



Program specification for pathology (2023)

Department of Pathology
Degree: Master in Pathology

A. Basic Information:

1. **Programme title:** Master degree in pathology **Code:** PA200
2. **Final award:** Master in Pathology
3. **Programme type:** single double multiple
4. **Responsible department:** Pathology department
5. **Departments involved in the programme:** Pathology department and Histology department
6. **Programme duration:** 2 years
7. **Number of programme courses:** 2 courses
8. **Coordinator:** Dr. Azza Mohamed Abdel Zaher
9. **External evaluators:** Dr. Eman Salah
10. **Programme management team:** All Staff members

B. Professional information:

1. Programme aims:

Graduate of Master Degree in Pathology, the candidate should be able to:

- 1- Demonstrate competency in practical use of basics, methods and tools of scientific research in the field of pathology
- 2- Apply the analytical scientific way in the field of professional practice in pathology.
- 3- Apply the specialized knowledge essential for the practice of pathology according to the international standards and be able to correlate such knowledge with related basic subjects during professional practice of pathology.
- 4- Demonstrate a satisfactory level of awareness as regards the current & common problems and recent updates in the field of pathology.
- 5- Identify and solve common health problems in pathology
- 6- Acquire all essential competencies necessary to enable the graduate to practice in a safe, scientific & ethical approach as well as using efficiently the suitable information technology to improve the professional practice in the field of pathology.
- 7- Exhibit practically effective communication skills that enables exchange of information with other health professionals, colleagues, students and develop the skills of leadership.
- 8- Acquire the skills of decision-making in different situations during the professional practice.
- 9- Allocate & make use properly of the available resources and ensure maintaining them.

10- Show adequate awareness of public health and health policies and actively share in and in assessment of community needs & solve their problems in view of the continuous national and international changes.

11- Manifest appropriate attitude and professionalism that comply with the adopted standards of code of practice.

12- Acquire essential skills of life-long learning and continuous medical education and professional self-development.

2. Intended Learning Outcomes (ILOs):

(a) Knowledge and understanding:

By the end of the study of master program in pathology, the candidate should be able to:

- a.1 Explain theories, basics & recent advances in the field of pathology and the relevant sciences related to the specialty
- a.2 Identify the effects of the environment on the professional practice of pathology and the impact of such practice on it and the welfare of the society
- a.3 Outline the main scientific progress & developments in the field of pathology
- a.4 Identify the basic medico-legal principles that should be applied in the practice of pathology and autopsy
- a.5 Recognize professionally the basics & standards of quality assurance to ensure good practice in the field of pathology
- a.6 Outline the fundamentals and ethics of medical research

(b) Intellectual skills

By the end of the master program in pathology, the candidate should be able to:

- b.1 Appraise & interpret relevant basic information, morphological features and correlate them with essential clinical data to reach a final diagnosis
- b.2 Solve problems in spite of lack of some data through the approach of investigative & analytical thinking by giving a list of differential diagnosis for further advanced investigations
- b.3 Combine different knowledge & relevant information to reach a final diagnosis.
- b.4 Develop a scientific research study and acquire the skills of analysis & interpretation of results and solve problems
- b.5 Evaluate then manage efficiently potential risks that may arise during the practice of pathology in different clinical situations like handling and processing of specimens as well as during performing different essential techniques.
- b.6 Plan for the development of acquisition of skills of basic & modern pathological laboratory techniques as well as principals of surgical pathology
- b.7 Maximize the skills of critical appraisal by presenting a case-study or review in one of the common problems in pathology.
- b.8 Formulate plans that reflects the skills of decision-making in different situations in the field of pathology.

3. Skills:

(c) Professional and practical skills

By the end of the study of master program in pathology, the candidate should be able to:

- c.1 Develop competency on dealing with and reporting gross features of different surgical specimens and correlate such information with the relevant provided clinical data.
- c.2 Practice efficiently basic and modern histological procedures & techniques
- c.3 Develop competency in performance of histochemical, immunohistochemical and essential techniques that can help reaching a final diagnosis, with emphasis on maximizing the use of the available resources and ensure keeping them.
- c.4 Achieve efficiently, on evidence-based information, the right diagnosis after evaluation & revision of the microscopic features of examined tissue sections
- c.5 Write & evaluate professionally a pathology report based on correlation of gross & microscopic features together with supplied clinical data and relevant knowledge.
- c.6 Evaluate & improve current methods and tools existing in practical, laboratory & surgical pathology
- c.7 Develop plans for performing experiments related to the speciality of pathology
- c.8 Counsel others in the lab regarding the basics of essential techniques and issues related to maintain safety and maintenance of available resources.

(d) General and transferable skills

By the end of the study of master program in pathology, the candidate should be able to:

- d.1 Communicate efficiently with senior staff, colleagues, lab technical staff, other health care professionals, students and patients
- d.2 Use efficiently the information technology including data entry & analysis to enhance data management and to achieve improvement of the professional practice
- d.3 Demonstrate skills of self-evaluation and identify personal learning needs to design plans for self-development.
- d.4 Use efficiently different sources of information to get essential and relevant knowledge
- d.5 Develop effective indicators for assessment of performance of others including students, junior staff and technical lab staff.
- d.6 Work effectively in a team, and demonstrate the skills of leadership in various professional contexts.
- d.7 Manage time efficiently and learn to priorities tasks.
- d.8 Show the skills of continuous & self-learning

3. Program Academic Reference Standards:

- Minia faculty of medicine adopted the general national academic reference standards provided by the national authority for quality assurance and accreditation of education (NAQAAE) for all postgraduate programs. (faculty council Degree No.6854, in its session No.177 Dated :18\5\2009) (Annex1).

-Minia faculty of medicine has developed the academic standards (ARS) for master program and was approved in faculty council decree No. 7528, in its session NO.191, dated:15-3-2010, last update 20-2-2023 (Annex 1)

- Then, Pathology department has developed intended learning outcomes (ILOS) for Master program in Pathology and the date of last update by department council was 12-3-2023.

4. Programme structure:

Programme duration: 2 years

Subject	Hour/week		
	Lectures	Practical	Clinical
First part			
Histology for pathologists	4	2	2
Second part			
Pathology (General and systemic pathology)	2	4	2

5. Programme courses

Course Title	Total No. of hours	No. of hours /week			Program ILOs Covered
		Lect.	Practical	Tutorial	
FIRST PART (Level of course):					
Histology for pathologists	8	4	2	-	a.1 a.2 c.6 c.7 c.8
Training programs and workshops, field visits, seminars& other scientific activities	Continuous				a.6 b.4 b.6 b.7 d.1 d.2 d.3 d.6
SECOND PART (Level of course):					
Pathology (General and systemic pathology)	8	2	4	2	a.3 a.4 b.8 c.1 c.2 c.3 c.4
Training programs and workshops, field visits, seminars& other scientific activities	Continuous				a.5 a.6 b.1 b.2 b.3 b.4 b.5 b.6 b.7 c.5 d.1 d.2 d.3 d.4 d.5 d.6 d.7 d.8

6. programme admission requirements:

A-Candidates should have either:

1. MBBCH degree from any Egyptian faculty of medicine or
2. Equivalent degree from medical schools abroad approved by the Ministry of Higher education.

B- Candidate should complete the house officer training/internship year.

C- Follows postgraduate regulatory rules of postgraduate studies of Minia Faculty of medicine.

7- Regulations for progression and programme completion

Duration of program is 2 years, starting from registration till acceptance of the thesis; divided to:

First Part: (≥12 months):

- All courses as specified in the internal by law
 - At least six months after registration should pass before the student can ask for examination in the 1st part.
 - Two sets of exams: 1st in May — 2nd in October.
 - For the student to pass the first part exam, a score of at least 60% in each curriculum is needed. Those who fail in one curriculum need to re-exam it only.

Thesis/essay:

- Start from registration and should be completed, and accepted at least after passing 6 months from protocol registration till one month before allowing to enter 2nd part final exam.
- Accepting the thesis occurs after publishing one thesis-based paper in local or international journal and this is enough to pass this part.

Second Part: (≥12months):

- Program related specialized Courses.
- Actual work for 12 months as a demonstrator /trainee in the department of Pathology.
- The student should pass the 1st part before asking for examination in the 2nd part.
- Two sets of exams: 1st in October — 2nd in April.
- For the student to pass the second part exam, a score of at least 60% in each curriculum is needed (with at least 40% in the written exam).
- Fulfillment of the requirements in each course as described in the template and registered in the **log book** is a prerequisite for candidates to be assessed and undertake part 1 and part 2 examinations; as following:
 - a. Training courses along the duration of the program
 - b. Seminars at least 10 seminars
 - c. Thesis discussion at least 3 discussions
 - d. Workshops

- e. Conference attendance at least one conference
- f. Other scientific activities requested by the department

8- Teaching and learning methods:

- 1- 2 hours of lectures per week throughout the course.
- 2-2hours of practical training and demonstration weekly throughout the course.
- 3-Self training activities such as use of internet and multimedia.
- 4- Regular weekly seminars, presentations and assignments.
- 5-Training courses & workshops.
- 6-Thesis discussion.
- 7-Conference attendance

Teaching and learning methods	The assessed ILOs
Lectures	a1,a2, a3,a4,a5,a6 b1,b2,b3,b4,b5,b6,b7,b8
Practical sessions	C1,C2,C5,C6 ,C7,C8
<ul style="list-style-type: none"> - Self-training activities -seminars, presentations and assignments. -training courses & workshops. -Thesis discussion. -Conference attendance 	C1,C2,C5,C6 ,C7,C8, d1,d2,d3,d4,d5,d6,d7,d8

9 -Methods of student assessment:

Method of assessment	The assessed ILOs
1. Research (Thesis)	a1,a2, a3,a4,a5,a6,b1,b2,b3,b4,b5,b6,b7,b8 C1,C2,C5,C6 ,C7,C8, d1,d2,d3,d4,d5,d6,d7,d8
2. Written Exams: <ul style="list-style-type: none"> • Short essay • MCQs • Complete • True or false and correct the wrong • Commentary 	a1,a2, a3,a4,a5,a6,b1,b2,b3,b4,b5,b6,b7,b8
3. Practical/Clinical Exams Slide exam, Data show and gross stations (OSPE)	C1,C2,C5,C6 ,C7,C8
4. Seminars, presentations, assignments	C1,C2,C5,C6 ,C7,C8, d1,d2,d3,d4,d5,d6,d7,d8
5. Oral Exams	a1,a2, a3,a4,a5,a6,b1,b2,b3,b4,b5,b6,b7,b8

Weighing of assessment:

It is mandatory to pass all the papers of written exams separately

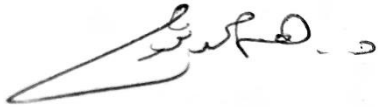
Course	written	Oral	Practical Histology	Practical Pathology	Total
Histology for Pathologists	120	90	45	45	300
General and systemic Pathology	280 (40%) 1st paper 140 2nd paper 140	210	210		700

10- Evaluation of programme intended learning outcomes:

Evaluator (By whom)	Method/tool	Sample
1. Senior students (Students of last year)	Questionnaires by Quality Assurance Unit	All the students
2. Stakeholders	Questionnaires	10 at least
3. external examiners	Questionnaires by pathology department	1 at least

- **Program Coordinators:**
Dr. Azza Mohamed Abdel Zaher

Head of Department: Professor /Heba Mohamed Tawfik



Date of program specifications 1st approval by department council: 2020.

Date of last update & approval by department council: ...12/3/2023...

Annex (1): Comparison between National Academic Quality Assurance & Accreditation (NAQAAE) General Academic Reference Standards (GARS) and Faculty Academic Reference Standards (ARS)

NAQAAE برامج الماجستير	Faculty Master (MSC) Program
1. مواصفات الخريج: خريج برنامج الماجستير في أي تخصص يجب أن يكون قادرا على:	1. Graduate Attributes: Graduate of master (MSC) program should be able to:
1.1. إجادة تطبيق أساسيات ومنهجيات البحث العلمي واستخدام أدواته المختلفة.	1.1. understanding and applying of basics of research method and research tools
2.1. تطبيق المنهج التحليلي واستخدامه في مجال التخصص	2.1. Critically analyze, evaluate, and effectively communicate findings, theories, and methods
3.1. تطبيق المعارف المتخصصة و دمجها مع المعارف ذات العلاقة في ممارسته المهنية.	3.1. Apply integrated professional and general knowledge in his scholarly field and at the interface between different fields.
4.1. إظهار وعيا بالمشاكل الجارية والرؤى الحديثة في مجال التخصص.	4.1. Demonstrate awareness of community health needs related to the field of specialization by understanding the beneficial interaction with the society to improve quality of life
5.1. تحديد المشكلات المهنية وإيجاد حلول لها.	5.1. Demonstrating proficiency, required to solve current complex problems in his scholarly field.
6.1. إتقان نطاق مناسب من المهارات المهنية المتخصصة واستخدام الوسائل التكنولوجية المناسبة بما يخدم ممارسته المهنية.	6.1. Master a variety of technical skills in his scholarly field and expert relevant equipment, technology, and software.
7.1. لتواصل بفاعلية والقدرة على قيادة فرق العمل.	7.1. Gain leadership skills and be able to communicate efficiently with colleagues and get the best results.

8.1. اتخاذ القرار في سياقات مهنية مختلفة.	8.1. Take professional situational decisions and logically support them.
9.1.1. توظيف الموارد المتاحة بما يحقق أعلى استفادة و الحفاظ عليها	9.1.1. Optimal use of available resources to achieve research or best patient health care and ensure its maintenance.
10.1. إظهار الوعي بدوره في تنمية المجتمع والحفاظ على البيئة في ضوء المتغيرات.	10.1. Demonstrate awareness of its role in community health development and
11.1. التصرف بما يعكس الالتزام بالنزاهة والمصداقية والالتزام بقواعد المهنة.	11.1. Exhibit ethical behavior that reflect commitment to the code of practice
12.1. تنمية ذاته أكاديميا ومهنيا و قادرا علي التعلم المستمر.	12.1. demonstrate the ability to sustain a lifelong personal and professional growth.
2. المعايير القياسية العامة: NAQAAE General Academic Reference Standards “GARS” for Master Programs	2. Faculty Academic Reference Standards (ARS) for Master Program
2.1. المعرفة والفهم: باتتهاء دراسة برنامج الماجستير يجب أن يكون بكل من: الخريج قادرا علي الفهم والدراية	2.1. Knowledge & Understanding: Upon completion of the Master Program , the graduate should have sufficient knowledge and understanding of:
2.1.1. النظريات والأساسيات والحديث من المعارف في مجال التخصص والمجالات ذات العلاقة	2.1.1. Understand the scientific basis and modern knowledge in the field of specialization and related medical sciences
2.1.2. التأثير المتبادل بين الممارسة المهنية وانعكاسها علي البيئة	2.1.2. The mutual influence of professional practice on work environment, working conditions, and job characteristics.
2.1.3. التطورات العلمية في مجال التخصص	2.1.3. Scientific developments in the field of specialization
2.1.4. المبادئ الأخلاقية والقانونية للممارسة المهنية في مجال التخصص	2.1.4. Recognize basics of medico-legal aspects of practice, malpractice and avoid common medical errors

2.1.5. مبادئ وأساسيات الجودة في الممارسة المهنية في مجال التخصص	2.1.5. Quality principles in the scholarly field
2.1.6. أساسيات وأخلاقيات البحث العلمي	2.1.6. Basis of research methodology and medical ethics.
2.2. المهارات الذهنية: بانتهاج دراسة برنامج الماجستير يجب أن يكون الخريج قادرا على:	2.2. Intellectual Skills: Upon completion of the master program, the graduate should be able to:
2.2.1. تحليل وتقييم المعلومات في مجال التخصص والقياس عليها لحل المشاكل	2.2.1. Use judgment skills for analytical and critical problem solving
2.2.2. حل المشاكل المتخصصة مع عدم توافر بعض المعطيات	2.2.2. Capable of integrating knowledge and dealing with complex subjects to solve problems
2.2.3. الربط بين المعارف المختلفة لحل المشاكل المهنية	2.2.3. Be capable of integrating research results and/or results of history, physical and laboratory test findings to solve a research or a clinical problem.
2.2.4. إجراء دراسة بحثية و/أو كتابة دراسة علمية منهجية حول مشكلة بحثية	2.2.4. Effectively apply research methods and carrying out a medical research thesis
2.2.5. تقييم المخاطر في الممارسات المهنية في مجال التخصص	2.2.5. Be aware of risk management principles, and patient safety.
2.2.6. التخطيط لتطوير الأداء في مجال التخصص	2.2.6. Establish goals, commitments, and strategies for improved professional performance in the field of specialty
2.2.7. اتخاذ القرارات المهنية في سياقات مهنية متنوعة.	2.2.7. Take professional situational decisions and logically support them.
3.2. المهارات المهنية: بانتهاج دراسة برنامج الماجستير يجب أن يكون الخريج قادرا على:	3.2. Professional Skills: Upon completion of the master program, the graduate must be able to:
3.2.1. إتقان المهارات المهنية الأساسية والحديثة في مجال التخصص.	3.2.1. Master the basic and some advanced professional skills in his scholarly field.

3.2.2 كتابة و تقييم التقارير المهني.	3.2.2. Write and evaluate medical or scientific reports
2.3.3 تقييم الطرق والأدوات القائمة في مجال التخصص	3.2.3. Assess and evaluate technical tools during research
4.2. المهارات العامة والمنتقلة : بانتهاؤ دراسة برنامج الماجستير يجب أن يكون الخريج قادرا على:	4.2. General and transferable skills Upon completion of the master program, the graduate should be able to:
4.2.1. التواصل الفعال بأنواعه المختلفة	4.2.1. Communicate effectively using a written medical record, electronic medical record, or other digital technology.
4.2.2. استخدام تكنولوجيا المعلومات بما يخدم الممارسة المهنية	4.2.2. Use of information technology (computer to create, process, store, secure and exchange electronic data) in the field of medical practice.
4.2.3. لتقييم الذاتي وتحديد احتياجاته التعليمية الشخصية	4.2.3. Assess himself and identify personal learning needs
4.2.4. استخدام المصادر المختلفة للحصول على المعلومات والمعارف	4.2.4. Use various sources for information (physical and digital sources).
4.3.5. وضع قواعد ومؤشرات تقييم أداء الآخرين	4.2.5. Setting indicators for evaluating the performance of others
4.2.6. العمل في فريق، وقيادة فرق في سياقات مهنية مختلفة	4.2.6. Work in a team, and Apply leadership skills to enhance team functioning, the learning environment, and/or the health care delivery system
4.2.7. إدارة الوقت بكفاءة	4.2.7. Manage time efficiently
4.2.8. التعلم الذاتي والمستمر	4.2.8. Demonstrate skills of self-learning and lifelong learning needs of medical profession.

Annex (2): ARS VS. MSc PROGRAM of Pathology

MSc Program of pathology	2. Faculty Academic Reference Standards (ARS) for Master Program	2.المعايير القياسية العامة: NAQAAE General Academic Reference Standards “GARS” for Master Programs
	2.1. Knowledge & Understanding: Upon completion of the Master Program in....., the graduate should have sufficient knowledge and understanding of:	2.1. المعرفة والفهم: بانتهاج دراسة برنامج الماجستير يجب أن يكون الخريج قادرا علي الفهم والدراية بكل من:
a.1 Explain theories, basics & recent advances in the field of pathology and the relevant sciences related to the specialty	2.1.1. Understand the scientific basis and modern knowledge in the field of specialization and related medical sciences	2.1.1. النظريات والأساسيات والحديث من المعارف في مجال التخصص والمجالات ذات العلاقة
a.2 Identify the effects of the environment on the professional practice of pathology and the impact of such practice on it and the welfare of the society	2.1.2. The mutual influence of professional practice on work environment, working conditions, and job characteristics.	2.1.2. التأثير المتبادل بين الممارسة المهنية وانعكاسها علي البيئة
a.3 Outline the main scientific progress & developments in the field of pathology	2.1.3. Scientific developments in the field of specialization	2.1.3. التطورات العلمية في مجال التخصص
a.4 Identify the basic medico-legal principles that should be applied in the practice of pathology and autopsy	2.1.4. Recognize basics of medico-legal aspects of practice, malpractice and avoid common medical errors	2.1.4. المبادئ الأخلاقية والقانونية للممارسة المهنية في مجال التخصص
a.5 Recognize professionally the basics & standards of quality assurance to ensure good practice in the field of pathology	2.1.5. Quality principles in the scholarly field	2.1.5. مبادئ وأساسيات الجودة في الممارسة المهنية في مجال التخصص
a.6 Outline the fundamentals and ethics of medical research	2.1.6. Basis of research methodology and medical ethics.	2.1.6. أساسيات وأخلاقيات البحث العلمي

	2.2. Intellectual Skills: Upon completion of the master program of....., the graduate should be able to:	2.2.المهارات الذهنية: بانتهاج دراسة برنامج الماجستير يجب أن يكون الخريج قادرا على:
b.1 Appraise & interpret relevant basic information, morphological features and correlate them with essential clinical data to reach a final diagnosis	2.2.1. Use judgment skills for analytical and critical problem solving	2.2.1. تحليل وتقييم المعلومات في مجال التخصص والقياس عليها لحل المشاكل
b.2 Solve problems in spite of lack of some data through the approach of investigative & analytical thinking by giving a list of differential diagnosis for further advanced investigations	2.2.2. Capable of integrating knowledge and dealing with complex subjects to solve problems	2.2.2. حل المشاكل المتخصصة مع عدم توافر بعض المعطيات
b.3 Combine different knowledge & relevant information to reach a final diagnosis.	2.2.3. Be capable of integrating research results and/or results of history, physical and laboratory test findings to solve a research or a clinical problem.	2.2.3 الربط بين المعارف المختلفة لحل المشاكل المهنية
b.4 Develop a scientific research study and acquire the skills of analysis & interpretation of results and solve problems	2.2.4. Effectively apply research methods and carrying out a medical research thesis	2.2.4. إجراء دراسة بحثية و/أو كتابة دراسة علمية منهجية حول مشكلة بحثية
b.5 Evaluate then manage efficiently potential risks that may arise during the practice of pathology in different clinical situations like handling and processing of specimens as well as during performing different essential techniques.	2.2.5. Be aware of risk management principles, and patient safety.	2.2.5. تقييم المخاطر في الممارسات المهنية في مجال التخصص
b.6 Plan for the development of acquisition of skills of basic & modern pathological laboratory techniques as well as principals of surgical pathology	2.2.6. Establish goals, commitments, and strategies for improved professional performance in the field of specialty	2.2.6. التخطيط لتطوير الأداء في مجال التخصص
b.7 Maximize the skills of critical appraisal by presenting a case-study or review in one of		

the common problems in pathology.		
b.8 Formulate plans that reflects the skills of decision-making in different situations in the field of pathology.	2.2.7. Take professional situational decisions and logically support them.	2.2.7. اتخاذ القرارات المهنية في سياقات مهنية متنوعة.
	3.2. Professional Skills: Upon completion of the master program of....., the graduate must be able to:	3.2. المهارات المهنية: بانتهاؤ دراسة برنامج الماجستير يجب أن يكون الخريج قادرا على:
c.1 Develop competency on dealing with and reporting gross features of different surgical specimens and correlate such information with the relevant provided clinical data. c.2 Practice efficiently basic and modern histological procedures & techniques c.3 Develop competency in performance of histochemical, immunohistochemical and essential techniques that can help reaching a final diagnosis, with emphasis on maximizing the use of the available resources and ensure keeping them. c.4 Achieve efficiently, on evidence-based information, the right diagnosis after evaluation & revision of the microscopic features of examined tissue sections	3.2.1. Master the basic and some advanced professional skills in his scholarly field.	3.2.1. إتقان المهارات المهنية الأساسية والحديثة في مجال التخصص.
c.5 Write & evaluate professionally a pathology report based on correlation of gross & microscopic features	3.2.2. Write and evaluate medical or scientific reports	3.2.2 كتابة و تقييم التقارير المهني.

together with supplied clinical data and relevant knowledge.		
c.6 Evaluate & improve current methods and tools existing in practical, laboratory & surgical pathology c.7 Develop plans for performing experiments related to the speciality of pathology c.8 Counsel others in the lab regarding the basics of essential techniques and issues related to maintain safety and maintenance of available resources	3.2.3. Assess and evaluate technical tools during research	2.3.3 تقييم الطرق والأدوات القائمة في مجال التخصص
	4.2. General and transferable skills Upon completion of the master program of....., the graduate should be able to:	4.2. المهارات العامة والمنتقلة : بانتهاء دراسة برنامج الماجستير يجب أن يكون الخريج قادرا على:
d.1 Communicate efficiently with senior staff, colleagues, lab technical staff, other health care professionals, students and patients	4.2.1. Communicate effectively using a written medical record, electronic medical record, or other digital technology.	4.2.1. التواصل الفعال بأنواعه المختلفة
d.2 Use efficiently the information technology including data entry & analysis to enhance data management and to achieve improvement of the professional practice	4.2.2. Use of information technology (computer to create, process, store, secure and exchange electronic data) in the field of medical practice.	4.2.2. استخدام تكنولوجيا المعلومات بما يخدم الممارسة المهنية
d.3 Demonstrate skills of self-evaluation and identify personal learning needs to design plans for self-development.	4.2.3. Assess himself and identify personal learning needs	4.2.3. لتقييم الذاتي وتحديد احتياجاته التعليمية الشخصية
d.4 Use efficiently different sources of information to get essential and relevant knowledge	4.2.4. Use various sources for information (physical and digital sources).	4.2.4. استخدام المصادر المختلفة للحصول على المعلومات والمعارف

d.5 Develop effective indicators for assessment of performance of others including students, junior staff and technical lab staff.	4.2.5. Setting indicators for evaluating the performance of others	4.3.5. وضع قواعد ومؤشرات تقييم أداء الآخرين
d.6 Work effectively in a team, and demonstrate the skills of leadership in various professional contexts	4.2.6. Work in a team, and Apply leadership skills to enhance team functioning, the learning environment, and/or the health care delivery system	4.2.6. العمل في فريق، وقيادة فرق في سياقات مهنية مختلفة
d.7 Manage time efficiently and learn to priorities tasks.	4.2.7. Manage time efficiently	4.2.7. إدارة الوقت بكفاءة
d.8 Show the skills of continuous & self-learning	4.2.8. Demonstrate skills of self-learning and lifelong learning needs of medical profession.	4.2.8. التعلم الذاتي والمستمر

نموذج رقم (11ب)

MSC in Pathology	مسمى البرنامج
PA 200	كود البرنامج

جامعة/أكاديمية :جامعة المنيا.....
 كلية / معهد :كلية الطب.....
 قسم:الباثولوجي....

A. Matrix of Coverage of MSC Program ILOs By Course

Courses (List of courses in 1 st and 2 nd parts)	Program Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
1. Histology for pathologists	a1,a2,	b1,b2	c1,c2,c3,c4	d1,d2,d3
2. General and systemic pathology	a3, a4,a5,a6	b3,b4,b5,b6,b7,b8	c1,c2,c3,c5,c6,c7,c8	,d4,d5,d6,d7,d8



B. Matrix of Coverage of Course ILOs by Methods of teaching and learning

Methods of Teaching & Learning	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
Lecture	A1,A2, A3,A4,A6, A7,A8	B1,B2,B3,B4,B5, B6,B8		
Practical			C1,C2,C3,C4,C5 ,C6 ,C7,C8	D1,D2,D3,D4, D5,D6,D7,D8
Presentation/seminar Journal club Thesis discussion Training courses & workshops				D1,D2,D3,D4, D5,D6,D7,D8



C. Matrix of Coverage of Course ILOs by Methods of Assessment

Methods of Assessment	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
Written exam	A1,A2, A3,A4,A6, A7,A8	B1,B2,B3,B4, B5,B6,B8		
Practical exam			C1,C2,C3,C4,C5, C6 ,C7,C8	D1,D2,D3,D4,D5
Oral Exam	A1,A2, A3,A4,A6, A7,A8	B1,B2,B3,B4, B5,B6,B8, B9,B10		D1,D2,D3,D4,D5,D6,D7,D8
Seminars, presentations, Assignments, Logbook assessment				D1,D2,D3,D4,D5,D6,D7,D8



نموذج رقم (12)

Course Specifications of Histology for master's degree (1st part) in Pathology

University: Minia

Faculty: Medicine

Department: Histology and cell biology

1.Course Information		
• Academic Year/level: Master's degree (1 st part) in Pathology.	Course Title: • Histology and Cell Biology.	Code: PA200 •
• Number of teaching hours: 120 hours - Lectures: Total of 60 hours; 2 hours/week - Practical/clinical: Total of 60 hours., 2 hours/week		
2. Overall Aims of the course	The aim of this course is to provide the postgraduate student with the medical knowledge and skills essential for the practice of specialty and necessary to gain further training and practice through providing: 1- Essential histological knowledge according to the international standards. 2- Ethical principles related to the practice in this specialty. 3- Active participation in community needs assessment and problem-solving. 4- Maintenance of research interests and abilities.	
3. Intended learning outcomes of course (ILOs): <i>Upon completion of the course, the student should be able to:</i>		

<p>A- Knowledge and Understanding</p>	<p>A.1 Define basics and know the cell structure, function, and its specific specialization.</p> <p>A.2 Identify the basics, methodology, and applications in the fields of histochemistry and immunocytochemistry.</p> <p>A.3 Enumerate different histological stains.</p> <p>A.4 Identify types of microscopy and microtechniques.</p> <p>A.5 Discuss the histological structure of different body tissues and organs.</p>
<p>B- Intellectual Skills</p>	<p>B.1. Correlate the histological structure of different cells with their function under normal conditions.</p> <p>B.2 Identify different types of histological and histochemical techniques .</p> <p>B.3 Compare different types of microscopes with their uses</p> <p>B.4 Evaluate the histological structure different types of cells with their function and related common diseases.</p>
<p>C- Professional and Practical Skills</p>	<p>By the end of the course, the student should have the ability to:</p> <p>C.1 practice the basic and modern professional skills in the field of Histology .</p> <p>C.2 Perform the steps of microtechnique for paraffin section preparation perfectly and independently.</p> <p>C.3 prepare general histological stains; H&E independently</p> <p>C.4 Observe the steps of immunohistochemistry under supervision.</p> <p>C.5. Manipulate a wide variety of lab animals.</p> <p>C.6. Photograph the microscopic fields through computer connected camera, with analyzing these pictures using image analysis & morphometry efficiently and write comments.</p>

D- General and transferable Skills	<p>By the end of the course, the student should have the ability to:</p> <p>D.1 Communicate effectively by all types of effective communication.</p> <p>D.2 Adopt information technology to serve the development of professional practice.</p> <p>D.3 Assess himself and follow learning needs.</p> <p>D.4 Use different sources to obtain information and knowledge</p> <p>D.5 Develop rules and indicators for assessing the performance of others.</p> <p>D.6 cooperate with colleagues.</p> <p>D.7 Respect dealing with practical specimens, resources, copyrights and avoid plagiarism</p>
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4. Course Contents

Topic	Lecture hours/week	Practical/Clinical hours/week	Total No. of hours
1. Introduction to basic histological technique	4	4	8
2. Epithelium	4	4	8
3. Connective tissue	4	4	8
4. Bone	4	4	8

5. Cartilage	2	2	4
6. lymphatic system (part 1)	2	2	4
7.lymphatic system (part 2)	2	2	4
8. upper respiratory tract	2	2	4

9.Lower Respiratory tract	2	2	4
10. Upper GIT Tract	4	4	8
11. Lower GIT Tract	4	4	8
12. GIT glands	4	4	8
13. Urinary system (part 1)	4	4	8
14. Urinary system (part 2)	4	4	8
15. Male genital system (part 1)	2	2	8
16. Male genital system (part 2)	2	2	8
17. Female genital system (part 1)	2	2	8
18. Female genital system (part 2)	2	2	4
19. Endocrine system	2	2	4
20. Skin	4	4	8
Total	60	60	120
5. Teaching and Learning Methods	5.1- Lectures: live, online, and pre-recorded video lectures 5.2- Practical lessons (slide examination, stain preparation, and powerpoint slide examination). 5.3- Seminars. 5.4- Workshops and participating in scientific conferences.		
6. Student Assessment methods			
	6. 1- log book 6.2- Written exams: Short essay: to assess knowledge		

<p>A. Student Assessment Methods</p>	<p>Problem solving: to Asses intellectual skills MCQ: to assess knowledge and intellectual skills Online quizzes</p> <p>6.3- Practical Exams: to assess practical 6.4- Oral Exams: to assess knowledge, understanding, attitude, and communication.</p>
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B. Weighting of Each Method of Assessment	Type of Assessment	Degree	%
	Written examination	120	(40%)
	Practical examination (45 histological exam, 45 pathological exam)	90 (30%)	(30%)
	Oral examination.	90	(30%)
	Total	(300)	
8. List of References			
A. Course notes	<ul style="list-style-type: none"> - Department Books, and notes. -Logbook 		

B. Essential books (Text Books):

List of references

8.1- Course notes: - Department Books, and notes.

-Logbook

8.2- Essential books (textbooks)

- Junqueira, Carneiro and Kelly (2019): Basic Histology, 11th ed. Librerie du liban and lang buruit, London, New York.
- Cormack, H.D. (1987): A text book of Histology, 9th edition, Lippincott, J.B. Company, Philadelphia.
 - Ovale, W.K. and Nahirney, P.C., 2020. *Netter's Essential Histology E-Book: With Correlated Histopathology*. Elsevier Health Sciences.
- Neelam, V., 2014. Inderbir Singh's Textbook of Human Histology: with Color atlas and Practical guide Seventh Edition/Neelam Vasudeva.
- Young, B., Woodford, P. and O'Dowd, G., 2013. *Wheater's functional histology: A text and color atlas 6th Edn.*
- *Essentials of Genetics 10th Edition:* William Klug (Author), Michael Cummings (Author), Charlotte Spencer (Author)
- Stem cells & Tissue culture:
- Meyer, U., Meyer, T., Handschel, J. and Wiesmann, H.P. eds., 2009. *Fundamentals of tissue engineering and regenerative medicine*. Springer Science & Business Media.
- Cell biology: **(eBooks)**
- Cell Biology/Introduction/Cell size - Wikibooks, open books for an open world:
https://en.wikibooks.org/wiki/Cell_Biology
- **Cells and genomes: (eBooks)**
https://www.academia.edu/5121556/INTRODUCTION_TO_THE_CELL_part_1_eBooks
- Alomari, M., 2004. Color Atlas of Cytology, Histology and Microscopic Anatomy.
- **Dr. Jastrow's Light- and Electron Microscopic Atlas:**
<http://www.drjastrow.de/WAI/EM/EMAtlas.html>
- Eroschenko, V.P. and Di Fiore, M.S., 2013. *DiFiore's atlas of histology with functional correlations*. Lippincott Williams & Wilkins.

For practical:

C. Periodicals	Egyptian Journal of Histology Cell and tissue research
Websites	http://www.histology-world.com http://histo.life.illinois.edu/histo/atlas/slides.php
9- Facilities required for teaching and learning	<ol style="list-style-type: none">1. Histology and Cell Biology research laboratory equipped with skill tools.2. Classrooms for theoretical lectures and tutorials.

Course coordinator: Dr. Soha Abdel-Kawy

Head of Department:

Professor Dr. / Seham Abdel Raouf Abdel Aleem

Seham Abd El-Raouf Abd El-Aleem

Date of the last update:3\6\2023

نموذج رقم (11أ)

Histology and Cell Biology	مسمى المقرر
-----PA200----- -	كود المقرر

.....جامعة/أكاديمية: جامعة المنيا
.....كلية / معهد: كلية الطب

A. Matrix of Coverage of Course ILOs By Contents

Contents (List of course topics)	Week No.	Intended Learning Outcomes (ILOs)			
		A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
		A	B	C	D
1. Introduction to basic histological technique		A2,A3,A4	B2,B3	C1,C2,C3,C4,C5,C6	D1,D2,D3,D4,D5,D6.D7
2. Epithelium		A1,A5	B1,B4	C1,C2,C3,C4,C5,C6	D1,D2,D3,D4,D5,D6.D7
3. Connective tissue		A1,A5	B1,B4	C1,C2,C3,C4,C5,C6	D1,D2,D3,D4,D5,D6.D7
4. Bone		A1,A5	B1,B4	C1,C2,C3,C4,C5,C6	D1,D2,D3,D4,D5,D6.D7
5. Cartilage		A1,A5	B1,B4	C1,C2,C3,C4,C5,C6	D1,D2,D3,D4,D5,D6.D7
6. lymphatic system (part 1)		A1,A5	B1,B4	C1,C2,C3,C4,C5,C6	D1,D2,D3,D4,D5,D6.D7
7.lymphatic system (part 2)		A1,A5	B1,B4	C1,C2,C3,C4,C5,C6	D1,D2,D3,D4,D5,D6.D7
8. upper respiratory tract		A1,A5	B1,B4	C1,C2,C3,C4,C5,C6	D1,D2,D3,D4,D5,D6.D7
9.Lower Respiratory tract		A1,A5	B1,B4	C1,C2,C3,C4,C5,C6	D1,D2,D3,D4,D5,D6.D7
10. Upper GIT Tract		A1,A5	B1,B4	C1,C2,C3,C4,C5,C6	D1,D2,D3,D4,D5,D6.D7

11. Lower GIT Tract		A1,A5	B1,B4	C1,C2,C3,C4,C5,C6	D1,D2,D3,D4,D5,D6.D7
12. GIT glands		A1,A5	B1,B4	C1,C2,C3,C4,C5,C6	D1,D2,D3,D4,D5,D6.D7
13. Urinary system (part 1)		A1,A5	B1,B4	C1,C2,C3,C4,C5,C6	D1,D2,D3,D4,D5,D6.D7
14. Urinary system (part 2)		A1,A5	B1,B4	C1,C2,C3,C4,C5,C6	D1,D2,D3,D4,D5,D6.D7
15. Male genital system (part 1)		A1,A5	B1,B4	C1,C2,C3,C4,C5,C6	D1,D2,D3,D4,D5,D6.D7
16. Male genital system (part 2)		A1,A5	B1,B4	C1,C2,C3,C4,C5,C6	D1,D2,D3,D4,D5,D6.D7
17. Female genital system (part 1)		A1,A5	B1,B4	C1,C2,C3,C4,C5,C6	D1,D2,D3,D4,D5,D6.D7
18. Female genital system (part 2)		A1,A5	B1,B4	C1,C2,C3,C4,C5,C6	D1,D2,D3,D4,D5,D6.D7
19. Endocrine system		A1,A5	B1,B4	C1,C2,C3,C4,C5,C6	D1,D2,D3,D4,D5,D6.D7
20. Skin		A1,A5	B1,B4	C1,C2,C3,C4,C5,C6	D1,D2,D3,D4,D5,D6.D7

Seham Abd El-Raouf Abd El-Aleem

B.Matrix of Coverage of Course ILOS by Methods of teaching and learning

Methods of Teaching & Learning	Intended Learning Outcomes (ILOS)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
Lecture	A1, A 2, A 3, A 4, A 5	B1,B2,B3,B4		
Practical			C1,C2,C3,C4,C5 ,C6	
Presentation/seminar Journal club Thesis discussion Training courses & workshops				D1,D2,D3,D4,D5,D6, D7

Seham Abd El-Raouf Abd El-Aleem

C.Matrix of Coverage of Course ILOs by Methods of Assessment

Methods of Assessment	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
Written exam	A1,A2,A3,A4,A5,	B1,B2,B3,B4		
Practical exam			C1,C2,C3,C4,C5.C6	
Oral Exam	A1,A2,A3,A4,A5,	B1,B2,B3,B4		

Seham Abd El-Raouf Abd El-Aleem

**Blueprint of Histology and cell biology department for
candidates of master degree “first part” examination paper
(120 marks)**

	Topic	Hours	Knowledge %	Intellectual %	% of topic	N of items per topic	Knowledge		Intellectual		Marks
							N of items	mark	N of items	mark	
1	1. Introduction to basic histological technique	4	60	40	6.6						8
2	2. Epithelium	4	50	50	6.6						8
3	. Connective tissue	4	50	50	6.6						8
4	Bone	4	50	50	6.6						8
5	. Cartilage	2	50	50	3.3						4
6	lymphatic system	4	50	50	6.6						8
7	Respiratory tract	4	50	50	6.6						8
8	GIT Tract	12	50	50	20						24
9	Urinary system	8	50	50	13.3						16
10	Male genital system	4	50	50	6.6						8
11	Female genital system	4	50	50	6.6						8
12	endocrine	2	50	50	3.3						4
13	skin	4	50	50	6.6						8
	Total	60			100 %						120

Seham Abd El-Raouf Abd El-Aleem

Course Specifications of Pathology
2nd Part of Master Program of Pathology
2022-2023

University: Minia

Faculty: Medicine

Department responsible for delivery of the course: Pathology

Program on which the course is given: MSC of pathology

1. Course Information		
<ul style="list-style-type: none"> • Academic Year/level: 2nd part of MSC in pathology 	<ul style="list-style-type: none"> • Course Title: General & systemic pathology. 	<ul style="list-style-type: none"> • Code: PA 200
<ul style="list-style-type: none"> • Number of teaching hours: • Lectures: Total of 48 hours; 2 hours/week • Practical/clinical: Total of 24 hours; 1 hours/week 		
2. Overall Aims of the course	<p><i>By the end of the course the student must be able to:</i></p> <ol style="list-style-type: none"> 1. Discuss the basic facts, concepts, theories and main scientific advances & developments in the field of pathology and related areas in basic sciences. 2. Demonstrate competency in application of principles, approaches & ethics of scientific research and be able to use its different tools to solve problems 3. Master all essential procedures related to handling & processing of surgical specimens as well as all other routine and special techniques with emphasis on employing, developing the available resources and maintaining them. 4. Appraise & interpret all pathological features and correlate them with available clinical data to reach a final diagnosis and being able to write reports properly. 	

<p>3. Intended learning outcomes of course (ILOs):</p> <p><i>Upon completion of the course, the student should be able to:</i></p>	
<p>A- Knowledge and Understanding</p>	<p>A.1. Illustrate Definition, types of acute inflammation as well as its pathological features and complications.</p> <p>A2: Describe the process of tissue healing.</p> <p>A.3 Explain cellular response to injury, etiology and pathological features of reversible cell injury and irreversible cell injury.</p> <p>A.4 Identify hemodynamic disorders as thrombosis, embolism, ischemia, infarction, haemorrhage, gangrene and edema and mention their causes and effects on different organs.</p> <p>A5. Recognise the pathological aspects of immunopathology.</p> <p>A.6 Demonstrate pathological features of chronic inflammation, and granuloma in relation to its morphological and etiological types and examples.</p> <p>A.7 Recognise infectious agents and bacterial infections.</p> <p>A.8 Outline adaptations of cellular growth and differentiation. Define each term with examples as hypertrophy, hyperplasia, agenesis, hypoplasia, aplasia and atrophy. Distinguish between the disorders of differentiation of the cells as dysplasia and metaplasia.</p> <p>A.9 Define neoplasia and name the characters and behavior of tumor, Study the classifications to benign and malignant epithelial tumors, benign and malignant connective tissue tumors. Identify grading and staging of cancer, the spread and prognosis of tumors and its effects on the host.</p> <p>A.10 Recognise the pathological aspects of genetic and pediatric diseases.</p> <p>A.11 Understand different environmental diseases as tobacco smoking, alcohol consumption, occupational diseases, and exposure to irradiation, nutritional disorders, and obesity.</p> <p>A.12 Understand routine and special techniques in surgical pathology and the related safety & quality measures.</p>

	<p>A.13 Illustrate how to handle surgical specimens and the related safety & quality measures.</p> <p>A.14 Outline principles of ethics of medical research.</p> <p>A15: Define and discuss the main disease categories of the cardiovascular system.</p> <p>A16: Define and discuss the main disease categories of the respiratory system.</p> <p>A17: Define and discuss the main disease categories of the gastrointestinal tract.</p> <p>A18: Define and discuss the main disease categories of the hepatobiliary system and pancreas.</p> <p>A19: Define and discuss the main disease categories of the kidney and urinary tract.</p> <p>A20: Define and discuss the main disease categories of the female genital system, female breast and male genital system.</p> <p>A21: Define and discuss the main disease categories of endocrine organs.</p> <p>A22: Define and discuss the main disease categories of the musculoskeletal system.</p> <p>A23: Define and discuss the main disease categories of the haematopoietic and lymphopoietic systems.</p> <p>A24: Define and discuss the main disease categories of the nervous system.</p>
<p>B- Intellectual Skills</p>	<p>B1. Predict the signs and symptoms of a disease based on the underlying gross & microscopic tissue changes .</p> <p>B2- Interpret a pathology report and integrate gross and microscopic findings with the underlying etiology</p> <p>B3- Utilize the obtained information to solve a problem in a case scenario to reach a provisional diagnosis</p> <p>B6. Create plans that embodies the skills of decision-making in different situations in all settings during the professional practice.</p>
<p>C- Professional and Practical Skills</p>	<p>C1- Write adequate pathological description concerning main features of gross appearance of a museum specimen</p>

	<p>C2- Use the light microscope to examine and identify microscopic findings of some selected examples of studied diseases.</p> <p>C3- Learn proper handling of and processing tissue specimens sent for pathological examination</p> <p>C4- Write a pathological request.</p>
D- General and transferable Skills	<p>D1. Demonstrate efficient communication & interpersonal skills in all its forms and in different situations that may involve senior staff, colleagues, students, lab technical staff, other health care professionals, and patients</p> <p>D.2. Use efficiently the information technology and select reliable sources of information to get essential information and updates regarding the different topics and techniques in surgical pathology.</p> <p>D.3. Develop skills of self-evaluation and identify personal learning needs to plan for self-development and continuous medical education</p> <p>D.4. Demonstrate the skills of effective time management</p>

4. Course Contents

Topic	Lecture hours/week	Practical/Clinical hours/week	Total No. of hours hours/week
GENERAL PATHOLOGY			
1. Introduction & Inflammation	2	1	3
2. Repair	1	1	2
3. Cell injury and cell death	2	1	3
4. Circulatory disturbances	2	1	3
5. Immunopathology	1	1	2
6. Granulomas	2	1	3
7. Acute bacterial infection, viral infection (with emphasis on COVID 19 infection), mycotic diseases (with emphasis on black fungus	1	1	2

infection), parasitic infestation			
8. Disturbances of cell growth and adaptation	1	1	2
9. Neoplasia	2	1	3
10. Genetic and pediatric diseases	1	-	1
11. Environmental and nutritional diseases & ionizing radiation	1	-	1
12. Routine and special techniques in surgical pathology and the related safety & quality measures.	1	-	1
13. Handling of surgical specimens and the related safety & quality measures.	1	-	1
14. Principles of ethics of medical research	1	-	1
Systemic pathology (with emphasis on COVID 19 infection) *			
1. CVS & blood vessels*	2	1	3
2. Respiratory system*	2	1	3
3. GIT*	2	1	3
4. Disease of liver and Biliary tract*	2	1	3
5. Diseases of exocrine pancreas and peritoneum	1	1	2
6. Diseases of the kidney*	2	1	3
7. Diseases of urinary bladder and ureter	2	1	3
8. Diseases of female genital system	2	1	3

9. Diseases of male genital system	2	1	3
10. Diseases of female breast	2	1	3
11. Endocrine diseases	2	1	3
12. Diseases of musculoskeletal system	2	1	3
13. Diseases of lymph nodes and spleen	2	1	3
14. Blood diseases*	2	1	3
15. Diseases of nervous system	2	1	3
Total hrs (General & Systemic Pathology)	48	24	72
5-Teaching and Learning Methods	5.1. Lectures: Both face to face & on-line ones. 5.2. Practical lessons: Gross pathology and histopathology 5.3. Self-directed learning (SDL) 5.4. Journal club, Case presentation, Seminars.		
6-Teaching and Learning Methods for students with limited Capacity	Not applicable		
7-Student Assessment			
A. Student Assessment Methods	1. Written exam to assess the acquired knowledge & understanding as well as intellectual skills and essential professional skills. 2. Practical exam to assess ability of the candidate for applying information studied in the course in diagnosis. 3. Oral exam to assess the student intellectual and communication skills regarding basic knowledge and understanding of the course topics, and to help the teaching		

	staff to evaluate the % of achievement of the intended learning outcomes of the course.															
B. Assessment Schedule (Timing of Each Method of Assessment)	<p>Assessment 1: 1 written exam by the end of the course.</p> <p>Assessment 2: Practical exam by the end of the course.</p> <p>• Assessment 3: Oral exam, after the written exam.</p>															
C. Weighting of Each Method of Assessment	<table border="1"> <thead> <tr> <th>Type of Assessment</th> <th>Degree</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>a. Written examination</td> <td>280</td> <td>40%</td> </tr> <tr> <td>b. Practical examination</td> <td>210</td> <td>30%</td> </tr> <tr> <td>c. Oral examination.</td> <td>210</td> <td>30% Total</td> </tr> <tr> <td>700</td> <td>100%</td> <td></td> </tr> </tbody> </table>	Type of Assessment	Degree	%	a. Written examination	280	40%	b. Practical examination	210	30%	c. Oral examination.	210	30% Total	700	100%	
Type of Assessment	Degree	%														
a. Written examination	280	40%														
b. Practical examination	210	30%														
c. Oral examination.	210	30% Total														
700	100%															
8-List of References																
A. Course Notes/handouts	1 -General and systemic pathology course notes prepared by the department staff & printed material of recorded lectures.															
B. Essential Books	<p>1. Goldblum, John R., et al. Rosai and Ackerman's Surgical Pathology E-Book. Elsevier Health Sciences, 2017.</p> <p>2. Cheng, Liang, and David G. Bostwick, eds. Essentials of anatomic pathology. Springer Science & Business Media, 2011.</p> <p>3. Kumar, V., Abbas, A. K., & Aster, J. C. (2017). Robbins basic pathology e-book. Elsevier Health Sciences.</p>															
C. Recommended Text Books	<p>1. WHO classification of tumours (recent updates).</p> <p>2. Mills, S. E., Carter, D., Greenson, J. K., Reuter, V. E., & Stoler, M. H. (2012). Sternberg's diagnostic surgical pathology. Lippincott Williams & Wilkins.</p>															

D. Periodicals, websites	To be determined and update during the cours work. 1-American Journal of pathology 2-The Journal of pathology 3-Diagnostic Histopathology 4-Cancer 5- www.pubmed .com 6- www.pathmax.com
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Course Coordinator:

Dr/ Azza M. Abd El Zaher

Head of Department:

Prof. Dr. Heba Mohamed Tawfik.



Date of last update & approval by department Council: 23 / 12 / 20

Course Specification Pathology Master degree of Pathology (Second part)	مسمى المقرر
PA200	كود المقرر

جامعة/أكاديمية :المنيا.....
كلية / معهد:الطب البشرى.....
قسم:الباثولوجي.....

(A)- The matrix of coverage of course ILOs by contents

Contents	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
General Pathology				
1.Introduction & Inflammation	A1	B3	C1,C2	D1,2
2.Repair	A2	B3	C1	-
3.Cell injury and cell death	A3	B3	C1	D3
4.Circulatory disturbances	A4	B3	C1	-
5.Immunopathology	A5	B3	C1	-
6.Granulomas	A6	B3	C1,C2,C3	D1,D2
7.Acute bacterial infection, viral infection (with emphasis on COVID 19 infection), mycotic diseases (with emphasis on black fungus infection), parasitic infestation	A7	B3	-	D3,D4
8.Disturbances of cell growth and adaptation	A8	B3	C1	D1,D2
9.Neoplasia	A9	B1,B2,B3	C1, C2,C3,C4	D1,D2,D3,D4
10.Genetic and pediatric diseases	A10	B1	-	-
11.Environmental and nutritional diseases & ionizing radiation	A11	B1	-	-
12.Routine and special techniques in surgical pathology and the related safety & quality measures.	A12	B1	C1	-

13. Handling of surgical specimens and the related safety & quality measures.	A13	B1	C1	-
14. Principles of ethics of medical research	A14	B1	-	-
Systemic pathology (with emphasis on COVID 19 infection) *				
1. CVS & blood vessels*	A15	B1,B2,B3	C1,C2,C3	D1:D4
2. Respiratory system*	A16	B1,B2,B3	C1,C2,C3	D1:D4
3. GIT*	A17	B1,B2,B3	C1,C2,C3	D1:D4
4. Disease of liver and Biliary tract*	A17	B1,B2,B3	C1,C2,C3	D1:D4
5. Diseases of exocrine pancreas and peritoneum	A18	B1,B2,B3	C1,C2,C3	D1:D4
6. Diseases of the kidney*	A19	B1,B2,B3	C1,C2,C3	D1:D4
7. Diseases of urinary bladder and ureter	A19	B1,B2,B3	C1,C2,C3	D1:D4
8. Diseases of female genital system	A20	B1,B2,B3	C1,C2,C3	D1:D4
9. Diseases of male genital system	A20	B1,B2,B3	C1,C2,C3	D1:D4
10. Diseases of female breast	A20	B1,B2,B3	C1,C2,C3	D1:D4
11. Endocrine diseases	A21	B1,B2,B3	C1,C2,C3	D1:D4
12. Diseases of musculoskeletal system	A22	B1,B2,B3	C1,C2,C3	D1:D4
13. Diseases of lymph nodes and spleen	A23	B1,B2,B3	C1,C2,C3	D1:D4
14. Blood diseases*	A23	B1,B2,B3	C1,C2,C3	D1:D4
15. Diseases of nervous system	A24	B1,B2,B3	C1,C2,C3	D1:D4



B. Matrix of Coverage of Course ILOs by Methods of Teaching & Learning

Methods of Teaching & Learning	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
Lecture	A1:24	B1,2,3	-	D1,2,3,4
Practical	-	-	C1,2,3,4	D3,4
Clinical (Including grand rounds)	-	-	-	-
Presentation/seminar	A1:9,A15:A24	B1,2,3	C1,2,3,4	D1,2,3
Journal club	-	-	-	-
Thesis discussion	-	-	-	-
Training courses & workshops	A15:24	B1,2,3	C3,4	D3,4



C. Matrix of Coverage of Course ILOs by Methods of Assessment

Methods of Assessment	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
Written exam	A1:24	B1,2,3	-	-
Practical exam	-	-	C1,2,3,4	D3,4
Clinical exam	-	-	-	-
Oral Exam	A1:24	B3	C3,4	D1,2
Assignment	-	-	-	-
Structured oral exams	-	-	-	-



**Blueprint of pathology course
for master degree (2nd part)
Pathology (280 marks)**

No.	Topic	Contact Hours	ILOs	Weight %	Total marks
General pathology					
1	1.Introduction & Inflammation	2	A1	4.16	11.5
2	2.Repair	1	A2	2.08	6.5
3	3.Cell injury and cell death	2	A3	4.16	11.5
4	4.Circulatory disturbances	2	A4	4.16	11.5
5	5.Immunopathology	1	A5	2.08	6
6	6.Granulomas	2	A6	4.16	12
7	7.Acute bacterial infection, viral infection (with emphasis on COVID 19 infection), mycotic diseases (with emphasis on black fungus infection), parasitic infestation	1	A7	2.08	6.5
8	8.Disturbances of cell growth and adaptation	1	A8	2.08	6
9	9.Neoplasia	2	A9	4.16	11.5
10	10.Genetic and pediatric diseases	1	A10	2.08	6
11	11.Environmental and nutritional diseases & ionizing radiation	1	A11	2.08	6
12	12.Routine and special techniques in surgical pathology and the related safety & quality measures.	1	A12	2.08	6
13	13.Handling of surgical specimens and the related safety & quality measures.	1	A13	2.08	6
14	14.Principles of ethics of medical research	1	A14	2.08	6
Systemic pathology (with emphasis on COVID 19 infection) *					
1	1. CVS & blood vessels*	2	A15	4.16	11.5
2	2. Respiratory system*	2	A16	4.16	11.5
3	3. GIT*	2	A17	4.16	11.5
4	4. Disease of liver and Biliary tract*	2	A17	4.16	11.5
5	5. Diseases of exocrine pancreas and peritoneum	1	A18	2.08	6
6	6. Diseases of the kidney*	2	A19	4.16	11.5

7	7. Diseases of urinary bladder and ureter	2	A19	4.16	11.5
8	8. Diseases of female genital system	2	A20	4.16	11.5
9	9. Diseases of male genital system	2	A20	4.16	11.5
10	10. Diseases of female breast	2	A20	4.16	11.5
11	11. Endocrine diseases	2	A21	4.16	11.5
12	12. Diseases of musculoskeletal system	2	A22	4.16	11.5
13	13. Diseases of lymph nodes and spleen	2	A23	4.16	11.5
14	14. Blood diseases*	2	A23	4.16	11.5
15	15. Diseases of nervous system	2	A24	4.16	11.5
	Total hours (General & Systemic Pathology)	48	-	100	280

