كلية الطب
Faculty of Medicine

MINIA UNIVERSITY

Doctorate (MD) Program & Courses' Specifications of Pathology

Program Specifications for MD of Pathology

(2023)

University: MINIA

Faculty(s): MEDICINE

Department: Pathology

A. Basic Information:

1. **Program title:** Doctorate Degree (MD) in Pathology, code:PA200
2. **Final award:** Doctorate Degree in Pathology
   Program type: Single ☑ Double ☐ Multiple ☐
3. **Responsible department:** Pathology Department
4. **Departments involved in the program:** Pathology Department and public health department
5. **Program duration: 3.5 years**
6. **Number of program courses:** four
7. **Coordinator: Assistant. Prof Alzahraa Ibrahim Khalil**
8. **External evaluators: Prof Eman Salah**
9. **Program management team:**
   Prof Heba Mohamed Tawfik
   Prof Wafaey Gomaa
   Prof Manal Ismeal

B- Professional Information:

1- Program aims

Graduate of Medical Doctorate Degree (MD) in Pathology should be able to:

1.1. Demonstrate comprehensive knowledge & skills regarding the fundamentals, methodology and tools of scientific research in the field of Pathology.

1.2. Demonstrate the skills to continuously add knowledge to the field of pathology.

1.3. Assess the value and utilize relevant scientific knowledge to continuously update and improve clinical practice in the field of pathology and relevant basic sciences.

1.4. Integrate the medical knowledge in the field of pathology with other relevant basic biomedical, clinical, behavioral sciences, clinical sciences, medical ethics and medical laws and apply such knowledge to improve

practical & professional skills.

1.5. Show deep awareness by current common health problems and recent theories & developments in the field of pathology.

1.6. Identify common health problems in the field of pathology and create applicable & practical ways to deal with them.

1.7. Demonstrate competency in a wide range of professional skills including basic practice, diagnosis to evidence-based clinical application, and acquisition of skills to manage professionally the problems in different aspects of pathology

1.8. Improve and develop current methods and create new methods & tools that enable proper diagnosis, early identification as well as prognosis

1.9. Use efficiently recent technologies to improve the various aspects of professional practice.

1.10. Demonstrate leadership competencies and effective communication skills to ensure effective information exchange with other health professionals, colleagues, students, technical staff and patients.

1.11. Master decision making skills in various situations during the professional practice, especially with provided available information.

1.12. Employ effectively the available resources & plan to improve them as well as attaining new ones.

1.13. Demonstrate comprehensive awareness of common public health problems and health policy issues and plan to improve & maintain health care on a system based strategy.

1.14. Show suitable attitudes and professionalism that reflect credibility and obligation to standards of medical practice.

1.15. Demonstrate the skills of lifelong learning, professional self-development and continuous medical education as well as educating others.

2- Intended learning outcomes (ILOs)

2.1. (A) Knowledge and understanding:

By the end of the study of doctorate program in Pathology the candidate should be able to:

A.1. Describe theories, basics and recent updates in the different areas

of pathology and relevant basic sciences.

A.2. Explain principles, methodology, tools and ethics of scientific medical &clinical research.

A.3. Outline ethical, medico-logical fundamentals related to the professional practice of Pathology.

A.4. Identify standards and measurements of quality assurance and quality improvement in regarding the professional practice of Pathology.

A.5. Recognize relevant issues related to the professional practice of pathology and their impact on public health and methods of maintenance of public health and strategic planning for its improvement.

2.2. (B) Intellectual skills:

By the end of the doctorate program in Pathology the candidate should be able to:

B.1. Appraise & interpret relevant basic information, pathological features, microscopic findings then correlate them with essential clinical data to reach a final diagnosis.

B.2. Solve problems in view of available data through the approach of investigative & analytical thinking by giving a list of differential diagnosis for further advanced investigations.

B.3. Conduct efficiently research studies that add to the knowledge in the field of pathology.

B.4. Master scientific writing of articles and publications.

B.5. Evaluate & manage efficiently potential risks that may arise during the professional practice of pathology in various practical situations like handling and processing of specimens as well as during performing different laboratory techniques.

B.6. Plan for the professional acquisition of essential skills of basic & modern pathological laboratory techniques as well as the skills of critical appraisal.

B.7. Demonstrate the skills of decision making in different professional situations during the professional practice of pathology.

B.8. Apply new methods, tools & ideas in the field of pathology.

B.9. Manage efficiently evidence-based discussion.

2.3. Skills:

2.3.1. (C) Professional and practical skills

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

C.1. Deal with different types of surgical specimens and reporting their gross features and correlate such information with the available provided clinical data.

C.2. Practice efficiently basic and modern histological procedures & techniques that include tissue fixation, embedding and tissue sectioning as well as preparation of essential stains and handling of different equipments, devices and microscopes.

C.3. Perform histochemical, immunohistochemical techniques that enable reaching a final diagnosis, with emphasis on maximizing the use of the available resources and ensure maintaining them.

C.4. Achieve efficiently, on evidence-based approach, the right diagnosis.

C.5. Write & evaluate professionally a pathology report based on correlation of gross & microscopic features together with available clinical data and relevant knowledge.

C.6. Evaluate & improve current methods and tools existing in practical, laboratory & surgical pathology.

C.7. Plan for performing experiments related to pathology

C.8. Counsel senior staff and expertise regarding the basics of essential techniques and issues related to safety and maintenance of available resources.

C.9. Use efficiently the different technological tools to help the professional practice during reporting & archiving.

C.10. Plan for professional self-development as well as improvement of others' performance.

2.3.2. (D) General and transferable skills

By the end of the study of doctoral program in Pathology the candidate should be able to:

D.1. Demonstrate effective communication skills in all its types in various situations and with different groups including students, junior staff, colleagues, senior staff, technicians, patients and other health care workers.

D.2. Use competently & efficiently information technology (IT) including data entry & analysis to enhance data management and to achieve improvement of the professional practice.

D.3. Demonstrate skills of educating others and develop effective indicators for assessment of their performance.

D.4. Demonstrate capability of identifying personal learning needs to design plans for self-development and continuous medical education.

D.5. Use competently all information resources to get basis, essential & recent knowledge and information related to the field of pathology

D.6. Work effectively among a team, and demonstrate the skills of leadership in various professional contexts.

D.7. Demonstrate essential competencies for scientific meetings' management as well as effective time management.

3- Program Academic Reference Standards

- Faculty of Medicine, Minia University adopted the general national academic reference standards (GARS) provided by the national authority for quality assurance and accreditation of education (NAQAAE) for all postgraduate programs. (Faculty Council Decree No.6854, in its cession No.177 Dated: 18\5\2009) **{Annex 1}**.
- Minia faculty of medicine has developed the academic standards (ARS) for Medical Doctorate (MD) program and was approved in Faculty Council Decree No.7528, in its cession No.191, dated: 15\3\2010). **{Annex 1}.**
- Then, Pathology department has developed the intended learning outcomes (ILOs) for Medical Doctorate (MD)program in Pathology and the date of program specifications first approval was by department

council: 13/5/2013, last update: 12/3/2023 **{Annex 2}.**

4. Program External References

- Faculty of Medicine, Minia University adopted the standards provided by Accreditation Council for Graduates Medical Education (ACGME): (http://www.acge.org/)

- Faculty Council Decree No.7528, in its cession No.191, dated: 15\3\2010.

- Then the department has implemented the program in view of the developed ARS & guided by the Benchmarks of the Royal College of Pathology, UK (http://www.rcpathol.org).

Comparison between The MD Program of Pathology & External References		
Item	**MD of Pathology**	**Royal College of Pathology**
Aims	Matched	Matched
ILOS	Matched	Matched to a large extent (70%)
Duration	3.5 years	Different
Requirements	Different	Different
Program structure	Different	Different

5. Program Structure and Contents:

5. A. Program duration: 7 semesters (3.5years).

5. B. Program structure:

- No of hours/week per course:
  - Lecture: 2-4 hrs/w
  - Practical: 2-4 hrs /w
  - Total hours/week: 4-8 hrs/w

 Basic sciences (compulsory) courses: No.: 2 Percentage %:50%

 Basic sciences (optional) courses: No.: Nil Percentage %:0%

 Specific courses related to the specialty: No: 2 Percentage %:50%

 Other courses: No..: Nil Percentage %:0%

 Training programs and workshops, field visits, seminars & other scientific activities: They are distributed along the whole program.

5. C. Levels of program in credit hours system: Not applicable

5. D. Program courses:

- **Courses' specification are present in {Annex 3} & correlation of program ILOs with courses are present in {Annex 4}.**

Course title	No. of hours /week			Program ILOs Covered
	Lect.	Practical	Total hours	
1st part				
1. Use of Computer in medicine	15	30	45	A1,A5 C5,C9 D1,D2,D5,D6
2. Medical statistics and research methodology	15	15	30	A1,A2,A3 B2,B3,B4,B6,B7,B9 C4,C9 D1,D2,D5,D6
3. Advances in Diagnostic Pathology	2/w	2/w	76	A1,A2,A3,A4,A5 B1,B2,B3,B4,B5,B6,B7,B8,B9 C1,C2,C3,C4,C5,C6,C7,C8,C10 D1,D2,D3,D4,D5,D6,D7
Training programs and workshops, seminars	Continuous			D1,D2,D3,D4,D5,D6,D7
2nd part				
4. Surgical pathology	2/w	2/w	182	A1,A2,A3,A4,A5 B1,B2,B3,B4,B5,B6,B7,B8,B9 C1,C2,C3,C4,C5,C6,C7,C8,C9,C10 D1,D2,D3,D4,D5,D6,D7
Training programs and workshops, seminars	Continuous			D1,D2,D3,D4,D5,D6,D7

6- Program admission requirements:

1. General 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- Master degree in Pathology with at least good grade.

C- Candidates must follow postgraduate regulatory rules of postgraduate studies of Minia Faculty of medicine.

2. Specific requirements:

A- Candidates graduated from Egyptian universities should have at least "Good Rank" in their final year / cumulative years examination and grade.

B- Master degree in Pathology with at least" Good Rank".

C- Candidate should know how to speak & write English well.

D- Candidate should have computer skills.

7- Regulations for progression and program completion:

Duration of the program is (3.5 years), starting from registration till acceptance of the thesis. This duration consists of the following:

First Part: (6 months)

- All courses as specified in the internal bylaw, which includes:

1. Medical statistics & Research methodology (1st part).
2. Use of computer in medicine (1st part).
3. Advances in Diagnostic Pathology (1st part)

- 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 April and 2nd in October.
- For the student to pass the first part exam, a score of at least 60% in each course is needed.
- Those who fail in one course need to re-exam it only.

Second Part: (≥24months):

• Program related specialized Courses.

Surgical Pathology (2nd part).

• At least 24 months after passing the 1st part should pass before the student can ask for examination in the 2nd part.

• 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:

➢ Two sets of exams: 1st in April— 2nd in October.

➢ At least 60% of the written exam is needed to be admitted to the oral and practical exams

➢ 4 times of oral and practical exams are allowed before the student has to re-attend the written exam.

➢ Scientific activities: the candidate should participate in the scientific activities organized and recommended by the department. Each activity is monitored and given score & registered in a special section in the logbook. Candidates should collect a minimum score in order to be allowed to attend the final exam. Examples of scientific activities include:

o Training courses

o Case presentation

o Seminars

o Thesis discussion

o Workshops

o Conference attendance

o Journal club

Thesis (24-48 months):

Could start after protocol registration and should be completed, defended and accepted after passing the 2nd part final examination, and after passing of at least 24 months after documentation of the subject of the thesis.

Publishing 2 paper- based thesis: at least 1 international paper in an international journal with (cite score 0.5 or more-has an ISSN) is required to pass this part.

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-
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 B1,B2,B3,B4,B5,B6,B7,B8,B9
• **Practical sessions**	C1,C2,C3,C4 ,C5,C6,C7,C8,C9,C10 D1,D2,D3,D4,D5,D6,D7
• **Self-training activities** • **Seminars, presentations and assignments.** • **Training courses & workshops.** • **Thesis discussion.** • **Conference attendance**	D1,D2,D3,D4,D5,D6,D7

9-Methods of student assessment:

Method of assessment	The assessed ILOs
1. Research (Thesis)	A1,A2,A3,A4,A5 B1,B2,B3,B4,B5,B6,B7,B8,B9 C1,C2,C3,C4,C5,C6, C7,C8,C9,C10 D1,D2,D3,D4,D5,D6,D7
2. Written Exams: • Short essay • MCQs • Complete • True or false and correct the wrong • Commentary	A1,A2, A3,A4,A5 B1,B2,B3,B4,B5,B6,B7, B8, B9

• Problem solving	
3. Practical/Clinical Exams (OSPE)	C1,C2,C3, C4,C5,C6 ,C7,C8,C9,C10 D1,D2,D3,D4,D5,D6,D7
4. Oral Exams	A1,A2, A3,A4,A5 B1,B2,B3,B4,B5,B6, B8,B9
5. **Seminars, presentations, assignments and Logbook assessment**	D1,D2,D3,D4,D5,D6,D7

Weighing of assessment:

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

Course	**written**	**Oral**	**Practical**	**Total**
Use of Computer in medicine	100	100	100	300
Medical statistics and research methodology	100	100	100	300
Advances in Diagnostic Pathology	100	100	100	300
Surgical Pathology	200	100	100	400

9. Methods of Program Evaluation:

Evaluator (By whom)	**Method/tool**	**Sample**
1. Senior students (Students of final years)	Questionnaires	Attached to the file

2. Graduates (Alumni)	Questionnaires	Attached to the file
3. Stakeholders	Meeting Questionnaires	Attached to the file Attached to the file
4. External & Internal evaluators and external examiners	Reports	Attached to the file
5. Quality Assurance Unit	Reports Questionnaires Site visits	Attached to the file Attached to the file Attached to the file

- **Program Coordinators:**
  Ass. Prof. Dr/ Alzahraa Ibrahim Khalil

  Head of Department: Prof. Dr/ Heba Mohamed Tawfik

Date of program specifications 1st approval by <u>department council</u>: 13/5/2013.

Date of <u>last update</u> & approval by <u>department council</u>: 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 الدكتوراة	Faculty Doctorate (MD) Program
١. مواصفات الخريج: خريج برنامج الدكتوراة في أي تخصص يجب أن يكون قادرا على:	**1. Graduate Attributes:** Graduate of doctorate (MD) 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 حلولا 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. توظيف الموارد المتاحة بما يحقق أعلي استفادة و الحفاظ عليها	9.1.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.
٢.المعايير القياسية العامة: **NAQAAE General Academic Reference Standards "GARS" for Doctorate Programs**	**2. Faculty Academic Reference Standards (ARS) for Doctorate Program**
٢,١. المعرفة والفهم: بانتهاء دراسة برنامج الدكتوراة يجب أن يكون الخريج قادرا علي الفهم والدراية بكل من:	**2.1. Knowledge & Understanding:** Upon completion of **the Doctorate Program** , the graduate should have sufficient knowledge and understanding of:
٢,١,١. 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
٢,١,٢. 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.
٢,١,٣. التطورات العلمية في مجال التخصص	2.1.3. Scientific developments in the field of specialization
٢,١,٤. 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

٢,١,٥. مبادئ وأساسيات الجودة في الممارسة المهنية في مجال التخصص	2.1.5. Quality principles in the scholarly field
٢,١,٦. أساسيات وأخلاقيات البحث العلمي	2.1.6. Basis of research methodology and medical ethics.
2.2.المهارات الذهنية: بانتهاء دراسة برنامج الدكتوراة يجب أن يكون الخريج قادرا على:	**2.2. Intellectual Skills:** Upon completion of the doctorate 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: بانتهاء دراسة برنامج الدكتوراة يجب أن يكون الخريج قادرا على:	**3.2. Professional Skills:** Upon completion of the doctorate 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.
٣,٢,٢كتابة و تقييم التقارير المهني.	3.2.2. Write and evaluate medical or scientific reports

٢,٣,٣تقييم الطرق والأدوات القائمة في مجال التخصص	3.2.3. Assess and evaluate technical tools during research
4.2.المهارات العامة والمنتقلة : بانتهاء دراسة برنامج الدكتوراة يجب أن يكون الخريج قادرا على:	4.2. **General and transferable skills** Upon completion of the doctorate program, the graduate should be able to:
٤,٢,١. التواصل الفعال بأنواعه المختلفة	4.2.1. Communicate effectively using a written medical record, electronic medical record, or other digital technology.
٤,٢,٢. 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 التعلمية 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
٤,٢,٨.التعلم الذاتي والمستمر	4.2.8. Demonstrate skills of self-learning and lifelong learning needs of medical profession.

- **Program Coordinators:**
  Ass. Prof. Dr/ Alzahraa Ibrahim Khalil

  Head of Department: Prof. Dr/ Heba Mohamed Tawfik

Date of program specifications 1st approval by <u>department council</u>: 13/5/2013.

Date of <u>last update</u> & approval by <u>department council</u>: 12/3/2023

ANNEX 2: ARS VS. MD Program of Pathology

2. Faculty Academic Reference Standards (ARS) for Doctorate Program	MD Program of Pathology
2.1. Knowledge & Understanding: Upon completion of **the Doctorate Program**, the graduate should have sufficient knowledge and understanding of:	**2.1. Knowledge and Understanding** Upon completion of the doctorate Program (MD) in Pathology the graduate should be able to:
2.1.1. Theories, basics and updated knowledge in his scholarly field and related basic sciences.	A.1. Describe theories, basics and recent updates in the different areas of pathology and relevant basic sciences.
2.1.2. Basic, methods and ethics of medical research.	A.2. Explain principles, methodology, tools and ethics of scientific medical &clinical research.
2.1.3. Ethical and medicolegal principles of medical practice.	A.3. Outline ethical, medico-logical fundamentals related to the professional practice of Pathology
2.1.4. Identify Principles and fundamental of quality in professional medical practice.	A.4. Identify standards and measurements of quality assurance and quality improvement in regarding the professional practice of Pathology.
2.1.5. Knowledge related to effects of professional practice on public health and methods of maintenance and system-based improvement of public health.	A.5. Recognize relevant issues related to the professional practice of pathology and their impact on public health and methods of maintenance of public health and strategic planning for its improvement.
2.2. Intellectual Skills: Upon completion of the doctorate program, the graduate should be able to:	**2.2. Intellectual skills (B):** Upon completion of the doctorate program (MD) in Pathology, the graduate must be able to:
2.2.1. Analysis and evaluation of information to correlate and deduce from it.	B.1. Appraise & interpret relevant basic information, pathological features, microscopic findings then correlate them with essential clinical data to reach a final diagnosis.

2.2.2. Problem solving skills based on analysis of available data for common health problems related to his scholarly field.	B.2. Solve problems in view of available data through the approach of investigative & analytical thinking by giving a list of differential diagnosis for further advanced investigations.
2.2.3. Carryout research projects related to his scholarly field.	B.3. Conduct efficiently research studies that add to the knowledge in the field of pathology.
2.2.4. Write and publish scientific papers	B.4. Master scientific writing of articles and publications.
2.2.5. Assess risk in professional medical practice.	B.5. Evaluate & manage efficiently potential risks that may arise during the professional practice of pathology in various practical situations like handling and processing of specimens as well as during performing different laboratory techniques. .
2.2.6. Establish goals, commitments and strategies for improved productivity and performance.	B.6. Plan for the professional acquisition of essential skills of basic & modern pathological laboratory techniques as well as the skills of critical appraisal
2.2.7. Making professional decisions in different professional contexts.	B.7. Demonstrate the skills of decision making in different professional situations during the professional practice of pathology.
Demonstrate intellectual curiosity necessary for scientific discovery and innovation through active participation in research.	B.8. Apply new methods, tools & ideas in the field of pathology.
2.2.9. Using Evidence-based strategies to during discussion or teaching others.	B. 9. Manage efficiently evidence-based discussion
3.2. Professional Skills: Upon completion of the doctorate program (MD), the graduate must be able to:	**2.3. (C) Professional and practical skills** Upon completion of the Doctorate program (MD) in Pathology , the graduate must be able to:
3.2.1. Master the basic and some advanced professional skills in his scholarly field.	C.1. Deal with different types of surgical specimens and reporting their gross features and correlate such information with the available provided clinical data.

	C.2.Practice efficiently basic and modern histological procedures & techniques that include tissue fixation, embedding and tissue sectioning as well as preparation of essential stains and handling of different equipments, devices and microscopes. C.3 Perform histochemical, immunohistochemical techniques that enable reaching a final diagnosis, with emphasis on maximizing the use of the available resources and ensure maintaining them. C.4. Achieve efficiently, on evidence-based approach, the right diagnosis.
3.2.2. Write and evaluate medical or scientific reports	C.5 Write & evaluate professionally a pathology report based on correlation of gross & microscopic features together with available clinical data and relevant knowledge.
3.2.3. Evaluate and improve the methods and tools in the specific field	C.6. Evaluate & improve current methods and tools existing in practical, laboratory & surgical pathology. C.7. Plan for performing experiments related to the speciality of pathology C.8. Counsel senior staff and expertise regarding the basics of essential techniques and issues related to safety and maintenance of available resources.
3.2.4. use of technological means to serve Professional practice	C.9.Use efficiently the different technological tools to help the professional practice during reporting & archiving.
3.2.5. Planning for the development of professional practice and improve of the performance of others.	C.10. Plan for professional self-development as well as improvement of others' performance.
4.2. **General and transferable skills** Upon completion of the doctorate program the graduate should be able to:	**4.2. (D) General and transferable skills** Upon completion of the doctorate program (MD) in Pathology , the graduate must be able to:
4.2.1. Communicate (in writing and orally) effectively and respectfully with peers, faculty, colleagues, and other members of the health	D.1. Demonstrate effective communication skills in all its types in various situations and with different groups including students, junior staff, colleagues, senior staff,

care team, understanding the role of consultations and referrals.	technicians, patients and other health care workers
4.2.2. Use of information technology to serve Professional Practice Development.	D.2. Use competently & efficiently information technology (IT) including data entry & analysis to enhance data management and to achieve improvement of the professional practice
4.2.3 Demonstrate effective teaching and evaluating others.	D.3. Demonstrate skills of educating others and develop effective indicators for assessment of their performance.
4.2.4. Self-assessment and continuous learning.	D.4. Demonstrate capability of identifying personal learning needs to design plans for self-development and continuous medical education.
4.2.5. Use physical information resources (print, analog), online (electronic, digital,) text, audio-video, book and journal to address medical questions and knowledge to sustain professional growth).	D.5. Use competently all information resources to get basis, essential & recent knowledge and information related to the field of pathology
4.2.5. Work in a team, and Apply leadership skills to enhance team functioning, the learning environment, and/or the health care delivery system	D.6. Work effectively among a team, and demonstrate the skills of leadership in various professional contexts.
4.2.6. Manage of scientific meetings and the ability to manage Time effectively.	D.7. Demonstrate essential competencies for scientific meetings' management as well as effective time management.

- **Program Coordinators:**
  Ass. Prof. Dr/ Alzahraa Ibrahim Khalil

  Head of Department: Prof. Dr/ Heba Mohamed Tawfik

Date of program specifications 1st approval by <u>department council</u>: 13/5/2013.

Date of <u>last update</u> & approval by <u>department council</u>: 12/3/2023

Annex 4

نموذج رقم (11)

مسمى البرنامج	MD in Pathology
كود البرنامج	PA100

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

A. Matrix of Coverage of MD Program ILOs by Course

Courses (List of courses in 1st and 2nd 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. Use of Computer in medicine	A1,A5	-	C5,C9	D1,D2,D5,D6
2. Medical statistics and research methodology	A1,A2,A3	B2,B3,B4,B6,B 7,B9	C4, C9	D1,D2,D5,D6
3. Advances in Diagnostic Pathology	A1,A2,A3,A4,A 5	B1,B2,B3,B4,B 5,B6,B7,B8,B9	C1,C2,C3, C4, C5,C6 ,C7,C8, C10	D1,D2,D3,D4,D 5,D5,D7
4.Surgical Pathology	A1,A2,A3,A4,A 5	B1,B2,B3,B4,B 5,B6,B7,B8,B9	C1,C2,C3, C4, C5,C6 ,C7,C8, C9 C10	D1,D2,D3,D4, D5,D6,D7

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

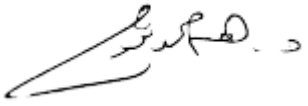
Methods of Teaching & Learning	**Intended Learning Outcomes (ILOs)**			
	A. Knowledge & Understanding	**B. Intellectual Skills**	**C. Professional & Practical skills**	**D. General & Transferable Skills**
	A	**B**	**C**	**D**
Lecture	A1,A2, A3,A4,A5	B1,B2,B3,B4,B5 ,B6, B7, B8,B9		
Practical			C1,C2,C3, C4, C5,C6 ,C7,C8, C9,C10	D1,D2,D3,D4, D5,D6,D7
Presentation/seminar , Journal club, Thesis discussion, Training courses & workshops				D1,D2,D3,D4, D5,D6,D7

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,B 5,B6,B7, B8, B9		
Practical exam			C1,C2,C3,C4,C5, C6, C7,C8,C9,C10	D1,D2,D3,D4,D5, D6,D7
Oral Exam	A1,A2, A3,A4,A5	B1,B2,B3,B4,B 5,B6,B8, B9		D1,D2,D3,D4,D5, D6,D7

- **Program Coordinators:**
  Ass. Prof. Dr/ Alzahraa Ibrahim Khalil

  Head of Department: Prof. Dr/ Heba Mohamed Tawfik



Date of program specifications 1st approval by <u>department council</u>: 13/5/2013.

Date of <u>last update</u> & approval by <u>department council</u>: 12/3/2023

Annex 3: COURSES

Course specification of :

"Use of Computer in Medicine"

in MD degree

University: Minia

Faculty: Medicine

Department offering the course: Public health and preventive medicine department

Department offering the programme: Pathology

Programme(s) on which the course is given: First part MD Pathology

Academic year/ Level: First part of MD

1. Course Information		
Academic Year/level: **First part MD**	**Course Title:** **Use of Computer in Medicine**	Code: **PA100**
• *Number of teaching hours:* - *Lectures:* ***20 hours*** - *Practical/clinical:* ***10 hours*** - *Total:* ***30 hours***		
2. Overall Aims of the course	***By the end of the course the student must be able to:*** 1. Recognize knowledge about the software and their applications in Medicine 2. Gain skills necessary for using and managing heath care information systems	
3. Intended learning outcomes of course (ILOs): ***Upon completion of the course, the student should be able to:***		
A. Knowledge and understanding	A.1. Define each part of computer hardware and its function	

	A.2. Have a basic understanding of various computer applications in medicine - for instruction, information managing, and computer based medical record, etc. A.3. Define telemedicine and its importance A.4. Recognize importance of health information technology in improvement of healthcare A.5. Describe electronic medical records and obstacles facing it A.6. Identify the concept of big data analysis
B. Intellectual Skills	B.1. Criticize adoption of telemedicine B.2. Discover factors constraining adoption of telemedicine
C. Professional and Practical Skills	C.1. Design framework for understanding of health information system performance
D. General and transferable Skills	D.1. Utilize computers in conducting research D.2. Appraise adoption of telemedicine D.3. Discover skills to carry out the process of improving health information system performance

4. Course Contents

Topic	**No. of hours**	**Lecture**	**Tutorial/ Practical**
Use of Computer in Medicine			
General concepts Introduction to Microsoft PowerPoint	6	4	2
Health Information Systems (HIS)	6	4	2
Telemedicine	6	4	2
Software Used in the Health Care	6	4	2
Big Data Analysis in Health	6	4	2
Total	**30**	**20**	**10**

5. Teaching and Learning Methods	**Since COVID-19 pandemic, blended learning approach was adopted that mixes virtual face-to-face interaction activities with the online learning. 60% of study method is offline and 40% of study is online**

	Online learning materials are available at Minia University site ▪ Lectures: Face to face lectures, Pre-recorded video lectures ▪ Practical lessons ▪ Assignment ▪ Online quizzes
6. Teaching and Learning Methods for students with limited Capacity	• Outstanding student rewarded certificate of appreciation due to high level of achievement • Limited students divided into small group to make learning more effective
7. Student Assessment	
A. Student Assessment Methods	7.1- **Research assignment:** to assess general transferable skills, intellectual skills. 7.2- **Written exams:** • Short essay: to assess knowledge. • Commentary: to assess intellectual skills. 7.3- **Practical Exams:** to assess practical skills, intellectual skills. 7.4- **Oral Exams:** Oral exams to assess knowledge and understanding, attitude, communication 7.5- **Structured oral exams:** to assess knowledge.
B. Assessment Schedule (Timing of Each Method of Assessment)	Assessment 1: Final written exam week: 24-28 Assessment 2: Oral exam week: 24-28 Assessment 3: Practical exam week: 24-28
C. Weighting of Each Method of Assessment	Final Written Examination 100% Oral Examination 100% Practical Examination 100% Total 100%
8. List of References	
A. Course Notes/handouts	Department notes, lectures and handouts
B. Essential Books	Essential Medical Statistics, Betty R. Kirkwood and J. A. Sterne (2000), 2nd edition

C. Recommended Textbooks	Data Management and Analytics for Medicine and Healthcare: Begoli, Edmon, Fusheng Wang, and Gang Luo. Springer, 2017.
D. Periodicals, websites	- National Institutes of Health: http://www.nih.gov - American Medical Informatics Association: http://www.amia.org/

- **Course Coordinators:**

  ➢ **Coordinators:**

  1) **Lecturers:** Dr / Shaimma Mahmoud, Dr/ Chrestina Monir

  ٢)**Assistant coordinator: Assistant lecture Shaza Fadel**

- **Head of Department**:

  Professor Dr. Nashwa Nabil Kamal

Date of program specifications 1st approval by department council: 13 /5/2013.

Date of last update & approval by department council: 6/ 3 / 2023

نموذج رقم (١١)

أكاديمية :المنيا/جامعة

معهد: الطب / كلية

الوقائي قسم: الصحة العامة والطب

Use of Computer in Medicine	**مسمى المقرر**
PA 100	**كود المقرر**

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**
Use of Computer in Medicine					
General concepts Introduction to Microsoft PowerPoint		A.1, A.2,			D.1
Health Information Systems (HIS)		A.4, A.5		C1	D.3
Telemedicine		A.3	B.1, .2		D.2
Software Used in the Health Care		A.5, A.6			D.1
Big Data Analysis in Health		A.6			

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	A.1 to A.6	B.1,		
Practical			C1	
Assignment	A.4	B.2		D1.D.2,D3

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 paper based exam	A.1, to A.6	B.1		
Practical computer exam (For SPSS, PowerPoint)			C1	D.1
Oral Exam	A.4, A..6	B.2	C.1	D.2, D.3

- **Course Coordinators:**

➢ **Coordinators:**

2) **Lecturers:** Dr / Shaimma Mahmoud, Dr/ Chrestina Monir

٢)**Assistant coordinator: Assistant lecture Shaza Fadel**

- **Head of Department**:

Professor Dr. Nashwa Nabil Kamal

Date of program specifications 1st approval by department council: 13 /5/2013.

Date of last update & approval by department council: 6/ 3 / 2023

Test blueprint for Uses of computer in Medicine course

Topic	Hour	% of topic	Total No. of items	Written exam (100 marks)		Marks (Percentages)	Modified marks (Percentages)
				Knowledge	Intellectual		
Use of Computer in Medicine							
General concepts Introduction to Microsoft PowerPoint	4	20%	6	4	2	30%	30%
Health Information Systems (HIS)	4	20%	4	4		20%	15%
Telemedicine	4	20%	6	2	4	25%	30%
Software Used in the Health Care	4	20%	5	4	1	20%	15%
Big Data Analysis in Health	4	20%	1	1		5%	10%
Total	20	100%	20			100%	100%

Course specification of:

"Medical Statistics and Research Methodology"

In MD degree

University: Minia

Faculty: Medicine

Department offering the course: Public health and preventive medicine department

Department offering the programme: Pathology

Programme(s) on which the course is given: Pathology

Academic year/ Level: First part of MD

1. Course Information		
Academic Year/level: **First part MD**	Course Title: **Medical Statistics and Research Methodology**	Code: **PA100**
Number of teaching hours: *- Lectures:* ***30 hours*** *- Practical/clinical:* ***15 hours*** *- Total:* ***45 hours***		
2. Overall Aims of the course	***By the end of the course the student must be able to:*** 1. Gain skills necessary for proper practice in the field of Research Methods including diagnostic, problem solving and decision make skills. 2. Apply ethical principles of scientific research with good awareness about patient´s rights. 3. Use precisely the research methodology in researches 4. Influence the students to adopt an analytical thinking	

	for evidence-based medicine 5. Enable graduate students to use statistical principles to improve their professional work and develop the concept of critical interpretation of data 6. To use precisely computer programs SPSS, Epi Info and Excel in data analysis
3. Intended learning outcomes of course (ILOs): ***Upon completion of the course, the student should be able to:***	
A. Knowledge and understanding	A.1. Define terms of research methodology . A.2. Describe the spectrum of research methodology . A.3. Explain tie strategies and design of research . A.4. Describe the study design, uses, and limitations . A.5. Explain evidence-based Medicine A.6. Define causation and association . A.7. Tell the principles and fundamentals of ethics. A.8. Describe the different sampling strategies A.9. Summarize the advantages and disadvantages of different sampling strategies A.10. Summarize different methods of samples size calculation A.11. Recognize the sources and the recent methods in data collection and analysis. A.12. Identify the types of variables A.13. Identify types of tabular and graphic presentation of data A.14. Describe the normal curves and its uses A.15. Identify the characters of normal distribution curve A.16. Identify measures of central tendency and measures of dispersion A.17. Explain regression analysis, its use and differentiate its types A.18. Define the screening tests pertinent to selected diseases and the at-risk approach in the application of screening tests A.19. Explain the usefulness of screening tests

B. Intellectual Skills	B.l. Apply research methods to different community health problems. B.2. Apply appropriate research strategies for use . B.3. Select appropriate research methods . B.4. Teach and advocate appropriately in the research design. B.5. Describe the normal curves B.6. Describe and summarize data B.7. Select the proper test of significance for a specific data. B.8. Interpret selected tests of significance and the inferences obtained from such tests
C. Professional and Practical Skills	C.1. Plan a research proposal for community diagnosis. C.2. Design questionnaires. C.3. Conduct research. C.4. Judge association and causation. C.5. Criticize for bias and confounding factors C.6. Design data entry file C.7. Validate data entry C.8. Manage data files C.9. Construct tables and graphs C.10. Calculate different samples sizes C.11. Calculate measures of central tendency and measures of dispersion C.12. Calculate sensitivity, specificity, and predictive values
D. General and transferable Skills	D.l. Lead a research team to conduct a specific study . D.2. Take part and work coherently with his associates to in research. D.3. Write scientific papers. D.4. Appraise scientific evidence D.5. Analyze and interpret data D.6. Use standard computer programs for statistical analysis effectively
4. Course Contents	

Topic	No. of hours	Lecture	Tutorial/ Practical
Research methods			
Introduction : - Introduction to research. - Terminology and Rationale - Originality		3	
- Study design : -Cross sectional study and the prevalence rate -Cohort study, incidence rate, relative & attributable risk -Case-control study, Odd's ratio sampling -Experimental study and clinical trials		4	
- Sources of Errors in Medical Research **- Bias and confounding and its Control.**		3	
- Validity and reliability		2	
- The questionnaire design		2	
- Writing the Research Paper or Manuscript **- Protocol Writing**		2	2
- Critic technique for the literature review		2	2
- Association and causation		1	
- Evidence -based approach in medical practice		2	1
- Ethics of medical research		2	
Statistics			
Sampling		1	
Introduction to Sample Size Calculation		1	1
Data presentation		1	1
Tests of significance		2	
Introduction to SPSS		1	1
Proportion test			1
Chi-square test			1
Student T test, Paired T test			1
ANOVA test			1
Correlation (simple and multiple)			1
Regression			1
Screening		1	1
Total		**30**	**15**
5. Teaching and Learning Methods	**Since COVID-19 pandemic, blended learning approach was adopted that mixes virtual face-to-face interaction activities with the online learning. 60% of study method is offline and 40% of study is online** **Online learning materials are available at Minia University site**		

	▪ Lectures: Face to face lectures, Pre-recorded video lectures ▪ Practical lessons ▪ Assignment ▪ Online quizzes
6. Teaching and Learning Methods for students with limited Capacity	• Outstanding student rewarded certificate of appreciation due to high level of achievement • Limited students divided into small group to make learning more effective
7. Student Assessment	
D. Student Assessment Methods	7.1- **Research assignment:** to assess general transferable skills, intellectual skills. 7.2- **Written exams:** • Short essay: to assess knowledge. • Commentary: to assess intellectual skills. 7.3- **Practical Exams:** to assess practical skills, intellectual skills. 7.4- **Oral Exams:** Oral exams to assess knowledge and understanding, attitude, communication 7.5- **Structured oral exams:** to assess knowledge.
E. Assessment Schedule (Timing of Each Method of Assessment)	Assessment 1: Final written exam week: 24-28 Assessment 2: Oral exam week: 24-28 Assessment 3: Practical exam week: 24-28
F. Weighting of Each Method of Assessment	- Final Written Examination 100% - Oral Examination 100% - Practical Examination 100% - Total 100%
8- List of References	
A. Course Notes/handouts	- Department notes, lectures and handouts

B. Essential Books	- The Lancet Handbook of Essential Concepts in Clinical Research
C. Recommended Textbooks	***Research methods:*** - **Introducing Research Methodology**; A Beginner's Guide to Doing a Research Project - **Understanding Clinical Research**, Renato Lopes and Robert Harrington; ISBN-10: 0071746781 | ISBN-13: 978-0071746786 - **Users' guides to the medical literature: a manual for evidence-based clinical practice:** Guyatt, G., D. Rennie, M. Meade and D. Cook (2002), AMA press Chicago. - **Research Methods in Community Medicine:** Surveys, Epidemiological Research, Programme Evaluation, Clinical Trials, 6th Edition Joseph Abramson, Z. H. Abramson ***Computer:*** - Discovering statistics using IBM SPSS statistics, Field, A. (2013). sage. - Medical Statistics: A Guide to SPSS, Data Analysis and Critical Appraisal, Belinda Barton, Jennifer Peat - 2nd EditionEveritt, Brian S. - Medical statistics from A to Z: a guide for clinicians and medical students. Cambridge University Press, 2021. - Bowers, David. Medical statistics from scratch: an introduction for health professionals. John Wiley & Sons, 2019. - Aviva, P. (2005): Medical Statistics at a Glance, Blackwell Company, 2nd , ed., Philadelphia

D. Periodicals, websites	- https://phrp.nihtraining.com/users/login.php - http://www.jhsph.edu/ - Journal of Biomedical Education - https://lagunita.stanford.edu/courses/Medicine/MedStats-SP/SelfPaced/about?fbclid=IwAR3nfirLM4wnuEqqUjLjk8TCR7lzPdnpGqwin06L-GjFq32a62w3j6R5s9c

- **Course Coordinators:**

  ➢ **Coordinators:**

  Lecturers: Dr / Chrestina Monir, Dr Shaimma Mahmoud

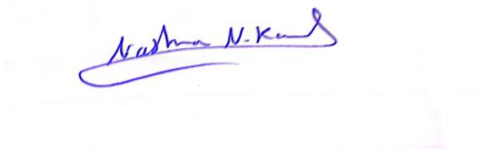
  Assistant Coordinator: Assis .lecturer Shaza Fadel

  Head of Department:

  Professor Dr. Nashwa Nabil Kamal

Date of program specifications 1st approval by department council: 13 /5/2013.

Date of last update & approval by department council: 6 / 3 / 2023



نموذج رقم (١١)

Medical Statistics and Research Methodology	**مسمى المقرر**
PA100	**كود المقرر**

جامعة/أكاديمية : المنيا

كلية / معهد: الطب

قسم: الصحة العامة والطب الوقائي

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**
<u>Introduction :</u> - Introduction to research. - Terminology and Rationale - Originality		A.1, A.2,			
- Study design : -Cross sectional study and the prevalence rate -Cohort study, incidence rate, relative & attributable risk -Case-control study, Odd's ratio sampling -Experimental study and clinical trials		A.3, A.4,	B.l, B.2, B.3, B.4,	C.1,	
- Sources of Errors in Medical Research **- Bias and confounding and its Control.**			B.3,	C.5	
- Validity and reliability					
- The questionnaire design				C.2,	

- Writing the Research Paper or Manuscript **- Protocol Writing**			B.3,	C.3,	D.1, D.2, D.3
- Critic technique for the literature review					
- Association and causation		A.6,		C.4,	
- Evidence -based approach in medical practice		A.5,			
- Ethics of medical research		A.7			
Statistics					
Sampling		A.8, A.9, A.11			D.4
Introduction to Sample Size Calculation		A.10		C.10	D.4
Data presentation		A.13, A.14	B.6	C.9	D.4
Tests of significance		A.15, A16	B.5	C.11	D.4
Introduction to SPSS		A.12	B.6	C.6, C7, C8	D.5, D.6
Proportion test		A.11	B.7, B8		D.5, D.6
Chi-square test		A.11	B.7, B8		D.5, D.6
Student T test, Paired T test		A.11	B.7, B8		D.5, D.6
ANOVA test		A.11	B.7, B8		D.5, D.6
Correlation (simple and multiple)		A.11	B.7, B8		D.5, D.6
Regression		A.17	B.7, B8		D.5, D.6
Screening		A.18, A.19	B.7, B8	C.12	D.4

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	A.1, A.2, A.3, A.4, A.5, A.6, A.7 , A.8,A9,A10,A11,A12,A13 A.14, A.15, A.16,A17, A.18	B.1, B.2, B.3, B.4, B5,B.6, B.7, B.8		
Practical			C1, C.3, C4, C.5, C.6, C.7, C.8. C.9, C.10, C11,C.12	
Assignment	A.11, A.13, A.18	B.7, B.8	C.2, C.6, C.8, C.9, C.10, C.12	D.1, D.2., D.4, D.5, D.6

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 paper based exam	A.3, A.4, A.5, A.6, A.7, A.8, A.9, A.14, A.15, A16, A18	B.3, B.5,		
Practical exam (Statistical exam)			C.1, C.2, C.5, C.6, C.7,C.8, C.9, C.10, C.11, C.12	
Oral exam	A.10, A11, A.12, A13, A.15, A.16, A.17, A18	B.1, B.2, B.6, B.7, B.8		D.1, D.2, D.5, D.6

Course Coordinators:

➢ **Coordinators:**

Lecturers: Dr / Chrestina Monir, Dr Shaimma Mahmoud

Assistant Coordinator: Assis .lecturer Shaza Fadel

Head of Department:

Professor Dr. Nashwa Nabil Kamal

Date of program specifications 1st approval by department council: 13 /5/2013.

Date of last update & approval by department council: 6 / 3 / 2023

Test blueprint for Research methodology course

Topic	Hour	% of topic	Total No. of items	Written exam (100 marks)		Marks (percentages)	Modified marks (Percentages)
				Knowledge	Intellectual		
Research							
Introduction: - Introduction to research. - Terminology and Rationale - Originality	3	10%	5	4	1	7%	5%
- Study design	4	13.3%	8	3	5	17%	17%
- Sources of Errors in Medical Research - Bias and confounding and its Control.	3	10%	4	2	2	13%	10%
- Validity and reliability	2	6.67%	3	2	1	7%	5%
- The questionnaire design	2	6.67%	3	1	2	5%	5%
- Writing the Research Paper or Manuscript - Protocol Writing	2	6.67%	4	1	3	13%	10%
- Critic technique for the literature review	2	6.67%	2	1	1	7%	5%
- Association and causation	1	3.33%	3	2	1	7%	8%
- Evidence -based approach in medical practice	2	6.67%	1	1		3%	5%
- Ethics of medical research	2	6.67%	2	2		3%	6%
Statistics							
Sampling	1	3.33%	2	1	1	4%	4%
Introduction to Sample Size Calculation	1	3.33%	1	1		2%	2%
Data presentation	1	3.33%	3	2	1	5%	4%
Tests of significance	2	6.67%	2	1	1	8%	8%
Introduction to SPSS	1	3.33%	1	1		3%	3%
Screening	1	3.33%	2	1	1	3%	3%
Total	**30**	**100%**					**100%**

Course specification of :

"Pathology for 1st Part of MD Program of Pathology"

(2022-2023)

University: Minia

Faculty: Medicine

Department: Pathology

<table>
<tr><td colspan="3">A. Basic Information</td></tr>
<tr><td>• Academic Year/level:
Post graduate; 1st Part</td><td>• Course Title:
Advances in Diagnostic Pathology</td><td>• Code: PA100</td></tr>
<tr><td colspan="3">- Number of teaching hours:
- Lectures: Total of 48 hours; 2 hours/week
- Practical/clinical: Total of 48 hours; 2 hours/week</td></tr>
<tr><td colspan="2">1. Overall Aims of the course</td><td>By the end of the course the student must be able to:
1.Demonstrate mastery of basics, methodology and tools of scientific research and medical audit in the field of Pathology
2. Appraise and improve clinical practice in the field of pathology
3. Integrate the medical knowledge in the field of pathology with other relevant sciences and apply such knowledge during professional practice
4. Identify and create solutions for common health problems in the field of pathology
5. Demonstrate competency in a wide range of professional skills in common areas of specialty, from basic practice and related clinical care to evidence-based clinical application, and acquisition of skills to manage independently all problems in the field of pathology
6. Use efficiently recent technologies to improve the professional practice of pathology
7. Demonstrate comprehensive awareness of common</td></tr>
</table>

	public health problems and plan to improve & maintain health care on system-based approach 8. Show appropriate attitudes and professionalism that reflect obligation to credibility and principles of medical practice. 9. Demonstrate commitment for lifelong learning, self-development and continuous medical education in the field of pathology as well as educating others
7. Intended learning outcomes of course (ILOs): ***Upon completion of the course, the student should be able to:***	
A- Knowledge and Understanding	A1. Describe theories, basics and updated knowledge in The field of molecular pathology and diagnostics of various cancers. . A2. Discuss diagnostic principles and clinical correlates of cytolopathology of different cytologic specimens. A3. Identify the basics and recent advances in the fields of immunopathology. A4. Outline basics, methodology, tools of ethical, medico-logical fundamentals and quality assurance & improvement related to the professional practice of Pathology A5. Identify the effect of professional practice issues on public health and health policies and methods of maintenance of public health and plan for system-based improvement
B- Intellectual Skills	B1. Appraise & interpret relevant basic information, pathological features, microscopic findings then correlate them with essential clinical data to produce a list of differential diagnosis. B2. Solve problems based on analysis of available data for common health problems by giving a list of differential diagnosis for further advanced investigations. B3. Conduct efficiently the proposed research thesis B4. Develop the basic skills of scientific writing of papers B5. Evaluate & manage efficiently potential risks that may arise during the professional practice of pathology in various practical situations like handling and processing of specimens as well as during performing different laboratory techniques. B6. Plan for acquiring of necessary skills of basic & modern pathological laboratory techniques. B7. Develop the skills to manage evidence-based discussion during case-presentation

C- Professional and Practical Skills	C1. Deal with different types of cytopathological and surgical specimens and reporting their gross features and correlate such information with the available provided clinical data. C2. Practice skillfully basic and learn recent cytopathological techniques. C3. Practice histochemical, genetic & immunohistochemical techniques. C4. Write a pathology report after correlation of gross & microscopic features together with available clinical data. C5. Evaluate current methods and tools used in laboratory & surgical pathology. C6. Counsel senior staff and consultants regarding the principles of essential techniques and those issues related to safety and maintenance of available resources. C7. Use efficiently the various technological devices on reporting & scientific writing.
D- General and transferable Skills	D1. Demonstrate effective communication skills in all its forms in various circumstances and contexts including students, colleagues, senior staff, technicians, patients and other health care workers D2. Use efficiently information technology (IT) including data entry & analysis D3. Demonstrate skills of teaching others and evaluating their performance. D4. Develop the skills of assessment of personal learning needs and planning for self-development and continuous medical education. D5. Use efficiently available information resources to get basic & recent knowledge. D6. Work efficiently as a team member as well as a team-leader in various professional events & circumstances. D7. Demonstrate basic & essential competencies for management of scientific meetings and manage time efficiently.

2. Course Contents

TOPIC	Contact hours

	Lecture	Practical	Total
1- Molecular Pathology and Diagnostics of cancer			
1. Molecular Pathology and Diagnostics of Gliomas	1	1	2
2. Molecular Pathology and Diagnostics of Thyroid and Parathyroid Malignancies	1	1	2
3. Molecular Pathology and Diagnostics of Breast Cancer	1	1	2
4. Molecular Pathology and Diagnostics of Non-small Cell Lung Carcinoma	1	1	2
5. Molecular Pathology and Diagnostics of Colorectal Cancer	1	1	2
6. Molecular Pathology and Diagnostics in Esophago-gastric Cancer	1	1	2
7. Molecular-Genetic Testing in Hepatocellular Carcinoma and Its Premalignant Conditions	1	1	2
8. Molecular Diagnostics of Pancreatic Cancer	1	1	2
9. Molecular Pathology and Diagnostics of Prostate Cancer	1	1	2
10. Molecular Diagnosis of Bladder and Kidney Cancer	1	1	2
11. Molecular-Genetic Testing in Penile, Scrotal, and Testicular cancer	1	1	2
12. Molecular Pathology and Diagnostics of Gynaecologic Malignancies	1	1	2
13. Molecular Pathology of Bone and Soft Tissue Neoplasms and Potential Targets for Novel Therapy	1	1	2
14. Molecular Pathology and Diagnostics of Pancreatic Endocrine Neoplasms	1	1	2
15. Molecular Pathology and Diagnostics of Childhood Tumours	1	1	2
16. Molecular Pathology and Diagnostics of Cutaneous Malignancy	1	1	2
17. Molecular Diagnostics of Lymphoid Neoplasms	1	1	2
18. Molecular Diagnostics of Myeloid Neoplasms	1	1	2
2- Cytopathology			
1. Introduction to cytology	1	1	2
2. Gynaecological cytology	1	1	2
3. Effusion cytology	1	1	2
4. Urine cytology	1	1	2
5. CSF cytology	1	1	2
6. Pulmonary cytology (A)- BAL & Wash (B)-FNA of Lung	2	2	4

7. GIT cytology	1	1	2
8. FNA: Principal & Techniques & criteria for adequacy (A)- FNS of Thyroid (B)-FNSA of Liver & Pancreas (C)-FNA of Breast (D)- FNA of Lymph nodes (E)-FNA of Salivary glands	12	12	24
3- Immunopathology			
1. The normal immune response	1	1	2
2. Cells and tissues of the immune system	1	1	2
3. Overview of lymphocyte activation and adaptive immune responses	1	1	2
4. Humoral Immunity: activation of B lymphocytes and elimination of extracellular decline of immune responses and immunological Memory	1	1	2
5. Hypersensitivity	1	1	2
6. Autoimmune diseases	1	1	2
7. Rejection of transplants	2	2	4
8. Immunodeficiency syndromes	1	1	2
9. Amyloidosis	1	1	2
Total	48	48	96

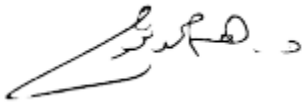
4- Teaching and Learning Methods	4.1. Lectures: Both face to face and online recorded ones. 4.2. Practical lessons: Gross and histopathology (Jars & slides). 4.3. Self-learning activities such as use of internet and multimedia 4.4. Tutorial & regular weekly seminars, case presentation, training courses & workshops

5- Teaching and Learning Methods to students with limited Capacity	(Not applicable)
6- Student Assessment	
A. Student Assessment Methods	**1. Written exam :** A- Short essay to assess knowledge and understanding B- Problem solving to assess intellectual skills C- MCQ to assess knowledge and intellectual skills **2. Oral exam:** to assess the student intellectual and communication abilities regarding basic knowledge and understanding of the course topics, and to help the teaching staff to evaluate the % of achievement of the intended learning outcome of the course..
B. Assessment Schedule	Assessment 1: Written exam at the end of course. Assessment 2: Oral exam, after passing the written exam.
C. Weighting of Assessment	**Type of Assessment %** • **Written** examination (100%) • **Oral** examination. (100%) **Total** (100%) ***N.B.*** *- Score of ≥ 60% of the written exam is essential to allow the student to perform both oral & clinical/ practical exams* *- For each exam, ≥ 60% is essential to pass*.
7- List of References	
A. Course Notes/handouts	1 -General and systemic pathology course notes Prepared by the department staff and printed material/ handouts of lectures & recorded ones.
B. Essential Books (text books)	1. Goldblum, John R., et al. Rosai and Ackerman's Surgical Pathology E-Book. Elsevier Health Sciences (2017). 2. Kumar, V., Abbas, A. K., & Aster, J. C. Robbins basic pathology e-book. Elsevier Health Sciences (2018). 3. Pathology e-book. Elsevier Health Sciences (2017). 4- WHO Blue Books. Recent Updates. 5. CYTOLOGY: DIAGNOSTIC PRINCIPLES AND CLINICAL CORRELATES (fifth edition). 6-Differential Diagnosis in Surgical Pathology (2021)
C. Recommended Books	- Mills, S. E., Carter, D., Greenson, J. K., Reuter, V.

	E., Stoler, M. H. (2012). Sternberg's diagnostic surgical pathology. Lippincott Williams & Wilkins.
D. Periodicals	American Journal of pathology The Journal of pathology Diagnostic Histopathology Cancer
E. Web sites	www.pubmed.com www.pathmax.com
8- Facilities required for teaching and learning	Classrooms for theoretical lectures and tutorials

- **Program Coordinators:**
  Ass. Prof. Dr/ Alzahraa Ibrahim Khalil

  Head of Department: Prof. Dr/ Heba Mohamed Tawfik



Date of program specifications 1st approval by department council: 13/5/2013.

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

نموذج رقم (١١)

Course Specification of Pathology **MD (First part)**	**مسمى المقرر**
PA100	**كود المقرر**

جامعة/أكاديمية : .....المنيا.....

كلية / معهد: .....الطب البشرى.....

قسم: ..الباثولوجي.....

A. The Matrix of Coverage of Course IL by Contents

Contents	**Intended Learning Outcomes (ILOs)**			
	Knowledge & Understanding	**Intellectual Skills**	**Professional & Practical skills**	**General & Transferable Skills**
	A	**B**	**C**	**D**
1- Molecular Pathology and Diagnostics of cancer				
1. Molecular Pathology &Diagnostics of Gliomas	A1	B3,4,6	C3,5,6,7	D1,2,3,4,5,6,7
2. Molecular Pathology & Diagnostics of Thyroid & Parathyroid malignancies				
3. Molecular Pathology and Diagnostics of Breast Cancer				
4. Molecular Pathology and Diagnostics of Non-small Cell Lung Carcinoma				
5. Molecular Pathology and Diagnostics of Colorectal Cancer				
6. Molecular Pathology and Diagnostics in Esophago-gastric Cancer				
7. Molecular-Genetic Testing in HCC Carcinoma & its Premalignant Conditions				
8. Molecular Diagnostics of Pancreatic Cancer				

9. Molecular Pathology and Diagnostics of Prostate Cancer				
10. Molecular Diagnosis of Bladder and Kidney Cancer				
11. Molecular-Genetic Testing in Penile, Scrotal, and Testicular cancer				
12. Molecular Pathology and Diagnostics of Gynaecologic Malignancies				
13. Molecular Pathology of Bone and Soft Tissue Neoplasms and Potential Targets for Novel Therapy				
14. Molecular Pathology and Diagnostics of Pancreatic Endocrine Neoplasms				
15. Molecular Pathology and Diagnostics of Childhood Tumours				
16. Molecular Pathology and Diagnostics of Cutaneous Malignancy				
17. Molecular Diagnostics of Lymphoid Neoplasms				
18. Molecular Diagnostics of Myeloid Neoplasms				
2- Cytopathology				
1. Introduction to cytology	A2,A4,A5	B1,2,5	C1,2,3,4,5,6,7	D1,2,3,4,5,6,7
2. Gynaecological cytology				
3. Effusion cytology				
4. Urine cytology				
5. CSF cytology				
6. Pulmonary cytology (C)- BAL & Wash (D)- FNA of Lung				
7. GIT cytology				
8. FNA: Principal & Techniques & criteria for adequacy (F)- FNS of Thyroid (G)- FNSA of Liver & Pancreas (H)- FNA of Breast				

(I)- FNA of Lymph nodes (J)- FNA of Salivary glands				
3- Immunopathology				
1. The normal immune response	A3	B1,5,6	C1,2,3,4,5,6,7	D1,2,3,4,5,6,7
2. Cells and tissues of the immune system				
3. Overview of lymphocyte activation and adaptive immune responses				
4. Humoral Immunity: activation of B lymphocytes and elimination of extracellular decline of immune responses and immunological Memory				
5. Hypersensitivity				
6. Autoimmune diseases				
7. Rejection of transplants				
8. Immunodeficiency syndromes				
9. Amyloidosis				
II. Scientific activities (Journal club, Training courses, Case presentation, Conference attendance, thesis discussion, Scientific writing, Seminars & Workshops)				D1,2,3,4,5,6,7

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	√	√		
Practical			√	
Presentation/seminar				√
Journal club				√
Training courses & workshops				√

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	√	√		
Practical exam			√	
Oral Exam	√	√		√
Log book	√	√	√	√

- **Program Coordinators:**
  Ass. Prof. Dr/ Alzahraa Ibrahim Khalil

  Head of Department: Prof. Dr/ Heba Mohamed Tawfik

Date of program specifications 1st approval by <u>department council</u>: 13/5/2013.

Date of <u>last update</u> & approval by <u>department council</u>: 12/3/2023

Blueprint Pathology Department

Doctorate Degree (MD) in Pathology

(1st Part) (2022-2023)

Topic	Contact hours	Knowledge %	Intellectual %	% of topic	mark	Actual mark
1- Molecular Pathology and Diagnostics of cancer	18	70	30	37.5	37.5	40
2- Cytopathology	20	70	30	41.6	41.6	40
3- Immunopathology	10	80	20	20.9	20.9	20
Total	**48**			**100**	**100**	**100**

Course specification of :

"Pathology for 2nd Part of MD Program of Pathology"

(2022-2023)

University: Minia

Faculty: Medicine

Department: Pathology

A. Basic Information		
• **Academic Year/level:** Post graduate; 2nd Part	• **Course Title**: 2nd Part of MD Program of Pathology Surgical Pathology	• **Code**: PA100
- Number of teaching hours: - **Lectures:** Total of **82** hours; **2** hours/week - **Practical/clinical:** Total of **108** hours; **2** hours/week		
3. Overall Aims of the course	*By the end of the course the student must be able to:* 1. Demonstrate mastery of basics, methods and tools of scientific research 2. Plan to continuously add developments to the field of pathology through research 3. Correlate the medical knowledge in the field of pathology with other relevant sciences and apply such knowledge in practical skills 4. Identify and create solutions for health problems in the field of pathology 5. Demonstrate competency in a wide range of professional skills in common areas of specialty, from basic clinical care to evidence based clinical application, and possession of skills to manage independently all problems in the field of pathology 6. Develop and improve new methods and approaches in the professional medical practice of the field of	

	pathology. 7. Use suitable technologies to improve the professional medical practice in the field of pathology 8. Demonstrate effective communication skills and leadership competencies in different professional situations. 9. Master decision making capabilities in different situations in view of the available data 10. Develop effective management skills & improvement of available resources and have the competency to get new resources 11. Demonstrate in depth awareness of public health and health policy issues and have the ability to improve & maintain health care and carryout system-based improvement of it. 12. Show appropriate attitudes and professionalism that reflect adherence to credibility and principles of medical practice. 13. Demonstrate commitment for lifelong learning and maintenance of competence and ability for continuous medical education in subsequent stages in the field of pathology as well as teaching others.
8. Intended learning outcomes of course (ILOs): ***Upon completion of the course, the student should be able to:***	
E- Knowledge and Understanding	A1. Discuss theories, principles and updated knowledge in the fields of histopathology, cytopathology, molecular pathology and immunohistochemistry. A2. Discuss etiology, pathogenesis, gross and microscopic pathological features, clinical manifestations, fate and complications of main common disease categories that may affect the different body systems. A3. Outline recent scientific development in the fields of molecular pathology & tumour markers. A4. Describe basics & methods of application of ethics and medico-logical aspects and quality assurance during the professional practice of Pathology. A5. Outline the mutual effect of professional practice issues & public health and health policies and methods of maintenance & improvement of public health.
F- Intellectual Skills	B1. Assess & interpret relevant basic information, gross features, microscopic findings then correlate them with

	available clinical data to reach a final correct diagnosis. B2. Solve problems based on analysis of available data through the approach of investigative & analytical thinking by making a list of differential diagnosis for further advanced investigations. B3. Conduct scientific research efficiently. B4. Write scientific papers and select suitable journals for publication B5. Assess & manage competently potential risks that may develop during the professional practice of pathology in various practical contexts such as during handling and processing of specimens as well as during performance of various laboratory techniques. B6. Show the essential skills of basic & recent pathological laboratory techniques. B7. Demonstrate the skills of critical appraisal & decision making in different professional settings & circumstances during the professional practice of pathology. B8. Innovate new methods, tools & ideas in the different aspects of the field of pathology. B9. Manage professionally evidence-based discussion during case-presentation, workshops & seminars.
G- Professional and Practical Skills	C1. Deal with different types of surgical specimens and reporting their gross features and correlate such information with the available provided clinical data. C2. Practice competently standard and recent histological techniques including tissue fixation, processing and tissue sectioning as well as preparation of basic stains and handling of different equipments, devices and microscopes. C3. Practice histochemical & immunohistochemical techniques that enable reaching a final & correct diagnosis C4. Write professionally a pathology report on evidence-based approach, through analytical approach and correlation of gross features & microscopic findings together with available clinical data. C5. Evaluate & develop plans for improvement of maximizing the use of the available resources and ensure maintaining them. C7. Use competently the different technological devices during reporting, archiving & scientific writing.

	C8. Plan for professional self-development as well as enhancement of performance of others.
H- General and transferable Skills	D1. Demonstrate effective communication skills in all its forms in different settings & events that may involve different groups such as students, junior staff, colleagues, senior staff, technicians, patients and other health care workers D2. Use competently information technology (IT) including data entry & analysis to enhance data management and to achieve improvement of the professional practice D3. Show efficient skills of educating others and assessment of their performance. D4. Evaluate personal needs and plan for self-development and continuous medical education. D5. Use efficiently available information resources to get principle & updated knowledge related to the field of pathology D6. Work competently as a team-leader as well as a team member in different professional contexts. D7. Manage scientific meetings and efficient time-management.

4- Course Contents:

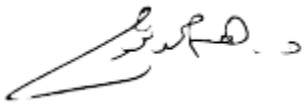
TOPIC	Contact hours		
	Lecture	Practical	Total
Surgical Pathology			
1. CVS & blood vessels	4	2	6
2. Respiratory system	4	6	10
3. GIT	6	8	14
4. Disease of liver and Biliary tract	6	6	12
5. Diseases of exocrine pancreas and Peritoneum	2	4	6
6. Diseases of the kidney	4	6	10
7. Diseases of urinary bladder and Ureter	4	4	8
8. Diseases of female genital system	6	6	12
9. Diseases of male genital system	2	4	6
10. Diseases of female breast	4	6	10
11. Endocrine diseases	4	6	10
12. Diseases of musculoskeletal system	4	6	10
13. Diseases of lymph nodes and spleen	4	6	10
14. Blood diseases	2	4	6
15. Diseases of nervous system	4	4	8
16.Routine and special techniques in surgical pathology and the related safety & quality measures.	10	10	20
17. Handling of surgical specimens and the related safety & quality measures.	12	20	32
Total	82	108	190

9- Teaching and Learning Methods	4.1. Lectures: Both face to face and online recorded ones. 4.2. Practical lessons: Gross and histopathology (Jars & slides). 43. Self-learning activities such as use of internet and multimedia 4.4. Tutorial & regular weekly seminars, case presentation, training courses & workshops
10- Teaching and Learning Methods to students with limited Capacity	(Not applicable)
11- Student Assessment	
D. Student Assessment Methods	**1. Written exam :** A- Short essay to assess knowledge and understanding B- Problem solving to assess intellectual skills C- MCQ to assess knowledge and intellectual skills **2. Practical exam:** To assess ability of the candidate for applying information studied in the course in diagnosis and drawing of different gross, microscopic and projector slides (OSPE). **3. Oral exam:** to assess the student intellectual and communication abilities regarding basic knowledge and understanding of the course topics, and to help the teaching staff to evaluate the % of achievement of the intended learning outcome of the course..
E. Assessment Schedule	Assessment 1: 2 Written exam at the end of course (Exam in 2 days, 3 hours each). Assessment 2: Practical exam, after passing the written exam. Assessment 3: Oral exam, after passing the written exam.
F. Weighting of Assessment	**Type of Assessment %** • **Written** examination (100%) • **Practical** examination (100%) • **Oral** examination. (100%) **Total** (100%) ***N.B.*** *- Score of ≥ 60% of the written exam is essential to allow the student to perform both oral & clinical/ practical exams* *- For each exam, ≥ 60% is essential to pass***.**
12- List of References	

F. Course Notes/handouts	1 -General and systemic pathology course notes Prepared by the department staff and printed material/ handouts of lectures & recorded ones.
G. Essential Books (text books)	1. Goldblum, John R., et al. Rosai and Ackerman's Surgical Pathology E-Book. Elsevier Health Sciences (2017). 2. Kumar, V., Abbas, A. K., & Aster, J. C. Robbins basic pathology e-book. Elsevier Health Sciences (2018). 3. Pathology e-book. Elsevier Health Sciences (2017). 4- WHO Blue Books. Recent Updates. 5-Differential Diagnosis in Surgical Pathology (2021)
H. Recommended Books	- Mills, S. E., Carter, D., Greenson, J. K., Reuter, V. E., Stoler, M. H. (2012). Sternberg's diagnostic surgical pathology. Lippincott Williams & Wilkins.
I. Periodicals	American Journal of pathology The Journal of pathology Diagnostic Histopathology Cancer
J. Web sites	www.pubmed.com www.pathmax.com
13- Facilities required for teaching and learning	Classrooms for theoretical lectures and tutorials

- **Program Coordinators:**
  Ass. Prof. Dr/ Alzahraa Ibrahim Khalil

  Head of Department: Prof. Dr/ Heba Mohamed Tawfik



Date of program specifications 1st approval by department council: 13/5/2013.

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

نموذج رقم (١١)

Course Specification of Pathology **MD (second part)**	مسمى المقرر
PA100	كود المقرر

جامعة/أكاديمية : .....المنيا.....

كلية / معهد: .....الطب البشرى.....

قسم: ..الباثولوجي.....

A. 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
I. Surgical Pathology	A	B	C	D
1. CVS & blood vessels	A1,2,3,4,5	B1,2,7	C5,6	D 3,4,5,6,7
2. Respiratory system	A1,2,3,4,5	B1,2,7	C5,6	D 3,4,5,6,7
3. GIT*	A1,2,3,4,5	B1,2,7	C5,6	D 3,4,5,6,7
4. Disease of liver and Biliary tract	A1,2,3,4,5	B1,2,7	C5,6	D 3,4,5,6,7
5. Diseases of exocrine pancreas and Peritoneum	A1,2,3,4,5	B1,2,7	C5,6	D 3,4,5,6,7
6. Diseases of the kidney	A1,2,3,4,5	B1,2,7	C5,6	D 3,4,5,6,7
7. Diseases of urinary bladder and Ureter	A1,2,3,4,5	B1,2,7	C5,6	D 3,4,5,6,7
8. Diseases of female genital system	A1,2,3,4,5	B1,2,7	C5,6	D 3,4,5,6,7
9. Diseases of male genital system	A1,2,3,4,5	B1,2,7	C5,6	D 3,4,5,6,7
10. Diseases of female breast	A1,2,3,4,5	B1,2,7	C5,6	D 3,4,5,6,7
11. Endocrine diseases	A1,2,3,4,5	B1,2,7	C5,6	D 3,4,5,6,7
12. Diseases of musculoskeletal system	A1,2,3,4,5	B1,2,7	C5,6	D 3,4,5,6,7
13. Diseases of lymph nodes and spleen	A1,2,3,4,5	B1,2,7	C5,6	D 3,4,5,6,7
14. Blood diseases	A1,2,3,4,5	B1,2,7	C5,6	D 3,4,5,6,7
15. Diseases of nervous system	A1,2,3,4,5	B1,2,7	C5,6	D 3,4,5,6,7
16.Routine and special techniques in surgical pathology and the related safety & quality measures.	A3,4,5	B6,7,8	C1,2,3,5,6,7,8	D1,2,3,5,6

17. Handling of surgical specimens and the related safety & quality measures.	A3,4,5	B6,7,8	C1,2,3,5,6,7,8	D1,2,3,5,6
II. Scientific activities (Journal club, Training courses, Case presentation, Conference attendance, thesis discussion, Scientific writing, Seminars & Workshops)				D1,2,3,4,5,6,7

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	√	√		
Practical			√	
Presentation/seminar				√
Journal club				√
Training courses & workshops				√

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	√	√		
Practical exam			√	
Oral Exam	√	√		√
Log book	√	√	√	√

- **Program Coordinators:**
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Date of program specifications 1st approval by <u>department council</u>: 13/5/2013.

Date of <u>last update</u> & approval by <u>department council</u>: 12/3/2023

Blueprint Pathology Department

Doctorate Degree (MD) in Pathology

(2nd Part) (2022-2023)

Topic	Contact hours	Knowledge %	Intellectual %	% of topic	mark	Actual mark
1. CVS & blood vessels	4	70	30	4.8	4.8	5
2. Respiratory system	4	70	30	4.8	4.8	5
3. GIT	6	75	25	7.4	7.4	7.5
4. Disease of liver and Biliary tract	6	80	20	7.4	7.4	7
5. Diseases of exocrine pancreas and Peritoneum	2	75	25	2.5	2.5	2.5
6. Diseases of the kidney	4	75	25	4.8	4.8	5
7. Diseases of urinary bladder and Ureter	4	75	25	4.8	4.8	5
8. Diseases of female genital system	6	80	20	7.4	7.4	7.5
9. Diseases of male genital system	2	70	30	2.5	2.5	2.5
10. Diseases of female breast	4	80	20	4.8	4.8	5
11. Endocrine diseases	4	80	20	4.8	4.8	5
12. Diseases of musculoskeletal system	4	70	30	4.8	4.8	5
13. Diseases of lymph nodes and spleen	4	70	30	4.8	4.8	5

14. Blood diseases	2	75	25	2.5	2.5	2
15. Diseases of nervous system	4	75	25	4.8	4.8	5
16. Routine and special techniques in surgical pathology and the related safety & quality measures.	10	50	50	12.3	12.3	12
17. Handling of surgical specimens and the related safety & quality measures.	12	50	50	14.8	14.8	14
Total	**82**			**100**	**100**	**100**