8- Share in updating and improving practical practice in Pathology 9- Function as teacher in relation to colleagues, medical students and other health professions.	8– التوجه نحو تطوير طرق و أدوات و أساليب جديدة للمزاولة المهنية
10- Use recent technologies to improve his practice in Pathology	9–استخدام الوسائل التكنولوجية المناسبة بما يخدم ممارسته المهنية

Faculty ARS	NAQAAE General ARS for Postgraduate Programs
8- Demonstrate leadership competencies including interpersonal and communication skills that ensure effective information exchange with other health professions, the scientific community and the public. 5- Function as a leader of a team to provide appropriate, effective and compassionate reaction when dealing with problems related to Pathology.	10-التواصل بفاعلية و قيادة فريق عمل في سياقات مهنية مختلفة
10- Master decision making capabilities in different situations related to Pathology	11-اتخاذ القرار في ظل المعلومات المتاحة
11- Show leadership responsiveness to the larger context of the related health care system, including the organisation, partnership with health care providers and managers, and resource allocations.	12-توظيف الموارد المتاحة بكفاءة و تنميتها والعمل على إيجاد موارد جديدة
12- Demonstrate in depth awareness of public health and related health policy issues including independent ability to improve health care, and identify and carryout system-based improvement of care.	13-الوعي بدوره في تنمية المجتمع و الحفاظ على البيئة
13- Show model attitudes and professionalism.	14-التصرف بما يعكس الالتزام بالنزاهة و المصداقية و قواعد المهنة

14- Demonstrate commitment for lifelong learning and maintenance of competence and ability for continuous medical education and learning in subsequent stages and in Pathology or one of its subspecialties. 15- Use recent technologies to improve his practice in Pathology	15–الالتزام بالتنمية الذاتية المستمرة و نقل علمه و خبراته للآخرين

2- Academic standards

Faculty ARS	NAQAAE General ARS for Postgraduate Programs
2.1. A- Established updated and evidence-based theories, basics and developments of Pathology and relevant sciences.	2-1-أ- النظريات و الأساسيات والحديث من المعارف في مجال التخصص والمجالات ذات العلاقة
2.1. B- Basic, methods and ethics of medical research.	2-1-ب - أساسيات و منهجيات و أخلاقيات البحث العلمي و أدواته المختلفة
2.1. C- Ethical and medicologal principles of medical practice related to Pathology field.	2-1-ج- المبادئ الأخلاقية و القانونية للممارسة المهنية في مجال التخصص
2.1. D- Principles and measurements of quality in the Pathology field.	2-1-د مبادئ و أساسيات الجودة في الممارسة المهنية في مجال التخصص
2.1. E- Principles and efforts for maintaining and improvements of public health.	2-1-هـ - المعارف المتعلقة بآثار ممارسته المهنية على البيئة وطرق تنمية البيئة وصيانتها
2.2. A- Application of basic and other relevant science to solve Pathology related problems.	2-2-أ -تحليل و تقييم المعلومات في مجال التخصص و القياس عليها و الاستنباط منها
2.2. B- Problem solving based on available data.	2-2-ب -حل المشاكل المتخصصة استنادا علي المعطيات المتاحة
2.2. C- Involvement in research studies related to the Pathology.	2-2-ج -إجراء دراسات بحثية تضيف إلى المعارف
2.2. D- Writing scientific papers.	2-2-د- صياغة أوراق علمية
2.2. E- Risk evaluation in the related Pathology practice.	2-2—هـ تقييم المخاطر في الممارسات المهنية
2.2. F- Planning for performance improvement in the Pathology field.	2-2-و -التخطيط لتطوير الأداء في مجال التخصص
2-2-G- Creation and innovation in the Pathology field.	2-2-ز- الابتكار /الإبداع
2.2. H- Evidence – based discussion.	2-2-ح- الحوار والنقاش المبني علي

	البراهين والأدلة
2.2. I- Decision making in different situations related to the Pathology field.	2-2-ط -اتخاذ القرارات المهنية في سياقات مهنية مختلفة
2.3. A- Provide extensive level of practical and or laboratory services that can help solving health problems and better understanding of the normal structure and function extensive level means in depth understanding from basic science to evidence – based clinical application and possession of skills to manage independently all problems in Pathology practice. 2.3. B- Master practical / laboratory skills relevant to Pathology.	2-3-أ -إتقان المهارات المهنية الأساسية و الحديثة في مجال التخصص
2.3. C- Write and evaluate reports for situations related to the Pathology.	2-3-ب- كتابة و تقييم التقارير المهنية.

2- Academic standards <u>(Continues)</u>

Faculty ARS	NAQAAE General ARS for Postgraduate Programs
2.4. A-Master practice-based learning and improvement skills that involves investigation and evaluation and improvements of Pathology practice, appraisal and assimilation of scientific evidence and risk management.	2-3-ج -تقييم و تطوير الطرق و الأدوات القائمة في مجال التخصص
2.4. B- Use competently all information sources and technology to improve Pathology practice.	2-3-د – استخدام الوسائل التكنولوجية بما يخدم الممارسة المهنية
2.4. A-Master practice-based learning and improvement skills that involves investigation and evaluation and improvements of Pathology practice, appraisal and assimilation of scientific evidence and risk management. 2.4. G- Participate in improvement of the education system.	2-3-هـ -التخطيط لتطوير الممارسة المهنية وتنمية أداء الآخرين

2- Academic standards (Continues)

Faculty ARS	NAQAAE General ARS for Postgraduate Programs
2.4. D- Master interpersonal and communication skills that result in effective information exchange and teaming with health professionals.	2-4-أ التواصل الفعال بأنواعه المختلفة
2.4. B- Use competently all information sources and technology to improve Pathology practice.	2-4-ب - استخدام تكنولوجيا المعلومات بما يخدم تطوير الممارسة المهنية
2.4. C- Master skills of teaching and evaluating others. 2.4.G- Participate in improvement of the education system.	2-4-ج - تعليم الآخرين وتقييم أداءهم
2.4. E- Master professionalism behavior, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles. 2.4.0- Demonstrate skills of self and continuous learning.	2-4-د - التقييم الذاتي والتعلم المستمر
2.4. C- Master skills of teaching and evaluating others.	2-4-هـ - استخدام المصادر المختلفة للحصول على المعلومات و المعارف
2.4. F- Demonstrate the ability to effectively use system resources to provide relevant services and care that is of optimal value.	2-4-و - العمل في فريق وقيادة فرق العمل
2.4.H- Demonstrate skills of leading scientific meetings including time management	2-4-ز - إدارة اللقاءات العلمية والقدرة علي إدارة الوقت

Comparison between ARS ILOS for medical doctorate (basic)

(ARS)	(ILOs)
2-1- Knowledge and understanding **2-1-A-** Established, updated and evidence-based theories, basics and developments of Pathology and relevant sciences.	***2-1- Knowledge and understanding*** **2-1-A**- Demonstrate in-depth knowledge and understanding of theories, basics and updated biomedical, clinical epidemiological and socio behavioral science relevant to Pathology as well as the evidence – based application of this knowledge to practice including patient care.
2-1-B Basic, methods and ethics of medical research. .	**2-1-B-** Explain basics, methodology, tools and ethics of scientific medical, clinical research.
2-1-C- Ethical and medicologal principles of medical practice related to Pathology field.	**2-1-C-** Mention ethical, medico logical principles and bylaws relevant to his practice in Pathology
2-1-D- Principles and measurements of quality in the Pathology field.	**2-1-D-** Mention principles and measurements of quality assurance and quality improvement in medical education and in practice of Pathology.
2-1-E-Principles and efforts for maintaining and improvements of public health.	**2-1-E-** Mention public health and health policy issues relevant to Pathology and principles and methods of system –based improvement of related to his practice in Pathology

continuous (ARS)	Continuous (ILOs)
***2-2- Intellectual skills*:** **2-2-A-**Application of basic and other relevant science to solve Pathology related problems.	***2-2- Intellectual skills:*** **2-2-A-** Apply the basic and clinically supportive sciences which are appropriate to Pathology related conditions / problem / topics.
2-2-B-Problem solving based on available data.	**2-2-B-** Demonstrate an investigatory and analytic thinking "problem – solving "approaches to relevant situations related to Pathology
2-2-C- Involvement in research studies related to Pathology	**2-2-C-** Plan research projects.
2-2-D Writing scientific papers.	**2-2-D-** Write scientific paper.
2-2-E-Risk evaluation in the related clinical practice.	**2-2-E-** Participate in clinical or laboratory risk management activities as a part of clinical governance.
2-2-F-Planning for performance improvement in Pathology	**2-2-F-** Plan for quality improvement in the field of medical education and practice in Pathology
2-2-G-Creation and innovation in the Pathology.	**2-2-G-** Create / innovate plans, systems, and other issues for improvement of performance in Pathology.
2-2-H-Evidence – based discussion.	**2-2-H-** Present and defend his / her data in front of a panel of experts.
2-2-I-Decision making in different situations related to Pathology	**2-2-I-** Formulate management plans and alternative decisions in different situations in the field of Pathology.

continuous (ARS)	continuous (ILOs)
2-3- Practical skills:	***2/3/1/Practical skills (Patient care :)***
2-3-A- provide extensive level of practical and or laboratory services that can help patient care ,solving health problems and better understanding of the normal structure and function extensive level means in depth understanding from basic science to evidence – based clinical application and possession of skills to manage independently all problems in his field of practice.	**2-3-1-A**- Master practical skills relevant to Pathology for all common techniques and /or experiments.
2-3-B- Master practical/laboratory skills relevant to Pathology.	**2-3-1-B-** Master practical skills with non-routine, laboratory skills and techniques and under increasingly difficult circumstances, while demonstrating, appropriate and effective competency.
	2-3-1-C- Master proficiency in performing available complex laboratory techniques and handling unexpected complications.
	2-3-1-D- Gather essential and accurate information about practical/laboratory skills of the Pathology related conditions.
	2-3-1-E- Make informed decisions about diagnostic laboratory tests for the Pathology related conditions.

	2-3-1-F- Develop and carry out diagnostic and teaching plans for Pathology related conditions / skills. **2-3-1-G-** Use information technology to support practical decisions and students education in all Pathology related practical situations. **2-3-1-H-** Provide health care or any relevant services aimed at preventing the Pathology related health problems. **2-3-1-I-** Lead other professionals, including those from other disciplines, to provide practical/laboratory-focused care in Pathology related conditions.
2-3-C- Write and evaluate reports for situations related to Pathology	**2-3-1-J-** Write competently all forms of professional reports related to Pathology (lab reports, experiments reports,) including reports evaluating these charts and sheets.

continuous (ARS)	continuous (ILOs)
2-4- General skills **2-4-A-** Master Practice-Based Learning and Improvement skills that involves investigation and evaluation and improvements of their own practice, appraisal and assimilation of scientific evidence and risk management.	***2/3/2 General skills*** **2-3-2-A-** Demonstrate the competency of continuous evaluation of different types of histology practice including sectioning and processing of specimens. **2-3-2-B-** Appraise scientific evidence. **2-3-2-C-** Continuously improve his practice based on constant self-evaluation and life-long learning. **2-3-2-D**- Participate in medical audits and research projects. **2-3-2-E-** Practice skills of evidence-based Medicine (EBM). **2-3-2-G-** Design logbooks. **2-3-2-H-** Design guidelines and standard protocols for different techniques and procedures.
2-4-B- Use competently all information sources and	**2-3-2-I-** Apply knowledge of study designs and statistical

technology to improve Pathology practice.	methods to the appraisal of Pathology related studies. **2-3-2-J**- Use information technology to manage information, access on- line medical information; for the important topics.
2-4-C- Master skills of teaching and evaluating others.	**2-3-2-F-** Educate and evaluate students.
2-4-D- Master interpersonal and communication Skills that result in effective information exchange and teaming with other health professionals.	**2-3-2-K**- Master interpersonal and communication skills that result in the effective exchange of information and collaboration with students including:- share in teaching small groups of students. • Present a seminar. • Write a paper. • Teamwork skills. **2-3-2-L-** Create and sustain an ethically sound relationships with students. **2-3-2-M**- Elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.

	2-3-2-N- Work effectively with others as a member or leader of a health care team or other professional group.
2-4-E- Master Professionalism behavior, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse student population.	**2-3-2-O-** Demonstrate respect, compassion, and integrity; a responsiveness to the needs of students and society. **2-3-2-P-** Demonstrate a commitment to ethical principles including provision or withholding of student information. **2-3-2-Q-** Demonstrate sensitivity and responsiveness to others' culture, gender, and disabilities.
2-4-F- Demonstrate the ability to effectively use system resources to provide relevant services and care that is of optimal value. **2-4-G**- Participate in improvement of the education system.	**2-3-2-R-** Work effectively in academic and health care delivery settings and systems related to Pathology including good administer and time management. **2-3-2-S-** Practice cost-effective services provision and resource allocation that does not compromise quality. **2-3-2-T-** Advocate for quality student care. **2-3-2-U-** Design, monitor and evaluate specification of under and post graduate courses and programs.

2-4-H- Demonstrate skills of leading scientific meetings including time management	**2-3-2-V-** Act as a chair man for scientific meetings including time management **2-3-2-R-** Work effectively in academic and health care delivery settings and systems related to Pathology including good administrative and time management.
0- Demonstrate skills of self and continuous learning.	From A to H**.**

II-Program matrix
Knowledge and Understanding

Course	Program covered ILOs				
	2/1/A	2/1/B	2/1/C	2/1/D	2/1/E
Course 1: Medical Statistics		✓		✓	
Course 2: Research methodology		✓			
Course 3 : Medicolegal Aspects and Ethics in Medical Practice and Scientific Research			✓		
Course 4: Pathology 1	✓				
course 5 : Pathology 2	✓				

Intellectual

Course	Program covered ILOs								
	2/2/ A	2/2/ B	2/2/ C	2/2/ D	2/2/ E	2/2/ F	2/2/ G	2/2/ H	2/2/ I
Course 1: Medical Statistics			✓	✓					
Course 2: Research methodology			✓	✓					
Course 3 : Medicolegal Aspects and Ethics in Medical Practice and Scientific Research		✓		✓			✓		
Course 4: Pathology 1	✓	✓							
course 5 : Pathology 2	✓	✓							

Practical Skills (Patient Care)

Course	Program covered ILOs									
	2/3/1/A	2/3/1/B	2/3/1/C	2/3/1/D	2/3/1/E	2/3/1/F	2/3/1/G	2/3/1/H	2/3/1/I	2/3/1/J
Course 1: Medical Statistics			✓				✓			✓
Course 2: Research methodology					✓					✓
Course 3 : Medicolegal Aspects and Ethics in Medical Practice and Scientific Research		✓							✓	
Course 4: Pathology 1	✓									
course 5 : Pathology 2				✓						

General Skills

Course	Program covered ILOs							
	2/3/2/A	2/3/2/B	2/3/2/C	2/3/2/D	2/3/2/E	2/3/2/F	2/3/2/G	2/3/2/H
Course 1: Medical Statistics		✓					✓	
Course 2: Research methodology					✓			✓
Course 3 : Medicolegal Aspects and Ethics in Medical Practice and Scientific Research			✓		✓		✓	
Course 4: Pathology 1								
course 5 : Pathology 2				✓			✓	

General Skills

Course	Program covered ILOs						
	2/3/2/J	2/3/2/K	2/3/2/L	2/3/2/M	2/3/2/N	2/3/2/O	2/3/2/P
Course 1: Medical Statistics	✓				✓		
Course 2: Research methodology			✓				✓
Course 3 : Medicolegal Aspects and Ethics in Medical Practice and Scientific Research			✓	✓			
Course 4: Pathology 1	✓	✓				✓	
course 5 : Pathology 2	✓						

General Skills

Course	Program covered ILOs					
	2/3/2 /Q	2/3/2 /R	2/3/2 /S	2/3/2 /T	2/3/2 /U	2/3/2 /V
Course 1: Medical Statistics	✓				✓	
Course 2: Research methodology		✓			✓	
Course 3 : Medicolegal Aspects and Ethics in Medical Practice and Scientific Research		✓			✓	
Course 4: Pathology 1		✓				
course 5 : Pathology 2		✓			✓	

Annex 7, Additional information:

Department information:

History and overview

Mission

Clinical Diagnostic services

1- Surgical Pathology
2- Cytopathology
3- Gynaecological and Obstetric pathology
4- Immunohistochemical diagnosis

Educational services

Research Services

Affiliated Institutions:

1- Department of Pathology, South Egypt Cancer Institute (SECI).
2- department of Pathology, University of Sohag
3- Department of Pathology, Qena.
4- Department of Pathology, Aswan

Research Services:

The main interest of research in our department is the application of recent pathological research methodologies and discoveries to improving the diagnosis of human disease.
The department provides research opportunities for postgraduates and staff from the department and from any other discipline both from Egypt and abroad.

The main research facilities available at the department:

1- Histopathological examination and evaluation of tissues
2- Cytopathological assessment of exfoliative and FNA cytology

3- Immunohistochemical –based researches

Are you interested in using immunohistochemistry (IHC) for Research purposes?

Availability:

The Department of Pathology has in-house research-specific Immunohistochemistry lab based in the department at Faculty of Medicine and is independent from the diagnostic IHC lab in Assiut University Hospital. Before establishment of the lab a big number of research was conducted in the diagnostic IHC lab (see publications)

Many of the department staff are expert in application of IHC in research studies and welcome any academic or physician interested in conducting research using the IHC technique.

Examples of research areas of expertise using IHC:

- Optimization of antigen retrieval conditions: We are using detergent, enzymatic, or microwave retrieval methods to expose the target antigen to the antibody.
- Titration of the primary antibody concentration.
- Adjusting the experimental conditions of the immunostaining.
- Examine stained tissues for interpretation of immunostaining results by our experts pathologists.
- Double immunostaining.
- Imaging for publications.
- Statistical analysis.

Current Research studies and projects:

1-Molecular and immunophenotypical classification of Breast cancer in Egyptian Patients
2- Molecular characterisation of ovarian epithelial tumours.
3-Others (will be completed soon)

Clinical Diagnostic services

I- Surgical Pathology Diagnostic Services

The Surgical Pathology Service provides complete diagnostic services in adult and paediatric Surgical Pathology for all departments of Assiut University Hospital, Women's heath hospital and Paediatric hospital.
A big and busy surgical pathology lab is based at the Assiut University Hopsital, first floor. The Lab is under supervision of the head of department Prof Etemad Helmy Yassien. Annually the lab receive and diagnose around 3000 case

How long it takes for a pathology specimen to be diagnosed?

It is difficult for patients and physicians to understand how surgical pathology specimen is processed from the time it is received by us till diagnosis. Through the following images we will take you in a tour in our lab to see what happens to a specimen that the surgeon sends to pathology!!!!

2- Cytopathology

The pathology department has a separate lab for processing cytology samples. The lab is based in the first floor in the main Assiut university Hospital with the surgical pathology lab. It is under supervision of Prof Rabab Mohammed Hussien Elghorory. We receive and diagnose around 1500 sample annually.

3- Gynaecological and Obstetric pathology

The pathology department has a separate lab for processing Gynaecological and obstetric specimens The lab is based in the ground floor in the Women's Heath Hospital (one of Assiut university Hospitals) and is under supervision of Prof Fatma M. Badary. We receive and diagnose around 1500 case annually.

4- Immunohistochemical diagnosis (IHC)

A separate IHC diagnostic unite is based at the Assiut University Hospital. The Unite is under supervision of Assistant Prof Heba El Deek

The Immunodiagnosis Services vat the pathology department provides an extensive number of Immunohistochemistry that is essential for accurate diagnosis and tumour typing. IHC is essential for the accurate identification of infectious organisms, distinction between morphologically-similar undifferentiated tumours, separation of benign and malignant neoplasms, and prognostication of malignancies.

Our goals through the use of IHC services are:

1. Conducting highest quality of Immunohistochemical techniques
2. Make our services available for consultation to referring clinicians
3. Make the service available also for scientific research both in translational and clinical fields for better understanding and diagnosis of human diseases.

Example of the available immunohistochemical markers at the IHC unite

Estrogen Receptors
Progesteron Receptors
Her-2 neu
CD3
CD20
CD30
Desmin
Smooth Muscle actin (SMA)
HMB45
CEA
EMA
CK
Vimintin
S100

- Annually the Unite conducts around 200-400 IHC test.
- How much does it coast?
  The service costs 100- 150 EL for Hospital-based patients.
  It coasts about 250- 275 EL for specimens from outside the hospital

Staff member

Prof Dr Dalia El Sers: head of the department
Prof Abd elhady Omar
Prof Saad Atta
Prof Moheb Daneil
Prof Sana Soliman
Prof Mahmoud Nassar
Prof Sana Sotohy
Prof. Nermeen Kamel
Prof Fatma Badary
Prof Rabab Mohammad
Prof Mohammad Galal
Prof Etemad Helmy Yassin
Prof Howayda Ismail
Prof Hesham Saad
Prof Sabah Fadel
Prof Mahmoud Rezk
Dr Moemen Hafez
Dr Hossam Mady
Dr Ola Omran
Dr Eman Ahmad
Dr Abeer Refaiy
Dr Dalia El Sers
Dr Rabab Ahmad
Dr Gehan Elosely
Dr Rania Makboul
Dr Yasser Gamal
Dr Noha Abdel Raheem
Dr Mahmoud Farouk
Dr Hisham Sayed
Dr Heba El Deek
Dr Dalia Badary
Dr Asmaa Mahmoud

Dr Ghada Hosney
Dr Mai El Kabsh

Opportunities within the department:

Pathology is a discipline that dedicated to understanding human diseases. Pathology has deep roots in research that provides the scientific foundation for all medical practice. The pathologist works with all other medical specialties, using the tools of laboratory medicine (histology, cytology, biochemistry, molecular biology, etc.) to provide information essential to problem solving in clinical practice.

All of the diagnostic methods that pathologists now use routinely for patient care our Pathology Department continues in this tradition of advancing health through basic research and through continually applying the newest knowledge and technologies in order to find better ways of diagnosing, preventing, and treating disease.

Pathology offers numerous opportunities for training in biomedical research. Intensive researches are available in collaboration with all clinical and basic departments

Experimental pathology also is available to cover spectrum of basic researches.

Department quality control insurance for completing the program:

We believe that a diverse range of material seen under the appropriate supervision and guidance of an educational supervisor is a superior method of working, towards achieving the required competencies, than the indicative figures below. The College intends to monitor and gather evidence about the optimal workload figures and training periods required to achieve the desired competencies, in conjunction with the relevant methods of assessment for training

(End of the program specification)*