Program specifications for: master's degree (MSc) of Internal Medicine

[1] Basic Information

1. **Program title:** master's degree (MSc) of Internal Medicine (GM200)
2. **Final award:** Master's degree (MSc) in Internal Medicine.
3. **Program type: single.**
4. **Responsible department:** Internal Medicine
5. **Departments involved in the program:** Internal Medicine, Medical Physiology, Pathology, Public health and preventive medicine, Human Anatomy and embryology, Histology and Cell Biology, Medical Biochemistry, Medical Pharmacology, Forensic Medicine and Clinical Toxicology, Microbiology and Immunology, Clinical Pathology.
6. **Program duration: 24 months (6 months for the first part and 18 months for the second part).**
7. **Number of program courses:** 8
8. **Coordinator: Prof. Ass.** Prof. Asmaa Kassem Ahmed
9. **External evaluators:** Prof. Dr. Hanan Ali Taha
10. **Program management team:** All staff members of Internal Medicine department.

[2] Professional Information: Program Aims

Graduate of master's degree in Internal Medicine, the candidate should be able to:

1.1 Understand and apply the basics of research tools and methods in the field of Internal Medicine.

1.2 Able to critically analyse and evaluate different findings and methods used in the internal medicine specialty.
1.3 Apply Internal Medicine knowledge in clinical practice, diagnose and treat common Internal Medicine diseases (including critical illnesses).
1.4 Demonstrate awareness of common internal medicine diseases in the community.
1.5 Become a professional and competent internist and shows the ability to diagnose and treat complex internal medicine diseases.
1.6 Master the usage of basic clinical skills and different diagnostic tools in different internal medicine subspecialties.
1.7 Gail leadership skills and communicate efficiency with other colleagues in the speciality of internal Medicine and Other related specialities.
1.8 Practice with sound professional ethical attitude to interact with community problems.
1.9 Demonstrate the ability to self-improvement and continuous professional growth in Internal Medicine specialty.

[3] Intended Learning Outcomes (ILOs):

(a) Knowledge and understanding:

By the end of the study of MSc degree of Internal Medicine the candidate should be able to:

a.1 Discuss the basics in the normal **anatomy** of the human organs.
a.2 Recognize the basics of **histology** and cell biology of the human tissues.
a.3 Define the normal **physiology** and functions of different human organs.
a.4 Identify the **biochemical** basis of health and disease in the human body.
a.5 Describe various **pharmacological** and non-pharmacological therapeutic options of different disease
a.6 Explain the **microbiological** and immunological basis of health and disease related to internal Medicine.
a.7 Recognize the essential **pathological** changes of different medical diseases of (hepatology, gastroenterology, nephrology, endocrinology, hematology,

cardiology, pulmonology, critical care)

a.8 Define main cardiological and pulmonary diseases, their etiologies, pathologies, diagnosis, and management.
a.9 Define the main hepatobiliary and gastrointestinal diseases.
a.10 Recognize the main nephrological, haematological, and endocrinal diseases.
a.11 Recognize the main infectious diseases and basics of managing critically ill patients.
a.12 Recognize the main neurological and rheumatological disease.
a.13 Identify scientific development in the field of Internal Medicine.
a.14 Identify the mutual influence between professional practice and its impacts on the environment.
a.15 List the ethical and legal principles of professional practice in the field of Internal Medicine.
a.16 List the principles of quality in professional practice in the field of internal Medicine.
a.17 Define the basics and ethics of scientific research.
a.18 Enumerate the quality principles in the internal medicine field.

(b) Intellectual skills

By the end of the MSc of Internal Medicine, the candidate should be able to:

b.1 Develop critical and analytical skills to solve different problems related to Internal Medicine.
b.2 Combine basic knowledge and clinical skills to diagnose and treat different internal medicine diseases.
b.3 Interpret clinical history, examination, imaging, and laboratory studies for different internal medicine diseases.
b.4 Effectively apply research methods to carry out a thesis in one of the internal medicine fields.
b.5 Construct good understanding to common risks and patient safety issues related to internal medicine patients.
b.6 Plan for the development of performance in the field of Internal Medicine.
b.7 Design diagnostic and therapeutic plans to Internal medicine patients and report them to colleagues and managerial authorities.

3. Skills:

(c) Professional and practical skills

By the end of the study of MSc of Internal Medicine, the candidate should be able to:

c.1 Assess clinical history and symptoms of internal Medicine.
c.2 Examine and perform clinical evaluation of different body systems.
c.3 Analyse different laboratory and imaging studies (x-rays, CT, MRIs), etc.
c.4 Assess Electrocardiogram.

c.5 Compare different clinical pictures, diagnostic procedures, and treatments of internal medicine diseases.
c.6 Write and evaluate medical reports for internal medicine patients.
c.7 Perform some interventional procedures such as paracentesis, thoracocentesis, central line insertion, and endotracheal tube insertion.

(d) General and transferable skills

By the end of the study of MSc **of Internal Medicine**, the candidate should be able to:

d.1 Use online databases to collect materials needed for research and thesis.
d.2 Manage and organize materials from various sources from the internet, libraries, etc.
d.3 Express a research assignment orally and electronically.
d.4 Show respect to all patients irrespective of their socioeconomic levels, culture or religious beliefs and use language appropriate to the patient's culture.
d.5 Ethically perform the clinical and academic activities.
d.6 Communicate effectively with Internal Medicine patients, colleagues, and other managerial authorities.
d.7 Develop a life-long attitude of continuous self-improvement and continuous medical education.
d.8 Become aware of community-related health problems related to internal medicine.
d.9 Manage time effectively.
d.10 Work as a team worker and leader while working with other colleagues.
d.11 Put and use indicator for evaluating the performance of others.

[4] Program Academic Reference Standards:

- Faculty of Medicine, Minia university 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 cession No.177 Dated :18\5\2009) (see Annex I)

- Faculty of Medicine, Minia university has developed the academic standards (ARS) for Master of Science (Msc) 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 I}.

- Then, Internal Medicine department has developed the intended learning outcomes (ILOs) for Master of Science (MSc) program in Internal Medicine and the Date of program specifications first approval was by department council: 13-5-2013, last update: 6-3-2023{Annex 2}.

[5] Program structure:

Program duration: 2 Years (24 Months).

Course	Lecture hours/week	Practical/Clinical hours/week	Total No. of hours hours/week
First part (6 months)			
Medical Physiology and Medical biochemistry	**3**	**-**	**3**
Human Anatomy and embryology Histology and cell biology	**1**	**-**	**1**
Medical Pharmacology	**2**	**-**	**4**
Pathology	**2**	**2**	**4**
Microbiology and Immunology.	**1**	**1**	**2**
Clinical Pathology	**1**	**1**	**2**
Medical Ethics	**2**	**-**	
Internal Medicine (clinical)	**-**	**18**	**18**
Total	**12**	**22**	**34**
Second part (18 months)			
Internal Medicine	6	26	32

Program courses (curriculum)

Course Title	Total No. of hours/w	No. of hours /week			Program ILOs Covered
		Lect.	Practical	Tutorial	
FIRST PART (Level of course):					
1. **Medical Physiology and Medical biochemistry**	**3**	**3**	**-**		a.3, a.4 b.1, b.2, c.3, c.7, d.1, d.2, d.5.
2.Human Anatomy and embryology 2. **Histology and cell biology**	**1**	**1**	**-**		a.1, a.2 b.1, b.2, c.3, c.,7, d.1, d.2, d.5.

3. Medical Pharmacology	**2**	**2**	**-**		a.5, b.1, b.2, c.3, c.7, d.1, d.2, d.5.
4. Pathology	**4**	**2**	**2**		a.7, b.1, b.2, c.3, c.7, d.1, d.2, d.5.
5. Microbiology and Immunology.	**2**	**1**	**1**		a.6, b.1, b.2, c.3, c.7, d.1, d.2, d.5.
6. Clinical Pathology	**2**	**1**	**1**		a.7, b.1, b.2, c.3, c.7, d.1, d.2, d.5.
7. Internal Medicine (clinical)	**18**	**-**	**18**		a.8, a.9, a.10, a.11, a.12, a.13, a.14, a.15, a.16, a18 b.1, b.2, b.3, b.5, b.6, b.7, c.1, c.2, c.3, c.4, c.5, d.2, d.7, d.8
8. Medical Ethics.	**2**	**2**	**-**	-	a.15, a17, b5, d4, d5, d6
Training programs and workshops, field visits, seminars& other scientific activities	continuous				a.8, a.9, a.10, a.11, a.12, a.13, a.14, a.15, a.16. b.1, b.2, b.3, b.5, b.6, b.7, c.1, c.2, c.3, c.4, c.5, c.6, c.7 d.2, d.7, d.8
SECOND PART (Level of course):					
1. Internal Medicine	32	6	26		a.8, a.9, a.10, a.11, a.12, a.13, a.14, a.15, a.16, a.18 b.1, b.2, b.3, b.5, b.6, b.7, c.1, c.2, c.3, c.4, c.5, c.6,c.7, d.2, d.7, d.8

Training programs and workshops, field visits, seminars& other scientific activities	continuous	a.8, a.9, a.10, a.11, a.12, a.13, a.14, a.15, a.16. b.1, b.2, b.3, b.5, b.6, b.7, c.1, c.2, c.3, c.4, c.5, d1,d.2, d3,d4,d5,d6,d.7, d.8,d9,d10,d11

[6] program admission requirements:

Conditions should be fulfilled for registration:

1- **Candidates graduated from Egyptian Universities should have at least "Good Rank" in their final year examination/ cumulative years, and grade "Good Rank" in internal medicine course too.**

2- **He should pass one year as a house officer in a university hospital or equivalent teaching hospital.**

3- **All candidates should have MBBCH with GOOD rank at least from Egyptian university or fellowship of internal Medicine from Egyptian ministry of health.**

4- **The candidates who are working in Ministry of health hospital must stay one year (full time) as visitor doctor for training in the university hospital after acceptance of registration.**

Specific Requirements:

1- **Candidate should know how to speak & write English well (TOEFL certificate).**

2- **Candidate should have computer skills and ICDL certificate.**

[7] Regulations for progression and program completion

<u>First part</u> ≥ 6 months:

- Registration for the study in October every year.

- Start of the study in October.

- Registration of the scientific research after acceptance of internal medicine department and faculty councils and the vice dean of post graduate studies of the university.

-Examination of the first part starts after 6 months from registration of master degree.

- the student has to pass the first part exam.

- Those who fail in one curriculum need to re-exam it only.

- Medical Ethics course is a pass or fail exam and not added to the Total grades of the MSc Degree.

<u>B) Second Part (≥18 months)</u>

• Program related specialized science of internal medicine courses and ILOs. At least 18 months after passing the 1st part should pass before the student can take permission 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:

Grand rounds اجتماع علمى موسع

Training courses دورات تدريبية

Conference attendance حضور مؤتمرات علمية

Thesis discussion حضور مناقشات رسائل

Workshops حضور ورش عمل

Journal club ندوة الدوريات الحديثة

Case presentation تقييم حالة مرضية

Seminars لقاء علمى موسع

Morbidity and Mortality conference ندوة تحليل المخاطر المرضية أوالوفاة

Self education program برنامج التعليم الذاتى

- Examination of the second part after passing first part examination and finishing clinical studies and training (not less than 18 months).

-The candidate should pass the written, clinical and oral exams .

-If the candidate failed to achieve ≥60 % of total ,he should repeat the full exam with 4 trial maximum.

Scientific research (Thesis)

- Discussion of the research done and accepted one month at least before the exam of the second part. The thesis should be accepted from the discussion committee, internal medicine department and faculty councils and vice dean of postgraduate studies of the university. One literature at least should be edited from the research in a documented scientific journal documented from the high council of the Egyptian universities.

[8] Evaluation of program intended learning outcomes:

Evaluator (By whom)	Method/tool	Sample
1. **Senior students (Students of last year**	Questionnaires	All the students
2. **Graduates (Alumni)**	Questionnaires	10 at least
3. **Stakeholders**	Meeting Questionnaires	10 at least
4. **External & Internal evaluators and external examiners**	Reports	1 at least
5. **Quality Assurance Unit**	Reports Questionnaires Site visits	
6. **Exams results**	Results analysis Report	All the students

[9] Teaching and learning methods	[10] Methods of assessment.:
Lectures (PowerPoint, chalk, and talk)	**WRITTEN EXAM** **- Short essay** **- MCQs**

	- Complete **- True or false and correct the wrong** **- Commentary** **- Problem solving**
Clinical and practical (Including grand rounds)	**CLINICAL EXAM:** **- Long case history and examination.** **- Short case history and examination.** **- Commentary cases.** **- ECG Quizzes.** **- Radiology Quizzes.**
Presentation/seminar	**ORAL EXAM**
Journal club	**LOG BOOK**
Thesis discussion	

Course	Written	Oral	practical	Total
First part				
Medical Physiology	20	**30-**		50
Medical biochemistry	10	**15**		25
Human Anatomy and embryology	15	**17.5**	5	37.5
Histology and cell biology	15	**22.5**		37.5
Medical Pharmacology	30	45		75
Pathology	15	22.5	-	37.5
Microbiology and Immunology.	7	11.5		18.5
Clinical Pathology	8	12		20
Medical Ethics	**40%**	**60%**		**100**
Total				**300**
Internal Medicine	280	210	210	700

Date of last department approval: 6-3-2023
Head of the Internal Medicine department Signature:

Prof. Dr. Youssef Ismail Moussa

Signature:

ANNEX [I]
Matrix Between National Academic Quality Assurance & Accreditation (NAQAAE) General Academic Reference Standards (GARS) and Faculty Academic Reference Standards (ARS) (Including graduate Attributes)

NAQAAE برامج الماجستير	**Faculty** **Master (MSC) Program**
١. 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 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 Master Programs**	**2. Faculty Academic Reference Standards (ARS) for Master Program**
٢,١. المعرفة والفهم: بانتهاء دراسة برنامج الماجستير يجب أن يكون الخريج قادرا علي الفهم والدراية بكل من:	**2.1. Knowledge & Understanding:** Upon completion of **the Master Program in** Internal Medicine, 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 الماجستير يجب أن يكون الخريج قادرا على:	**2.2. Intellectual Skills:** Upon completion of the master program of Internal Medicine, 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 الماجستير يجب أن يكون الخريج قادرا على:	**3.2. Professional Skills:** Upon completion of the master program of Internal Medicine, 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 الماجستير يجب أن يكون الخريج قادرا على:	4.2. **General and transferable skills** Upon completion of the master program of internal medicine, 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.

Date of last department approval: 6-3-2023
Head of the Internal Medicine department Signature:

ANNEX [II]
Matrix Between Faculty Academic Reference Standards (ARS), and Program ILOs

2. Faculty Academic Reference Standards (ARS) for Master Program	Internal Medicine MSc program ILOs
2.1. Knowledge & Understanding: Upon completion of **the Master Program** **in** internal Medicine the graduate should have sufficient knowledge and understanding of:	**A. Knowledge And understanding (A)**
2.1.1. Understand the scientific basis and modern knowledge in the field of specialization and related medical sciences	a.1 Discuss the basics in the normal **anatomy** of the human organs. a.2 Recognize the basics of **histology** and cell biology of the human tissues. a.3 Define the normal **physiology** and functions of different human organs. a.4 Identify the **biochemical** basis of health and disease in the human body. a.5 Describe various **pharmacological** and non-pharmacological therapeutic options of different disease a.6 Explain the **microbiological** and immunological basis of health and disease related to internal Medicine. a.7 Recognize the essential **pathological** changes of different medical diseases of (hepatology, gastroenterology, nephrology, endocrinology, hematology, cardiology, pulmonology, critical care) a.8 Define main cardiological and pulmonary diseases, their etiologies, pathologies, diagnosis, and management. a.9 Define the main hepatobiliary and gastrointestinal diseases. a.10 Recognize the main nephrological, haematological, and endocrinal diseases. a.11 Recognize the main infectious diseases and basics of managing critically ill patients.

	a.12 Recognize the main neurological and rheumatological disease. a.13 Identify scientific development in the field of Internal Medicine.
2.1.2. The mutual influence of professional practice on work environment, working conditions, and job characteristics.	a.14 Identify the mutual influence between professional practice and its impacts on the environment.
2.1.3. Scientific developments in the field of specialization	a.13 Identify scientific development in the field of Internal Medicine.
2.1.4. Recognize basics of medico-legal aspects of practice, malpractice and avoid common medical errors	a.15 List the ethical and legal principles of professional practice in the field of Internal Medicine.
2.1.5. Quality principles in the scholarly field	a.16 List the principles of quality in professional practice in the field of internal Medicine. a.18 Understand the quality principles in the internal medicine field.
2.1.6. Basis of research methodology and medical ethics.	a.17 Define the basics and ethics of scientific research.
2.2. Intellectual Skills: Upon completion of the master program of, the graduate should be able to:	**Intellectual Skills** **(B)**
2.2.1. Use judgment skills for analytical and critical problem solving	b.1 Develop critical and analytical skills to solve different problems related to Internal Medicine.
2.2.2. Capable of integrating knowledge and dealing with complex subjects to solve problems	b.2 Combine basic knowledge and clinical skills to diagnose and treat different internal medicine diseases.
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.	b.3 Interpret clinical history, examination, imaging, and laboratory studies for different internal medicine diseases.

2.2.4. Effectively apply research methods and carrying out a medical research thesis	b.4 Effectively apply research methods to carry out a thesis in one of the internal medicine fields.
2.2.5. Be aware of risk management principles, and patient safety.	b.5 Construct good understanding to common risks and patient safety issues related to internal medicine patients.
2.2.6. Establish goals, commitments, and strategies for improved professional performance in the field of specialty	b.6 Plan for the development of performance in the field of Internal Medicine.
2.2.7. Take professional situational decisions and logically support them.	b.7 Design diagnostic and therapeutic plans to Internal medicine patients and report them to colleagues and managerial authorities.
3.2. Professional Skills: Upon completion of the master program of……, the graduate must be able to:	**Professional Skills** **(C)**
3.2.1. Master the basic and some advanced professional skills in his scholarly field.	c.1 Assess clinical history and symptoms of internal Medicine. c.2 Examine and perform clinical evaluation of different body systems. c.3 Analyse different laboratory and imaging studies (x-rays, CT, MRIs), etc. c.4 Assess Electrocardiogram. c.7 Perform some interventional procedures such as paracentesis, thoracocentesis, central line insertion, and endotracheal tube insertion.
3.2.2. Write and evaluate medical or scientific reports	c.6 Write and evaluate medical reports for internal medicine patients.
3.2.3. Assess and evaluate technical tools during research	c.5 Compare different clinical pictures, diagnostic procedures, and treatments of internal medicine diseases.
4.2. **General and transferable skills**	**General and Transferrable Skills.** **(D)**

Upon completion of the master program of……, the graduate should be able to:	
4.2.1. Communicate effectively using a written medical record, electronic medical record, or other digital technology.	d.6 Communicate effectively with Internal Medicine patients, colleagues, and other managerial authorities.
4.2.2. Use of information technology (computer to create, process, store, secure and exchange electronic data) in the field of medical practice.	d.1 Use online databases to collect materials needed for research and thesis. d.2 Manage and organize materials from various sources from the internet, libraries, etc. d.3 Express a research assignment orally and electronically.
4.2.3. Assess himself and identify personal learning needs	d.7 Develop a life-long attitude of continuous self-improvement and continuous medical education.
4.2.4. Use various sources for information (physical and digital sources).	d.2 Manage and organize materials from various sources from the internet, libraries, etc.
4.2.5. Setting indicators for evaluating the performance of others	d.11 Put and use indicator for evaluating the performance of others.
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	d.10 Work as a team worker and leader while working with other colleagues.
4.2.7. Manage time efficiently	d.9 Manage time effectively during clinical and academic work.
4.2.8. Demonstrate skills of self-learning and lifelong learning needs of medical profession.	d.7 Develop a life-long attitude of continuous self-improvement and continuous medical education.

Date of last department approval: 6-3-2023
Head of the Internal Medicine department Signature:

ANNEX [III]:
Matrix of Coverage of Program ILOs by Program courses (topics)

Course Title	Program ILOs Covered
FIRST PART (Level of course):	
1. Medical Physiology and Medical biochemistry	a.3, a.4 b.1, b.2, c.3, c.7, d.1, d.2, d.5.
2.Human Anatomy and embryology Histology and cell biology	a.1, a.2 b.1, b.2, c.3, c.7, d.1, d.2, d.5.
3- Medical Pharmacology	a.5, b.1, b.2, c.3, c.7, d.1, d.2, d.5.

4- Pathology	a.7, b.1, b.2, c.3, c.7, d.1, d.2, d.5.
5- Microbiology and Immunology.	a.6, b.1, b.2, c.3, c.7, d.1, d.2, d.5.
6- Clinical Pathology	a.7, b.1, b.2, c.3, c.7, d.1, d.2, d.5.
7- Internal Medicine (clinical)	a.8, a.9, a.10, a.11, a.12, a.13, a.14, a.15, a.16,a18 b.1, b.2, b.3, b.5, b.6, b.7, c.1, c.2, c.3, c.4, c.5, c.6,c.7 d.2, d.7, d.8
8- Medical Ethics.	a.15, a17, b5, d4, d5, d6
Training programs and workshops, field visits, seminars& other scientific activities	a.8, a.9, a.10, a.11, a.12, a.13, a.14, a.15, a.16. b.1, b.2, b.3, b.5, b.6, b.7, c.1, c.2, c.3, c.4, c.5, c.6,c.7, d1,d.2, d3,d4,d5,d6,d.7, d.8,d9,d10,d11
SECOND PART (Level of course):	
2. Internal Medicine	a.8, a.9, a.10, a.11, a.12, a.13, a.14, a.15, a.16, a.18 b.1, b.2, b.3, b.5, b.6, b.7, c.1, c.2, c.3, c.4, c.5, d.2, d.7, d.8
Training programs and workshops, field visits, seminars& other scientific activities	a.8, a.9, a.10, a.11, a.12, a.13, a.14, a.15, a.16. b.1, b.2, b.3, b.5, b.6, b.7, c.1, c.2, c.3, c.4, c.5, d1,d.2, d3,d4,d5,d6,d.7, d.8,d9,d10,d11

Date of last department approval: 6-3-2023
Head of the Internal Medicine department Signature:

ANNEX [IV]:
Matrix of Coverage of Program 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

Lectures (PowerPoint, chalk, and talk)	1,2,3,4,5,6,7,8,9,10,11,12,13.	1,2,3,5,7	1,2,3,4,5	2,5,7,8,10
Clinical and practical (Including grand rounds)	5,6,7,8,9,10,11,12,14,15,16,17,18.	1,2,3,5,7	1,2,3,4,5,6,7	2,4,5,6,7,8,9,10,11
Presentation/seminar	8,9,10,11,12,13,14,15,16.	1,2,5,6,7	1,2,5	2,5,6,7,8,10
Journal club	8,9,10,11,12,13,14,15,16.	2,4,5,6,7	1,3,5	1,2,3,5,7,10
Thesis discussion	-	-	-	1,2,3,5

Date of last department approval: 6-3-2023
Head of the Internal Medicine department Signature:

ANNEX [V]
Matrix of Coverage of Program 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 **- Short essay** **- MCQs** **- Complete** **- True or false and correct the wrong** **- Commentary** **- Problem solving**	**1,2,3,4,6,7,8,9,10,11,12,13,14,15,16,17,18**	**1,2,3,4,5,6 7**	**-**	**-**
CLINICAL EXAM: **- Long case history and examination.** **- Short case history and examination.** **- Commentary cases.** **- ECG Quizzes.** **- Radiology Quizzes.**			**1,2,3,4,5,6,7**	**-**
ORAL EXAM	**1,2,3,4,6,7,8,9,10,11,12,13,14,15,16,17,18**	**1,2,3,4,5,6,7**		
LOG BOOK	**-**	**-**	**1,2,3**	**1,2,3,4,5,6,7,8,9,10,11**

Date of last department approval: 6-3-2023
Head of the Internal Medicine department Signature:

Course Specifications of Internal Medicine Master (MSc) degree.

University: Minia

Faculty: Medicine

Department: Internal Medicine

1. Course Information

• **Academic Year/level:** Second Part	• **Course Title:** Course Specifications of Internal Medicine, MSc Degree **(CODE GM200)**

- **Number of teaching hours: 32 Hours per week X 18 months**
- **Lectures:** 4 hours/week X 18 months
- **ECG and Radiology Tutorials:** 4 hours per week X18 months
- **Practical/clinical**: 24 Hours per week X18 months

2. Overall Aims of the course	MSc candidates must be able to provide a high standard patient care that is compassionate and effective for the treatment of internal medical conditions and the promotion of health. They must treat their patient's conditions with practices that are safe, scientifically based, effective, efficient, timely, cost effective as well as evidence -based. The program must integrate patient centered care with medical education. **Master graduates are expected to demonstrate the ability of:** 1- Showing competency in applying the principles, methodology and various tools of scientific research in internal medicine. 2- Applying and use of analytical design in internal medicine specialties. 3-Applying and integration of general knowledge with the knowledge related to the practice of internal medicine and health care. 4- Showing awareness with the present problems, difficult conditions as well as recent updates in internal medicine. 5- Detection of professional problems through analytical design and findings possible solutions in these situations. 6- Showing competency of the professional skills required by the specialist of internal medicine and use of various suitable new technologies in the practice of medicine. 7- Effective communication and the ability of acting as a member and a leader of healthcare team in various situations. 8- Making decisions in different situations including emergencies.

	9- Use and benefit of available resources to get the highest standards of clinical practice. 10- Showing awareness of their role in community development and protection of the environment in the context of national and international changes. 11- Acting with integrity, honesty and commitment with the roles and ethics of medical profession. 12- Self-development both academically and professionally and showing ability of continuous learning.
3. Intended learning outcomes of course (ILOs): ***Upon completion of the course, the student should be able to:***	
A- Knowledge and Understanding	A1- Recognize the Definition, causes, pathogenesis, diagnosis and treatment of the different **Gastroenterology** , **Hepatobiliary** & **pancreatic** disorders. A2. Identify the Definition, causes, pathogenesis, diagnosis and treatment of the different **Hematology** & **oncology** diseases. A3. Recognize the Definition, causes, pathogenesis, diagnosis and treatment of the **Infectious diseases**. A4. Define the causes, pathogenesis, diagnosis and treatment of the following **General internal medicine** topics including, History taking and examination, Ethics and communication, Chest pain / Dyspnea / Polyuria, Syncope, PUO, Laboratory interpretation, Imaging techniques and interpretation, A5. Explain Evidence based medicine, Steps of EBM. A6. Recognize the definition, causes, pathogenesis, diagnosis and treatment of the different **Endocrinology, Diabetes** ,**Metabolism**, And **Nutrition** disorders and conditions A7. Memorize the definition, causes, pathogenesis, diagnosis and treatment of the different **Rheumatology** and **immunology** diseases. A8. Recognize the definition, causes, pathogenesis, diagnosis and treatment of the different **Neurology & psychiatry** topics. A9. Define the basics of geriatric medicine (common disorders). A10. Recognize the definition, causes, pathogenesis, diagnosis and treatment of the different **Cardiology** diseases. A11. Recognize the definition, causes, pathogenesis, diagnosis and treatment of the different **Renal** medicine & electrolyte disorders.

	A12. Recognize the definition, causes, pathogenesis, diagnosis, and treatment of the different **Respiratory** & **critical** care medicine topics. A13. Recognize the definition, causes, pathogenesis, diagnosis, and treatment of the following **emergency** medicine & Critical care aspects including, Shock, Pulmonary embolism, Cardiac arrest and brain death, Advanced life support (ALS).
B- Intellectual Skills	b. 1 Develop critical and analytical skills to solve different problems related to Internal Medicine. b.2 Combine basic knowledge and clinical skills to diagnose and treat different internal medicine diseases. b.3 Interpret clinical history, examination, imaging, and laboratory studies for different internal medicine diseases. b.4 Effectively apply research methods to carry out a thesis in one of the internal medicine fields. b.5 Construct good understanding to common risks and patient safety issues related to internal medicine patients. b.6 Plan for the development of performance in the field of Internal Medicine. b.7 Design diagnostic and therapeutic plans to Internal medicine patients and report them to colleagues and managerial authorities.
C- Professional and Practical Skills	c.1 Take a good medical history and conduct a proper general examination. c.2 Differentiate between normal and abnormal physical signs by proper regional examination of the body. c.3 Make and evaluate medical reports. c.4 Prepare a clear priority plan in the patient's management. c.5 Assess the indications for consulting higher levels of reference to other disciplines. c 6. Assess methods and tools in diagnosis and management in internal medicine. c.7 Use updated information and demonstrations on modern diagnostic tools. c.8 Judge adequately the results of common laboratory investigations. c.9 Interpret adequately X-ray, CT and ultrasonic images of common diseases. c.10 Interpret properly ECG recordings of cardiac cases. c.11 Get acquainted with the methods of patient's clinical

	assessment and monitoring, their significance and inter-relations. c.12 Evaluate adequately the patient's acute morbidity score and need for urgent intervention.
D- General and transferable Skills	d.1 Communicate effectively with patients and their families. d.2 Deal perfectly with the computer. d.3 Assess himself and identify personal learning needs. d.4 Develop personal skills in writing a **case summary** and a simple essay. d.5 Prepare and present different topics using power point and data show. d.6 Use different sources for information and knowledge continuously. d.7 Use information technology to serve the development of professional practice d.8 Work in a teamwork. d.9 Manage Scientific meetings according to the available time. d.10 Present problematic internal medicine-cases in seminars. d11. Communicate effectively by all types of effective communication.

4. Course Contents

Topic	Lecture Hours	Clinical/Tutorial Hours	Total
Factors in disease Molecular & genetic -Chromosome disorders -Mitochondrial DNA inherited diseases -C.T. inherited disorders -Practice of genetics in health and diseases	14	-	14
Clinical Genetics Cystic Fibrosis Haemochromatosis Haemophilia Marfan's syndrome Polycystic kidney disease Sickle Cell disease Thalassaemias Turner's syndrome Von Willeband's disease **Clinical Science** Principles of inheritance: mendelian, sex-linked, mitochondrial	**14**		14

clinical examination and analysis of nucleic acid (e.g. PCR)			
Immunological factors in diseases -Types of immune reaction -The major histocompatibility system in health & disease -Primary and secondary immune deficiencies	**14**		14
Nutritional factors in health and diseases -Nutritional assessments and requirements -Malnutrition disorders -Obesity and eating disorders -Metabolic syndrome -Basics of parenteral nutrition	**24**	**27**	51
Oncology - Hypercalcaemia - SVC obstruction - Spinal cord compression - Neutropenic sepsis - Common cancers (presentation, diagnosis, staging, treatment principles): lung, bowel, stomach, oesophagus, bladder, skin, haematological, and ovarian. - Premalignant conditions e.g. familial polyposis coli - Paraneoplastic conditions e.g. ectopic ACTH	**13**	**17**	30
Critical illnesses -Acute respiratory distress syndrome -Shock &Sepsis and cardiac arrest -Coma &DD & Algorithm in management -Oncologic emergencies -Ventilatory support basics	**28**	**97**	119
Infectious diseases -Viral infections - Bacterial infections -Fungal and rickettsia infections -Parasitic and protozoal infections -Infective endocarditis - Laboratory diagnosis of infectious diseases infections	**23**	**57**	80
Clinical biochemistry &metabolism -Porphyrias -Hemochromatosis	**18**	**16**	34

-Wilsons disease -Glycogen storage & lysosomal storage diseases -Osteomalacia -Pagets disease			
Kidney diseases & Electrolytes disorders -Acute renal injury -Chronic kidney diseases -Dialysis and renal transplantation -Glomerular diseases -Tubulo- interstitial diseases -Vascular diseases of the kidney -Potassium disorders -Sodium disorders -Calcium disorders -Acid-base balance disorders	**28**	**56**	78
Cardiovascular diseases -Tachyarrhythmias -Bradyarrhythmias -Cardiomyopathies and myocarditis -Congestive heart failure and core pulmonale -Ischemic heart diseases -Rheumatic heart diseases -Pericardial diseases -Degenerative blood diseases -Pulmonary hypertension -Peripheral vascular diseases	**28**	**96**	124
Respiratory diseases -Bronchial asthma -Chronic obstructive lung diseases -Interstitial lung diseases -Pleural diseases -Tuberculosis -Upper and lower respiratory tract infections -Pulmonary vasculitis -Pulmonary thromboembolism -Sleep apnea syndromes	**28**	**96**	124
Endocrine diseases & Diabetes mellitus -Pituitary disorders -Thyroid disorders -Parathyroid disorders -Suprarenal gland disorders -Short and tall statures -Hairsutism and virilization -Diabetes mellitus and its emergencies	**28**	**56**	84

-Endocrine disorders of GIT			
Alimentary tract and Pancreatic diseases -Motility disorders -Peptic ulcers -Gastrointestinal bleeding disorders -Malabsorption syndromes -Inflammatory bowel disease -Vascular diseases of GIT -Peritonitis - Pancreatic disorders	**28**	**76**	104
Hepatobiliary diseases -Acute and chronic hepatitis -Liver cirrhosis &its complications -Granulomatous and infiltrative liver diseases -Principles of liver transplantation -Acute and chronic cholecystitis -Jaundice and DD	**28**	**96**	124
Blood diseases -Hypoproliferative anemias -Hemoglobin disorders -Hemolytic anemias -Myeloproliferative disorders & polycythemia vera -Myelodysplasia and bone marrow failure diseases -Lymphoproliferative disorders -Platelets and vessel wall disorders -Coagulation disorders -Hypercoagulable status disorders -Antiplatelets &anticoagulants &fibrinolytic drugs	**28**	**76**	104
Collagen & Musculoskeletal diseases -Autoimmune diseases -Rheumatoid arthritis -Spondyloarthropathies -Crystal induced arthropathies -Osteoporosis -Vasculitic disorders -Acute rheumatic fever and arthritis	**18**	**96**	114
Neurological diseases -Epilepsy -Cerebrovascular disorders -Tremors disorders -Motor neurone diseases	**28**	**96**	124

-Myopathies & myasthenia gravis -Peripheral nerve disorders -Spinal cord lesions -CNS infections			
X-Ray & CT interpretation -Chest X ray -Barium studies -Bone and joints X-ray -Neuro-imaging (CT) & MRI -Abdominal CT	**26**	**46**	72
ECG interpretation -Arrhythmias -Cardiac ischemia (acute and chronic) -Conduction disorders -Metabolic changes in ECG	**26**	**46**	72
Total	432	1872	2304
5. Teaching and Learning Methods	• Lectures (PowerPoint, chalk, and talk) • Clinical Training. • Seminars, Presentations. • Journal club • Thesis discussion		
6. Teaching and Learning Methods for students with limited Capacity	- Special session for training and tutorials.		
7. Student Assessment			
A. Student Assessment Methods	1. Research assignment for the students to assess the general and transferable skills. 2. Logbook to assess clinical, and transferable skills, attendance to medical conferences and oral discussions of thesis. 3 Final written and commentary written exam. to assess knowledge, understanding, and intellectual skills. 4. Final oral exam to assess knowledge and understanding, intellectual skills. 5. Final clinical exam., ECG and X- ray exam. to assess professional and clinical skills.		
B. Assessment Schedule (Timing of Each Method of Assessment)	Assessment Final exam: ----------: 96 th Week.		

C. Weighting of Each Method of Assessment	Final-term written examination (including commentary question) 280 40 % Oral examination & Clinical examination: 420 60 % Total: 700 100 %
8. List of References:	
A. Course Notes/handouts	• **Hepatology by Dr. Mahmoud Khattab.**
B. Essential Books	• **Davidson's Principles and practice of medicine (24th Edition, 2023).** • **Handbook of critical and intensive care (4th Edition, 2021).** • **Essentials of electrocardiography** • **Methods of Clinical examination (Salah Ibrahim)**
C. Recommended Text Books	• **Harrison's textbook of medicine (21st Edition, 2022)** • **Cecil's essentials of internal medicine (26th Edition)** • **Hutchison for clinical examination methods (25th Edition, 2022)** •
D. Periodicals, websites	• **https://pubmed.ncbi.nlm.nih.gov/** • **https://diabetesjournals.org/care (Diabetes Care).** • **https://www.acpjournals.org/journal/aim (Annals Of Internal Medicine).**

Course Coordinator:

Prof. Dr. Asmaa Kasem Mahmoud

Head of Department:

Prof. Dr. Youssef Ismail Moussa.

Date of last update & approval by department Council:

6th of March 2023

مسمى المقرر	الباطنة العامة
كود المقرر	GM200

جامعة: المنيا

كلية: الطب

قسم: الباطنة العامة

[ANNEX I] Matrix of Coverage of Course ILOs By Content (Topics)

Contents (List of course topics)	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
Molecular & genetic Factors in disease	1,2,3,5,6,7,8,10,11,12	1,2,3,7	5,6,7	3,6,7,10
Clinical Genetics	1,2,3,5,6,7,8,10,11,12	1,2,3,7	5,6,7	3,6,7,10
Immunological factors in diseases	1,2,3,7,11	1,2,4	5,6,7	5,6,7,8
Nutritional factors in health and diseases	1,4,6,9	1,2,5,7	1,4,5,8,11,12	1,8,11

Oncology	**1,2,5,6,8,9,10,11,12**	**2,5,7**	**1,2,3,5**	**1,4,6,7,8,10,11**
Critical illnesses	**10,12,13**	**3,5**	**1,2,3,4,9,10,11,12**	**1,3,7,10,11**
Infectious diseases	**1,3,4**	**1,2,3**	**1,2,3,6,7**	**5,6,7,8**
Clinical biochemistry &metabolism	**1,7**	**1,6**	**7,8**	**3,6,10**
Kidney diseases & Electrolytes disorders	**11,8,1**	**1,2,3,7**	**1,2,3,6**	**1,2,3,6,8,10**
Cardiovascular diseases	**10,13**	**3,7**	**1,2,3,10,12**	**1,2,3,6,9**
Respiratory diseases	**12,13,3**	**1,2,5,7**	**1,2,3,9**	**5,6,7,8**
Endocrine diseases & Diabetes mellitus	**6,13**	**2,5,7**	**1,2,3,4,11**	**1,3,7,10,11**
Alimentary tract and Pancreatic diseases	**9**	**3,5**	**1,2,3,11,12**	**1,2,3,6,8,10**
Hepatobiliary diseases	**9**	**1,2,3**	**1,2,3,11,12**	**1,2,3,6,9**
Blood diseases	**10**	**1,7**	**1,2,3,11,12**	**1,5,6,7,8**
Collagen & Musculoskeletal diseases	**12**	**1,2,3,7**	**1,2,3,5,9**	**1,2,3,6,8,10**
Neurological diseases	**12**	**3,7**	**1,2,5,9,12**	**1,2,3,6,8,10**
X-Ray & CT interpretation	**8,9,10,11**	**3**	**9**	**2,6,8**

ECG interpretation	**8,11**	**3**	**10**	**2,6,8**

Date of last department approval: 6-3-2023
Head of the Internal Medicine department Signature:

[ANNEX III] 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**
Lectures (PowerPoint, chalk, and talk)	**1,2,3,4,5,6,7,8,9, 10,11,12,13**	**1,2,5,7**		
Clinical (Including grand rounds)	**1,2,3,4,5,6,7,8,9, 10,11,12,13**	**1,2,3,5,6,7**	**1,2,3,4,5,6,7,8,9,10,11,12**	**1,2,3,4,6,8,11**

Pre entation/seminar	1,2,3,4,5,6,7,8,9, 10,11,12,13	1,2,3,5,6,7	2,5,7,8,12	2,3,4,5,7,9,10,11
Jou nal club	1,2,3,4,5,6,7,8,9, 10,11,12,13	1,2,3,5,6,7	4,5,6,7,8,12	2,3,4,5,7,9,10,11
The is discussion				2,3,4,5,6,7,8

Date of last department approval: 6-3-2023

Head of the Internal Medicine department Signature:

[ANNEX III] 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	1,2,3,4,6,7,8,9,10,11,12, 13	1,2,3,7	-	-
Clinical exam - Short Case. - Long Case. - ECG & Radiology Quizzes.	1,2,3,4,5,6,7,8,9,10,11,12	1,2,3,5,7	1,2,3,49,10,11,12	1,4,11
Oral Exam	1,2,3,4,5,6,7,8,9,10,11,12	1,2,3,5,6,7	4,6,7,11,12	4,5
Logbook	1,2,3,4,5,6,7,8,9,10,11,12	2,3,7	1,2,3	1,2,3,4,5,6,7,8,9,10,11

Date of last department approval: 6-3-2023

Head of the Internal Medicine department Signature:

[ANNEX IV] Blueprint Of Internal Medicine Department Candidates for Master Degree [Internal Medicine Examination Paper, Second Part, 280 marks]

	Topic	Hours	Knowledge %	Intellectual %	% of topic	N of items per topic	Knowledge		Intellectual		Marks	Actual Mark
							N of items	mark	N of items	Mark		
1	Molecular & Factors genetic in disease	14	80	20	3.6%						10.08	10
2	Clinical Genetics	14	80	20	3.6%						10.08	10
3	Immunological factors in diseases	14	80	20	3.6%						10.08	10
4	Nutritional factors in health and diseases	24	80	20	6.2%						17.36	10
5	Oncology	13	80	20	3.3%						9.24	9
6	Critical illnesses	28	80	20	7.2%						20.16	20
7	Infectious diseases	23	80	20	5.9%						16.52	17

8	**Clinical biochemistry &metabolism**	**18**	80	20	4.6%						12.88	13
9	**Kidney diseases & Electrolytes disorders**	**28**	80	20	7.2%						20.16	21
10	**Cardiovascular diseases**	**28**	80	20	7.2%						20.16	21
11	**Respiratory diseases**	**28**	80	20	7.2%						20.16	21
12	**Endocrine diseases & Diabetes mellitus**	**28**	80	20	7.2%						20.16	21
13	**Alimentary tract and Pancreatic diseases**	**28**	80	20	7.2%						20.16	21
14	**Hepatobiliary diseases**	**28**	80	20	7.2%						20.16	21
15	**Blood diseases**	**28**	80	20	7.2%						20.16	21
16	**Collagen & Musculoskeletal diseases**	**18**	80	20	4.6%						12.88	13
17	**Neurological diseases**	**28**	80	20	7.2%						20.16	21
	Total	**390**	80	20	100%						-	280

Date of last department approval: 6-3-2023

Head of the Internal Medicine department Signature:

Course Specifications of Pathology for 1st Part of Master Degree in Internal medicine

1.Course Information
Course Title: Pathology **Code: GM 200** **Academic Year/level:** Postgraduate, Master degree (1st part), Internal Medicine. **Date of specification approval:** 2022/2023
• **Number of teaching hours:** - **Lectures:** Total of 48 hours; 2 hour/week - **Practical/clinical:** Total of 48 hrs., 2 hour/week
2. **Overall Aims of the course**
By the end of the course the student must be able to: 1. Explain theories, basics & recent advances in the field of pathology. 2. Appraise & interpret relevant basic information and correlate them with essential clinical data to reach a final diagnosis 3. Plan for the development of acquisition of skills of basic & modern pathological laboratory techniques as well as principals of pathology. 4. Demonstrate competency on dealing with various biopsies and reporting pathological features and correlate such information with the relevant provided clinical data.

3. **Intended learning outcomes of course (ILOs):** ***Upon completion of the course, the student should be able to:***	
A- Knowledge and Understanding	A.1.Illustrate definition, types of acute inflammation as well as its pathological features and complications A.2.List pathological features of chronic inflammation, and granuloma in relation to its morphological and etiological types A.3.List examples of granulomas: Define tuberculosis, outline methods of infection, the sites of primary and secondary infection, pathological features, and its fate. Explain the reaction to bilharzial infestation, pathological features, and complications of bilharziasis of the intestine, bilharzial hepatic fibrosis and bilharzial splenomegaly. A.4. Illustrate different forms of bacterial infections such as bacteremia, septicemia, toxemia and pyemia. Mention their causes and effects on different organs. A.5.Discuss cellular response to injury, etiology and pathological features of reversible cell injury and irreversible cell injury A6. Define repair, fibrosis, and regeneration with examples, and analyze pathological processes. A.7.Explain hemodynamic disorders such as thrombosis, embolism, ischemia, infarction, hemorrhage, gangrene and edema and mention their causes and effects on different organs. A.8. Define hypersensitivity reactions and explain pathogenesis of autoimmune diseases. A.9. Define each of these terms with examples as hypertrophy, hyperplasia, agenesis, hypoplasia, aplasia and atrophy. Distinguish between the disorders of differentiation of the cells as dysplasia and metaplasia. A.10. Define neoplasia, classification of tumors, illustrate grading and staging of malignant tumors. Define metastasis, explain mechanism of spread, and outline the main routes

	A.11.Define gastroesophageal reflux disease, and describe Barrett's esophagus and its effects, Classify tumors of the esophagus with emphasis on esophageal carcinoma. Mention etiology of acute and chronic gastritis, with brief description of its pathological features, define peptic ulceration, its pathogenesis, and its complications, describe gastric carcinoma, highlight its pathological features, and mention its prognosis. Explain typhoid ulcer in the small intestine. Define dysentery and enumerate its common types.and Mention pathogenesis, define inflammatory bowel disease and mention its causes and complications. Enumerate types of colonic polypi, classify tumors of the colon giving an account of colorectal carcinoma, emphasizing risk factors, pathological features. A. 12. Heart and Blood vessels: - • Identify the causative organism of rheumatic fever (Post Streptococcus pyogenes infection) . • Discuss the mechanism and pathophysiology of the disease • Recognize the role of molecular mimicry and type II hypersensitivity • State the diagnosis of the disease and learn the most important preventive measures. • Identify the most common causative organisms of infective carditis -.Learn about HACEK organisms and bacteria responsible for "culture negative" endocarditis -.List the high risk diseases associated with occurrence of IE. • Discuss the pathogenesis of IE-Define rheumatic fever and discuss its etiology, pathogenesis, pathology and complications. • -Enumerate pathological types of pericarditis and its causes -.Outline the clinical features and complications of pericarditis. • Outline the main types of endocarditis. – • Summarise the clinical features, pathogenesis and appearance of vegetation in each of these types.- Define myocardtis and cardiomyopathy and enumerate their types.

	• -Recognize the different diagnostic methods of IE. Define the term atherosclerosis and list the risk factors for its development and mention its pathogenesis. – • Describe the morphological changes that occur in vessel wall in the various stages of development of atheroma -Outline the common complications of atheroma. Define systemic hypertension, enumerate its causes and mention its types • -.Describe the effects of systemic hypertension, particularly on the vessels, heart, kidney and brain and list causes of death in patients affected with systemic hypertension. - Define secondary hypertension and list its causes. A. 13. Respiratory System: • Define rhinitis and sinusitis and list its types. • Describe pathology of rhinoscleroma. • Enumerate causes of epistaxis. • List the common tumors of nose and nasopharynx. Discuss laryngitis. • List the common tumors of the larynx. Define pneumonia. • Define pneumonia, outline the anatomical and etiological classification of pneumonia. • Describe the gross and microscopic picture of lobar pneumonia and mention its complication. • Describe the gross and microscopic picture of bronchopneumonia and mention its complication. Describe the gross and microscopic picture of interstitial pneumonia and mention its complication. • List other nosocomial pneumonia. Discuss the etiology of lung abscess and its complications. • Describe the pathology and complication of pulmonary tuberculosis. Define bronchial asthma and describe the pathophysiology, morphology and pathological consequences of asthma. • Discuss chronic bronchitis. Define emphysema and enumerate its types, distinguish between two main types

	with reference to the pathogenic mechanisms underlying each. • Define bronchiectasis. Outline the main causes, pathogenesis, morphological changes and complication. Define restrictive lung diseases**.** • Outline classification of restrictive lung diseases**.** Discuss ARDS and NRDS. Define and enumerate causes of pneumoconiosis. Idiopathic pulmonary fibrosis. Identify causes and pathology of pulmonary embolism, pulmonary hypertension and pulmonary oedema. • List different types of pleural effusion and list the underlying causes of each. Define pneumothorax and enumerate its causes. • Enumerate tumors of the pleura. Outline the major pathological classification of lung neoplasms. List the risk factors for the development of primary bronchogenic carcinoma, clinical presentation, the pathological features and prognosis between different tumor types. A.14. Outline the main causes of acute and chronic viral hepatitis, mention its pathological features. • Define liver cirrhosis, list its classification, mention the etiology of each type and its pathological features. • Give a brief account on hepatocellular carcinoma with emphasizes on risk factors, Pathological features, spread and prognosis. • List causes and common types of gall stones. Describe the pathology and complications of acute and chronic cholecystitis. • Outline the etiology, pathology, and complications of acute pancreatitis. A.15. Kidney and Urinary Tract: • List treatment and specific preventive measures for UTI. • Enumerate congenital anomalies of the kidney and discuss polycystic kidney. • Define glomerulonephritis and the pathogenetic mechanisms underlying glomerular injury and the tissue reaction of glomerular injury. • Define the terms nephritic and nephrotic syndromes and enumerate its causes.

	• Outline the clinicopathological features of the common types of glomerulonephritis etiology and pathology of acute tubular necrosis**.** • Define pyelonephritis and describe the risk factors, morphology, and complications of acute and chronic pyelonephritis. • Define hydronephrosis and enumerate causes of unilateral and bilateral hydronephrosis and their complication. Discuss the etiology, and pathological consequences of urinary calculi. • Define cystitis and discuss its aetiology and complications**.** Classification of renal tumors**.** Renal cell carcinoma, the presenting features and morphological appearances. Nephroblastoma, the presenting features and morphological appearances. • List tumors of the renal pelvis, ureter and urinary bladder. • List the sites of origin of transitional cell carcinoma and discuss the epidemiology, risk factors and pathology. • Discuss squamous cell carcinoma of the urinary bladder; epidemiology, risk factors and pathology A.16. Endocrine system. Define and classify goiter. • Describe etiology, pathogenesis, pathology and clinical features of hyperthyroidism and simple or toxic goiter (graves & secondary causes). • Describe etiology, pathogenesis and pathology of multinodular goiter. Describe pathology of hypothyroidism including (cretinism and myxedema) Know definition, site, pathology of thyroglossal cyst. • Discuss etiology, pathogenesis, pathology, clinical features and effects of Hashimoto's thyroiditis. Classify thyroid tumors and Describe pathology and effects of thyroid adenomas. • Discuss various types of thyroid carcinomas. Discuss primary and secondary hyperparathyroidism. • Describe hypoparathyroidism. A.17. Identify the classification of lymphoma and its main pathological features.

B- Intellectual Skills	B.1.Analyze the signs and symptoms of a disease based on the underlying gross & microscopic tissue changes . B2. Interpret a pathology report and integrate gross and microscopic findings with the underlying etiology B3. Utilize the obtained information to solve a problem in a case scenario to reach a provisional diagnosis
C- Professional and Practical Skills	C1- Write adequate pathological description concerning main features of gross appearance of a museum specimen C2- Use the light microscope to examine and identify microscopic findings of some selected examples of studied diseases . C3- Learn proper handling of and processing tissue specimens sent for pathological examination. C4- Write a pathological request.
D- General and transferable Skills	D1. Demonstrate efficient communication & interpersonal skills in all its forms and in different situations that may involve senior staff, colleagues, other health care professionals, and patients 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. D.3. Develop skills of self-evaluation and identify personal learning needs to plan for self-development and continuous medical education D.4. Demonstrate the skills of effective time management

4.Course content

Topic	Lecture hours	Practical hours	Total hours
1. Acute inflammation	3	3	6
2. Chronic inflammation	1	1	2
3- Granuloma and Bilharziasis	2	2	4
4- Bacterial infection	٣	٣	6
5 - Cell injury	3	3	6

6- Repair& Healing	2	2	4
7- Hemodynamic disorders	٢	٢	4
8- Immunopathology	4	4	8
9- Cellular adaptation	2	2	4
10 – Neoplasia	2	2	4
11- Diseases of the GIT	٤	4	8
12- Pathology of the Heart and blood vessels	4	4	8
13- Pathology of the Respiratory system	4	4	8
14- Pathology of the Hepatobiliary system	4	4	8
15- Diseases of the Kidney and Urinary Tract	4	4	8
16- Pathology of the Endocrine system	2	2	4
17- Lymphoma	2	2	4
Total	48	48	-

5. **Teaching and Learning Methods**

5.1. Lectures: Both face to face & on-line.
5.2. Practical sessions: Gross pathology and histopathology
5.3. Self-learning activities for the topics studied in lectures or related topics; including libraries, E-learning (practical photographs and questions of different topics available online for student's assessments) and consulting professors for gathering information.
5.4. Tutorial & regular weekly seminars, case presentation, training courses & workshops.

5. **Teaching and Learning Methods for students with limited Capacity.**

Not applicable

7. Student Assessment

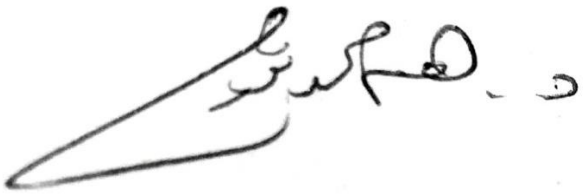
A. Student Assessment Methods	**1. Written exam** to assess the acquired knowledge & understanding as well as intellectual skills and essential professional skills. **2. Oral exam** to assess the student intellectual and communication skills regarding basic knowledge and understanding of the course topics, 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)	**Assessment 1: 1 written exam** by the end of course. **Assessment 2: Oral exam,** after the written exam
C. Weighting of Each Method of Assessment	**Type of Assessment** — **Degree** **Written** examination — (15) **Oral** examination. — (22.5) • **Total** — (37.5)
8. **List of References**	
A. Course Notes/handouts	1 -General pathology course notes prepared by the department staff and printed material of recorded lectures. **2-** Lectures' Handouts
B. **Essential Books** C. **Recommended Textbooks**	1- Liang Jing & David Bostwick. Essentials of anatomic pathology (2011). Diana W Molavi. The practice of surgical pathology; A beginners guide to the diagnostic process (2008)
D. **. Periodicals, websites**	To be determined and updated during the course 1-American Journal of pathology 2-The Journal of pathology 3-Diagnostic Histopathology 4-Pathology outlines 5.www.pubmed.com

Course Coordinator/s:
Assistant Prof. Dr. . Nisreen Dahi Mohamed Toni

Head of Department

Prof. Dr. Heba Mohamed Tawfik

Date of last update & approval by department Council: 2023



جامعة/أكاديمية : .....المنيا.....

كلية / معهد: .....الطب البشرى.....

قسم: .....الباثولوجي.....

Course Specification Pathology Master degree of Internal Medicine (First part))	مسمى المقرر
GM200	كود المقرر

A. The Matrix of Coverage of Course IL by Contents

Contents	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
Acute inflammation	A1	B3	C1	D1,2
Chronic inflammation	A2	B3	C1	-
Granuloma and Bilharziasis	A3	B1, B2, B3	C1,C2	D3
Bacterial infection	A4	B2, B3	C1, C2	-
Cell injury	A5	-	C1	-
Repair	A6	B3	C2	D2
Hemodynamic disorders	A7	-	C1	-
Immunopathology	A8	B3	C1, C2	D4
Cellular adaptation	A9	-	C2	D1
Neoplasia	A10	-	C2	-
Diseases of the GIT	A11	B3	C1,C2	-
Pathology of the Heart and Blood Vessels.	A12	B1,B2,B3	C2,C3,C4	D3
Pathology of the Respiratory System.	A13	B1,B2,B3	C1,C3,C4	D1.2
Pathology of the Hepatobiliary system	A14	B1,B2,B3	C3,C4	-
Pathology of the Kidney and Urinary Tract	A15	B1,B2,B3	C1,C2,C3,C4	D1,4
Pathology of the Endocrine system	A16	B1,B2,B3	C1,C2,C3,C4	D3
Pathology of the Lymphoma	A17	B2	C3,C4	-

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	**A1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17**	**B1,2,3**	**-**	**D1,2,3,4**
Practical	-	-	C1,2,3,4	D3,4
Clinical (Including grand rounds)	-	-	-	-
Presentation/seminar	**A12,13,14,15,16,17**	**B1,2,3**	**C1**,2,3,4	**D1,2,3**
Journal club	-	-	-	-
Thesis discussion	-	-	-	-

Training courses & workshops	**A12,13,14,15,16,17**	**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**
Written exam	**A1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17**	**B1,2,3**		
Oral Exam	**A1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17**	**B1,2,3**	**C1**,2,3,4	**D1,2,3,4**
Logbook	**A1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17**	**B1,2,3**	**C1**,2,3,4	**D1,2,3,4**

Blueprint of Pathology for Internal Medicine MSc degree

Postgraduate Pathology Course for Master's degree (1st part) of Internal Medicine Department (Code: GM 200) (15 marks)

Topic	Hours	Knowledge %	Intellectual%	Weight %	ILOs	Total Marks	Actual Mark
1. Acute inflammation	3	75	25	6.3	A1	1.41	2
2. Chronic inflammation	1	75	25	2.1	A2	0.47	1
3- Granuloma and Bilharziasis	2	75	25	4.2	A3	0.94	1
4- Bacterial infection	3	75	25	6.3	A4	1.41	1
5 - Cell injury	3	75	25	6.3	A5	1.41	1
6- Repair& Healing	2	75	25	4.2	A6	0.94	1
7- Hemodynamic disorders	2	75	25	4.2	A7	0.94	1
8- Immunopathology	4	75	25	8.3	A8	1.88	1
9- Cellular adaptation	2	75	25	4.2	A9	0.94	1
10 - Neoplasia	2	75	25	4.2	A10	0.94	1
11- Diseases of the GIT	4	75	25	8.3	A11	1.88	2
12- Pathology of the Heart and blood vessels	4	75	25	8.3	A12	1.88	2
13- Pathology of the Respiratory system	4	75	25	8.3	A13	1.88	2
14- Pathology of the Hepatobiliary system	4	75	25	8.3	A.14	1.88	2
15- Diseases of the Kidney and Urinary Tract	4	75	25	8.3	A15	1.88	2
16- Pathology of the Endocrine system	2	75	25	4.2	A16	0.94	0.5
17- Lymphoma	2	75	25	4.2	A17	0.94	1
Total	48			100%	-	22.5	22.5

Course Specifications of Medical Microbiology and Immunology for General internal medicine master program (GM200)

University: Minia

Faculty: Medicine

Department: Medical Microbiology and Immunology

1. Course Information		
Academic Year/level: postgraduate students	**Course Title:** Medical Microbiology and Immunology for General internal medicine postgraduate students.	**Code**: **GM200**
- **Number of teaching hours:** - **Lectures:** Total of 20 hours; 1 hours/week - **Practical**/clinical: Total of 5 hours		
1.Overall Aims of the course	By the end of the course the student must be able to: 1. Know the different types of pathogens, their structure and pathogenesis 1. Know the different methods for laboratory diagnosis and control of different infectious agents. 3. Know the different molecular microbiological techniques and their applications. 4. Know the basics of the host-parasite relationships and the role of the immune system in defending the body against different pathogens and its role in health and disease. 5. Know the principles of biosafety measures and aseptic precautions.	
3.Intended learning outcomes of course (ILOs): ***Upon completion of the course, the student should be able to:***		

A-Knowledge and Understanding	A1. Identify microbial morphology, structure, metabolism and physiology of medically significant microorganisms A2. Define the basis of microbial genetics and biotechnology techniques and their applications. A3. Recognize the taxonomy and classification of different microorganisms. A4. Identify the natural habitat, source of infection and mode of transmission of the different classes of pathogens. A5. Identify the different levels of host-parasite relationship and recognize the microbial virulence factors A6. Recognize the role of the immune system in the health and disease of the human being. A7. Enumerate the causes, sources, mode of transmission and treatment of nosocomial infections and know the different methods for infection control.
B-Intellectual Skills	B1. Analyze of different cases of infection to reach a final diagnosis and microbiological identification of the causative organism B2. Solve problems associated with different infections such as microbial resistance to antimicrobial agents, reach a final diagnosis of a certain pathological condition caused by an infectious organism.
C- Professional and Practical Skills	C1. Apply professional applications such as managing a microbiology laboratory. C2. Differentiate between different microbes at microbiology laboratory using basic techniques C3. Apply standards of infection control C4. Apply standard protocol in collection of pathological samples

D-General and transferable Skills	D1. Manipulate microbiological samples and reach a microbiological diagnosis of an infection. D1. Write protocols for identification of a given microorganism. D3. Communicate with colleagues and patients regarding a case caused by a microorganism. D4. Work in/with different groups. D5. Manage a microbiological laboratory.

4.Course Contents

Topic	Lecture hours/week	Practical/Clinical hours/week	Total No. of hours hours/week
1. Introduction and collection of pathological samples		1	1
2. Cleaning, sterilization and disinfection		1	1
3. Antimicrobial chemotherapy	1	1	2
4. Bacteremia, toxemia and toxic shock	1		1
5. Fever	1		1
6. Laboratory techniques used in epidemiology		1	1
7. Basic immunology 1	1		1
8. Basic immunology 2	1		1
9. Hypersensitivity reactions	1		1
10. Bacterial and viral vaccines	1		1
11. Mycobacterial infections	1		1
12. Rickettsial infections	1		1
13. General virology	1		1
14. Viral Hepatitis	1		1
15. Human immunodeficiency	1		1
16. Covid-19	1		
17. Bacterial, viral and fungal respiratory tract infections	1		1

18. Bacterial, viral and fungal GIT infections	1		1
19. Bacterial, viral and fungal CNS infections	1		1
20. Blood-transmitted diseases	1		1
21. Vector-transmitted diseases	1		1
22. Nosocomial infections	1		1
23. Infection control and Occupational safety	1	1	2
Total	20	5	25

5.Teaching and Learning Methods	Lectures Practical sessions Seminars
6.Teaching and Learning Methods for students with limited Capacity	Self-learning activities such as use of internet and multimedia.
7.**Student Assessment**	
A.Student Assessment Methods	End of course written exam: A paper based exam **to assess** the student's comprehension and understanding of the class work Oral exam: to assess student's intellectual and communication abilities regarding basic knowledge and understanding of the course topics. Practical exam: objective structured practical examination to assess student professional and practical skills
B.Assessment Schedule (Timing of Each Method of Assessment)	End of course exam (written, oral and practical exams) **Week** 23
C.Weighting of Each Method of Assessment	Final written Examination: 7 marks Oral and practical Examination:11.5 marks Total 18.5 marks
8.List of References	

A. Course Notes/handouts	Department Books, and notes on Medical Microbiology and Immunology by microbiology department, Faculty of medicine, Minia university
B. Essential Books	Jawetz, Melnick and Adelberg's Medical Microbiology 17th edition by Riedel. S (2019); McGraw-Hill Education Review of Medical Microbiology and Immunology 17th edition by warren levinson (2022); McGraw-Hill Education
C. Recommended Text Books	Janeway's Immunobiology 9th edition by Kenneth Murphy and Casey Weaver, (2016); Garland Publishing Inc. NY, London.
D. Periodicals, websites	TBD and updated during the course work

Course Coordinator: Dr. Dalia Nabil

Head of Department : Prof. Dr. Wafaa Khairy

Date of last update: 3/ 2023

A. Matrix between ILOs and course topics

Contents (List of course topics)	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
1. Introduction and collection of pathological samples	A3 A5 A7	B1	C1,C4	D4 D5
2. Cleaning, sterilization and disinfection	A3 A5 A6	B1	C1,C4	D1 D3
3. Antimicrobial chemotherapy	A1 A5 A6	B1	C1	D1 D3
4. Bacteremia, toxemia and toxic shock	A1 A5 A7	B1 B2	C1, C2	D1 D2 D3
5. Fever	A1	B1	C1	D1 D3 D5
6. Laboratory used in epidemiology	A1	B1	C1,C3	D1 D4
7. Basic immunology 1	A3 A7	B1	C1,C4	D3

8. Basic immunology 2	**A1 A2 A4**	**B1**	**C1,C4**	**D1 D3 D4**
9. Hypersensitivity reactions	**A3 A4 A5**	**B1 B2**	**C2**	**D1**
10. Bacterial and viral vaccines	**A1,A6, A7**	**B1**	**C4,C1**	**D1 D3 D4**
11. Mycobacterial infections	**A1 A5**	**B1 B2**	**C1, C2**	**D1 D3 D4**
12. Rickettsial infections	**A3 A4**	**B1**	**C1**	**D5**
13. General virology	**A3 A4**	**B1**	**C1,C4**	**D3**
14. Viral Hepatitis	**A1 A3**	**B1 B2**	**C1, C4**	**D1 D3**
15. Human immunodeficiency	**A5 A6**	**B1**	**C1, C3**	**D1 D3 D4**
16. Covid-19	**A1,A1,A3**	**B1,B1**	**C1, C4**	**D1,D2,D3**
17. Bacterial, viral and fungal respiratory tract infections	**A4 A5 A6**	**B1**	**C1**	**D3 D4**
18. Bacterial, viral and fungal GIT infections	**A3 A4**	**B1**	**C1 C4**	**D3 D4**
19. Bacterial, viral and fungal CNS infections	**A1 A2 A3**	**B1**	**C1 C4**	**D4 D5**
20. Blood-transmitted diseases	**A1 A2 A4 A6**	**B1**	**C1, C4**	**D3 D5**
21. Vector-transmitted diseases	**A4 A5**	**B1**	**C1, C4**	**D3**

22. Nosocomial infections	**A1A7**	**B1**	**C1, C4**	**D4 D5**
23. Infection control and Occu	**A1 A2 A3**	**B1**	**C1,C4**	**D4**

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

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 A6 A7**	**B1**		
Practical			**C1 C2 C3 C4**	**D1 D2 D5**
Presentation/seminar				**D3 D4**

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 A6 A7**	**B1 B2**		
Practical exam			**C1 C2 C3 C4**	**D3 D4**
Oral Exam				**D1 D2 D5**

Blueprint of Medical Microbiology and Immunology Exam paper for 1st part of Master of General Internal Medicine (GM200) (7 marks)

(List of course topics)	HOURS	Intended learning outcomes ILOS		No of item per topic	% of topic	Knowledge & Understanding		Intellectual Skills		Total mark	Actual mark
Contents		Knowledge & Understanding	Intellectual Skills			No of items	mark	No of items	mark		
24. General Microbiology	4	70%	30%	4	20	2	0.9	1	0.5	1.4	1
25. Immunology	3	70%	30%	3	15	2	0.7	1	0.35	1.05	1
26. Bacteriology	3	70%	30%	3	15	2	0.7	1	0.35	1.05	1
27. Virology	3	70%	30%	3	15	2	0.7	1	0.35	1.05	1
28. Applied Microbiology	5	70%	30%	5	25	4	1.2	2	0.6	1.75	2
29. Nosocomial Infection and Infection control	2	70%	30%	2	10	2	0.5	1	0.2	0.7	1
Total	20				100 %					7	7

2022-2023

University: Minia

Faculty: Medicine

Department: Clinical pathology and chemistry department

1. Course Information		
• **Academic Year/level: first part internal medicine MSc**	• **Course Title:** **Clinical pathology for internal medicine Master degree**	• **Code: GM200**
• ***Number of teaching hours:*** - ***Lectures: Total of 48 hours, 2 hours/week***		
2. Overall Aims of the course	***By the end of the course the student must be able to:*** 1-Gain basic and necessary knowledge for proper diagnosis of different hematological disease. 2- Enable candidate to reach to proper diagnosis by interpreting of electrolyte, lipid, renal and carbohydrate results. 3-Enable candidate to know various infectious (e.g. bacterial or viral or fungal) disease and how to differentiate between them. 4-Aquire the basic information about hypersensitivity reaction, allergic reaction and immunological disease.	
3. Intended learning outcomes of course (ILOs): ***Upon completion of the course, the student should be able to:***		
A- Knowledge and	A.1. Define terms screening of hemostasis.	

Understanding	A.2. Recognize basic concepts of different hematological disease. A.3. Discuss the of importance of microbiology disease. A.4. List different types of hypersensitivity reaction. A.5. Describe importance of electrolytes analysis.
B- Intellectual Skills	B.1. Decide appropriate laboratory tests for hemostasis screening. B.2. Differentiate between different types of anemia and hematological malignancies. B.3. Report different patterns of microbiological disease. B.4. Compare between the different types of hypersensitivity reaction and lipid patterns.
C- Professional and Practical Skills	C.1. Label importance of assay of hypersensitivity test. C.2. Investigate appropriate laboratory tests for hematological disease, diabetic pattern.
D- General and transferable Skills	D.1. Practice the life-long habits of reading, literature-searches, and consultation with colleagues, attendance of scientific meetings, and the presentation of scientific work as part of continuing professional education (CPD). D.2. Use communication skills as the trainee must gain experience, under supervision, in planning departmental policies and develop and implement the leadership skills. D.3. Use e-technology in continuous professional improvement

4. Course Contents

Topic	No. of hour lecture	No. of hour practical (cases)

Anemia (etiology and classification)(Clinical hematology**)**	**6**	**2**
Screening tests of hemostasis (Clinical hematology)	**2**	**2**
Malignancy(myeloid) (Clinical hematology)	**2**	**2**
Malignancy (Lymphoid) (Clinical hematology)	**2**	**2**
Blood bank (Clinical hematology)	**2**	**1**
Carbohydrate (CHO) (Clinical chemistry)	**2**	**2**
Lipid (Clinical chemistry)	**2**	**2**
Electrolyte (Clinical chemistry)	**2**	**2**
Kidney (Clinical chemistry)	**2**	**2**
Immunological diseases (Clinical immunology)	**2**	**1**
Hypersensitivity reactions ,allergic reaction(Clinical immunology)	**2**	**1**
Bacterial infection Viral infection Fungal infection (Clinical microbiology)	**2**	**1**
Total	**28**	**20**
5.Teaching and Learning Methods	1- Lectures. 2- Online lectures and seminars	
6. Student Assessment		

A. Student Assessment Methods	**5.1- Written exams:** to assess the student's comprehension and understanding of the class work. **5.2- Oral Exams:** to assess student's intellectual and communication abilities regarding basic knowledge and understanding of the course topics.
B. Assessment Schedule (Timing of Each Method of Assessment)	**Assessment 1: Final written exam** **Assessment 2: Oral exam**
C. Weighting of Each Method of Assessment	**Final Written Examination 40 %** **Oral Examination 60 %** **Total 100%**
7. List of References	
A. Course Notes/handouts	**Staff members print out of lectures and/or CD copies.**
B. Essential Books	➢ **Tietz Fundamentals of clinical chemistry** ➢ **Williams of hematology** ➢ **Basic and clinical immunology** ➢ **Basic and clinical immunology**
C. Periodicals, websites	➢ **http://www.medscape.com** ➢ **http://www.pubmed.com**

Course Coordinator **Head of Department**

Dr . /Hend M Moness **Prof. Dr. /Ashraf M Osman**

Last data of approval 7/3/2023

نموذج رقم (١١أ

Post-Graduate Course Specifications **Clinical pathology for First part Master degree of internal medicine**	مسمى المقرر
CP 200	كود المقرر

جامعة/أكاديمية : المنيا
كلية / معهد: الطب
قسم: الباثولوجيا الأكيلينكية

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**
Anemia (etiology and classification)		**A2**	**B2**	**C1**	**D1,2,3**
Screening tests of hemostasis		**A1**	**B1**	**C2**	**D1,2,3**
Malignancy (myeloid)		**A2**	**B2**	**C2**	**D1,2,3**
Lymphadenopathy (lymphoid)		**A2**	**B2**	**C2**	**D1,2,3**
Blood bank		**A3**	**B3**	**C2**	**D1,2,3**
CHO		**A2**	**B2**	**C2**	**D1,2,3**
Lipid		**A2**	**B2**	**C2**	**D1,2,3**
Electrolyte		**A3**	**B3**		**D1,2,3**

Kidney		**A3**	**B3**	**C2**	**D1,2,3**
Immunological disease		**A5**	**B4**		**D1,2,3**
Hypersensitivity reactions ,allergic reaction		**A4**	**B4**	**C1**	**D1,2,3**
Bacterial infection Viral infection Fungal infection		**A5**	**B4**	**C1**	**D1,2,3**

Methods of Teaching & Learning	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
Lecture	A1-5	B1-4	C1, C2	D1,2,3,
Assignment	A1-5	B1-4	C1, C2	D1,2,3

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

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
Written exam	A1-5	B1-4		
Oral Exam	A1-5	B1-4	C1, 2	D1,2,3

Course Coordinator **Head of Department**

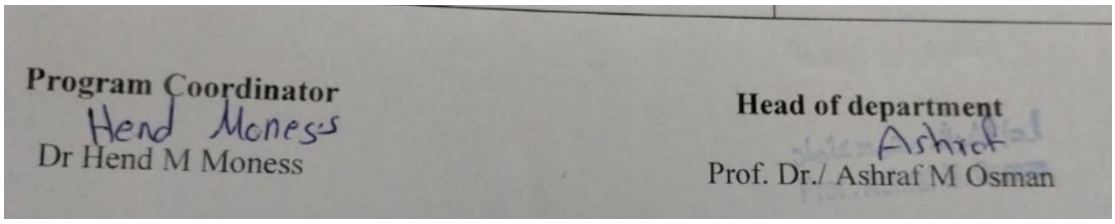
Dr . /Hend M Moness **Prof. Dr. /Ashraf M Osman**

Last data of approval 7/3/2023

Blueprint of Clinical pathology and chemistry Exam paper for 1st part of internal medicine (GM200)
(8 marks)

	Topic	Hours	Knowledge %	Intellectual%	% of topic	N of items Per topic	Knowledge		Intellectual		Marks	Actual Mark
							N of items	mark	N of items	Mark		
1	**Clinical hematology**	14	70	30	**50**	8	7	**3**	1	0.4	**3.4**	**3.5**
2	**Clinical chemistry**	8	75	25	**28.5**	4	3	**2**	1	0.28	**2.28**	**3.0**
3	**Clinical microbiology**	2	75	25	**7.1**	1	1	**0.56**	----	----	**1.2**	**1.0**
4	**Clinical immunology**	4	70	30	**14.2**	2	2	**1.1**	----	----	**0.42**	**0.5**
	Total	28			**100%**							**8**

Course Coordinator **Head of Department**



Dr . /Hend M Moness **Prof. Dr. /Ashraf M Osman**

Last data of approval 7/3/2023

Course Specification of Medical Ethics

Master degree of Internal Medicine (2022-2023)

University: Minia

Faculty: Medicine

Program on which the course is given: Master degree of Internal Medicine
Major or minor element of program: Medical ethics, ethics of medical research
Department offering the program: Internal Medicine Department
Department offering the course: Forensic Medicine & Clinical Toxicology Department
Academic year / Level: First part

A. Basic Information		
9- Academic Year/level: Post graduate; 1st Part MSC, Internal Medicine	**10- Course Title**: Course Specification of Medical Ethics (Master degree of Internal Medicine)	**11- Code**: GM200
12- Number of teaching hours: - **Lectures:** Total of 30 hours; 2 hour/week - **Practical:** Total of 15 hours; 1 hour/week		
B- Professional Information		
1. Overall Aims of the course	By the end of the course the student should be able to identify the value of studying and practicing medicine, the duties of doctors towards their patients, colleagues and community, the ethics in medical consultations among colleagues and also able to explain respect the patient's confidentiality and secrets, recognize the role of health care providers in the community and describe medical errors, negligence and legal issues, ethics of medical research especially on human beings and finally able to explain ethics and evidence based medicine	
2. Intended learning outcomes of course (ILOs): ***Upon completion of the course, the student should be able to:***		
A- Knowledge and Understanding	**A.1**- Identify the basic concept of learning and practicing medicine from the religious and human point of view. **A.2-** Identify the very beneficial impressive history of medicine; ethics related.	

	A.3- Classify the main principles of medical ethics. **A.4-** Recognize an integrated approach to deal with patients, their families, community and medical staff in an ethical, legal and human manner. **A.5-** Identify rules in low and regulations to deal with patients in practicing medicine. **A.6-** Explain the standard and accredited methods of clinical research especially on human beings.
B- Intellectual Skills	**B.1-** Design approach to patients in different situations; critical and noncritical ones. **B.2-** Develop adequate communication skills with patients, community and colleagues. **B3-** Conclude in medical researches on clear ethical basis. **B.4-** Use knowledge and learn according to standard basis worldwide. **B.5-** Apply and practice medicine according to concepts of evidence based medicine. **B.6-** Recognize common ethical dilemma and suggest a proper solution.
C- Professional and Practical Skills	**C.1-** Use a high professional approach with colleagues and patients. **C.2-** Modify steps of upgrading his/her educational, academic and clinical carriers. **C.3-** Use the standard guidelines in managing patients. **C.4-** Identify what is called as clinical governance and auditing his /her Performance.
D- General and transferable Skills	**D.1-** Identify how to respect his/herself and the profession. **D.2-** Develop adequate behavior and skill communications with community. **D.3-** Modify life and live like others sharing social and national affairs. **D.4-** Develop the capacity of helping people and share in upgrading their culture and education. **D.5-** Identify how to participate in the national and social affairs and responsibilities.

3- Course Contents

TOPIC	Lecture Hours	Practical Hours	Total hours
Medical Responsibility and Duties of the physician	2	1	3
Medicolegal aspect of cloning	2	1	3
Defensive Medicine	2	1	3
Diagnosis of death & Death Certificates	2	1	3
Consent in medical field	2	1	3
Medical malpractice	2	1	3
Medical syndicate	2	1	3
Professional secrecy	2	1	3
Physician disciplinary proceeding	2	1	3
Domestic Violence	2	1	3
Euthanasia (Mercy death)	2	1	3
Ethics in medical research	2	1	3
Medical reports	2	1	3
Rules of using addictive drugs among physicians	2	1	3
Medical certificates	2	1	3
Total	(30 hr.) ٢/W	(15 hr.) 1/W	(45 hr.) 3/W

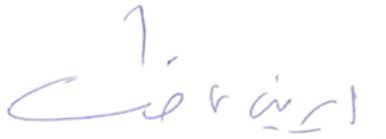
4- Teaching and Learning Methods	4.1 - Straight lectures; power point presentations 4.2 - Practical lessons 4.3 - Brain storming with the students 4.4 - Questions and Answers
5- Teaching and Learning Methods to students with limited Capacity	(Not applicable)
6- Student Assessment	
A. Student Assessment Methods	**TENDANCE CRITERIA**: by Faculty laws (log book) **ASSESSMENT TOOLS:** *Final Written exam: short essay to asses knowledge and understanding. problem solving to asses intellectual skills MCQ to assess knowledge and intellectual skills. *Oral exam; to asses knowledge and understanding. Also intellectual skills, attitude, and communication. *Practical exam: to assess practical and professional skills.
B. Assessment Schedule	• Final Written exam week: 24-28 • Oral exam week: 24-28 • Practical exam week: 24-28
C. Weighting of Assessment	• Final Written exam 40% (40 Marks) • Oral & Practical exams 60% (60 Marks) • Total 100% (100 Marks)
7- List of References	
A. Course Notes/handouts	Department book by staff members. Log Book.
B. Essential Books (text books)	Medical Ethics Manual, 2nd Edition John R. Williams, 2009. Medical Ethics, 2nd Edition, Michael Boylan, 2014.
C. Recommended Books	Text book of medical ethics, Erich H. Loewy, 1989
D. Periodicals	Journal of Medical Ethics Journal of Medical Ethics and History of Medicine
E. Web sites	https://en.wikipedia.org/wiki/Medical_ethics https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5074007/
8- Facilities required for teaching and learning	Classrooms for theoretical lectures and tutorials

Course Coordinators:

Prof. Dr. Morid Malak Hanna

Dr. Mennatallah Mahmoud Ahmed

Head of Department:
Prof. Dr. Irene Atef Fawzy



Date of last update & approval by department council: 5/3/2023

Course Specification of Medical Ethics **Master degree of Internal medicine** **(First part))**	**مسمى المقرر**
GM 200	**كود المقرر**

جامعة/أكاديمية : .....المنيا.....

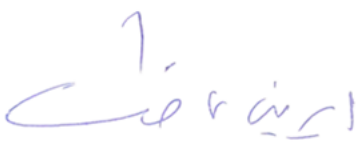
كلية / معهد: .....الطب البشرى.....

قسم: .....الطب الشرعى والسموم الأكلينكية.....

D. The Matrix of Coverage of Course IL by Contents

Contents	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D

Medical Responsibility and Duties of the physician	**A1,3**	**B4**	**C1**	**D1,2**
Medicolegal aspect of cloning	**A1,2**	**B3**	**-**	**-**
Defensive Medicine	**A4,5**	**B6**	**C3**	**D3**
Diagnosis of death & Death Certificates	**A1,2**	**B2**	**-**	**-**
Consent in medical field	**A2,5**	**-**	**-**	**-**
Medical malpractice	**A1,6**	**B5**	**C4**	**D5**
Medical syndicate	**A5,6**	**B3**	**-**	**-**
Professional secrecy	**A1,2,3**	**-**	**-**	**D4**
Physician disciplinary proceeding	**A2,4,5**	**B2**	**-**	**D1.2,3**
Domestic Violence	**A2,4,6**	**-**	**C2**	**-**
Euthanasia (Mercy death)	**A1,3,4**	**B1**	**-**	**-**
Ethics in medical research	**A1,2**	**-**	**-**	**-**
Medical reports	**A3,4**	**-**	**C1,2**	**D1.2**
Rules of using addictive drugs among physicians	**A1,4**	**B1,2**	**-**	**-**
Medical certificates	**A1,6**	**B3,5**	**C3**	**D1,4**



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	A1,2,3,4,5,6	B1,2,3,4,5,6	-	-
Practical	-	-	C1,2,3,4	-
Presentation/seminar	-	-	-	D1,2,3,4,5
Journal club	-	-	-	-
Thesis discussion	-	-	-	-
Training courses & workshops	-	-	-	D1,2,3,4,5

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	A1,2,3,4,4,5,6	B1,2,3,4,5	-	-
Practical exam	-	-	C1,2,3,4,5	-
Oral Exam	A1,2,3,4,4,5,6	B1,2,3,4,5	-	-

Blueprint of Forensic Medicine and Clinical Toxicology Department

Blueprint of 1st master of Internal Medicine Postgraduates" Medical Ethics Examination Paper (40 marks)

	Topic	Hours	Knowledge %	Intellectual%	% of topic	N of items Per topic	Knowledge		Intellectual		Marks	Actual Mark
							N of items	Mark	N of items	Mark		
1	Medical Responsibility and Duties of the physician & Defensive Medicine	4	75	25	13.32	1	1	5.32	1	10	5.32	5
2	Medicolegal aspect of cloning	2	75	25	6.66	1	1	2.66	---	---	2.66	3
3	Diagnosis of death & Death Certificates	2	75	25	6.66	1	1	2.66	---	---	2.66	3
4	Consent in medical field &	4	70	30	13.32	1	1	5.32	1	10	5.32	5

	Medical malpractice											
5	**Medical syndicate &Professional secrecy**	4	75	25	**13.32**	1	1	**5.32**	---	**---**	**5.32**	**5**
6	**Physician disciplinary proceeding & Euthanasia (Mercy death)**	4	75	25	**13.32**	1	1	**5.32**	1	**10**	**5.32**	**5**
7	**Domestic Violence**	2	70	30	**6.66**	1	1	**2.66**	---	**---**	**2.66**	**3**
8	**Ethics in medical research**	2	80	20	**6.66**	1	1	**2.66**	---	**---**	**2.66**	**3**
9	**Medical reports & Medical certificates**	4	80	20	**13.32**	1	1	**5.42**	1	**10**	**5.42**	**5**
10	**Rules of using addictive drugs among physicians**	2	75	25	**6.76**	1	1	**2.66**	---	**---**	**2.66**	**3**
	Total	**30**			**100%**			**40**		**40**	**40**	**40**

Medical Biochemistry course specification for master degree in internal medicine (First part)

University: *Minia*
Faculty: *Medicine*
Department: Medical Biochemistry
Last date of approval 3\2023

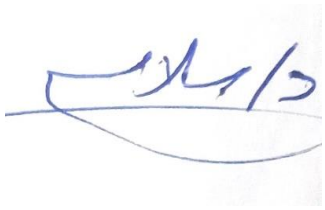
9. Course Information		
Academic Year/level: First Part of Master Degree	**Course Title**: First Part of Master Degree in internal medicine	**Code**: GM200
Number of teaching hours: **Lectures: 30 hours; 1.5 hours/week**		
.Overall Aims of the course	***By the end of the course the student must be able to:*** 1. Provide the postgraduate student with the medical Knowledge and skills essential for the practice of specialty and necessary to gain. 2- Understand all molecular basics and diseases. 3-Know different molecular techniques and their advanced applications. 4-Better understand and use the research tools including internet and differentlaboratory equipment. 5-Know retrieving the literature and understanding the evidence-basedmedicine	

	6-Maintain learning abilities necessary for continuous medical education. 7-Maintain research interest and abilities.
.Intended learning outcomes of course (ILOs): ***Upon completion of the course, the student should be able to:***	
Knowledge and Understanding	The student finishes the course; he will be able to achieve the following objectives: A1. Illustrate various metabolic processes of carbohydrate, lipid and protein A2. Describe role of minerals and hormones and Vitamins in metabolism. A3. Discuss various metabolic diseases and their diagnosis A4. List the role of enzymes in the chemical reactions in the body and its diagnostic importance. A5. Discuss types of gene therapy and its therapeutic effect. A.6. Describe the metabolism of hemoglobin and nucleic acids. A.7- Explain xenobiotics and their detoxification. A8- Explain principles, methodologies, tools and ethics of scientific research.
Intellectual Skills	B1-Analyze of different diseases to reach a final diagnosis. B2-Solve problems associated with metabolic diseases. B3- Integrate metabolic pathways with diseases.
- Professional and Practical Skills	After completing the course, the student should be able to C1. Organize groups, as a leader or as a colleague. C2. Practice willingly the presentation skills through the attendance and participation in scientific activities.
- General and transferable Skills	After completing the course, the student should be able to D1. Be aware of the advanced biomedical information to remain current with advances in knowledge and practice (self-learning). D2. Prepare for medical progress by having advanced medical research studies

4- Course Contents			
Topic	**Lecture hours)(**	**Practical/Clinical hours)(**	**Total No. of hours**
1. Carbohydrate Metabolism	6	---	6
2. Lipid metabolism	6	---	6
3. Protein metabolism	3	---	3
4. Purines and pyrimidine Metabolism	1.5	---	1.5
5. Enzymes	1.5	---	1.5
6. Minerals	3	---	3
7. Hormones	1.5	---	1.5
8. Vitamins	3	---	3
9. Xenobiotics	1.5	---	1.5
10. Gene Therapy	1.5	---	1.5
11. Hemoglobin metabolism	1.5	---	1.5
Total	**30**	**---**	**30**
5-Teaching and Learning Methods	1-Lectures & discussions. 2-Assignments 3-Attending and participating in scientific conferences and workshops to acquire the general and transferable skills needed		
6-Teaching and Learning Methods for students with limited Capacity	Additional lectures, adjusting time and place of lectures according to their schedule and capacity		
7- Student Assessment			

A-Student Assessment Methods	**1- Written exam** to assess the capability of the student for assimilation and application of the knowledge included in the course. **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)	***Assessment 1: one written exam*** *by the end of the course* ***Assessment 2: Oral exam,*** *after the written exam* **Formative only assessment:** log book.
C-Weighting of Each Method of Assessment	**Written examination:** 10 marks **Oral examination**: 15 marks **Total**: 25 marks
8- List of References	
A-Course Notes/handouts	Lectures notes are prepared in the form of a book authorized by the department.
B-Essential Books	-Harper's Biochemistry, Robert K. Murray, Daryl K. Granner, PeterA.Mayes, and VictorW. Rodwell (32th edition, 2022)
C- Recommended Text Books	Lubert Stryer, Biochemistry (9 th edition, 2019) Lehninger, Biochemistry (8th edition, 2021) Lippincott, Biochemistry (7th edition, 2017)
D-Periodicals, websites	To be determined and updated during the course work. **Websites:** 1-http://www.Medical Biochemistry.com. **Periodicals:** 1- International journal of biochemistry 2- Science Direct

Course Coordinator/s:
Dr. Heba Marey
Head of Department:
Prof. Dr. Salama Rabie Abd El Rahiem



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

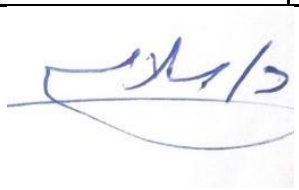
مسمى المقرر	جزء اول ماجستير الأمراض الباطنه
كود المقرر	

جامعة/أكاديمية : ..المنيا.....
كلية / معهد :.....الطب
قسم : **الكيمياء الحيويه**

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. Carbohydrate Metabolism	**1**	**A1 A3 A4**	**B3**	**C2**	

2. Lipid metabolism	**2**	**A1 A3 A4**	**B2 B3**	**C2**	
3. Protein metabolism	**3**	**A1 A3 A4**	**B1 B2 B3**	**C1 C2**	
4. Purines and pyrimidine metabolism	**4**	**A3 A6**	**B1**	**C1**	
5. Enzymes	**5**	**A4**	**B2**		
6. Minerals	**6**	**A2 A3**	**B1**	**C1**	
7. Hormones	**7**	**A2 A3**	**B3**	**C2**	
8. vitamins	**8**	**A2 A3**	**B1**	**C2**	
9. Xenobiotics	**9**	**A7**	**B1 B3**		
10.Gene Therapy	**10**	**A5**	**B3**	**C1**	
11.Hemoglobin metabolism	**11**	**A3 A6**	**B2**	**C2**	



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 A2 A3 A4 A5 A6	B2 B3		
Practical			C1 C2	
Presentation/seminar				D1 D2
Journal club				D1 D2
Training courses & workshops				D1 D2
Other/s (Specify)		B3 B1	C1 C2	D1 D2

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 A6 A7 A8	B1 B2 B3		
Oral Exam	A1 A2 A3 A4 A5 A6 A7	B2 B3		
Assignment				D1 D2
Other/s(Specify)		B1 B2	C2	D2

Blueprint of Medical Biochemistry Department

Blueprint of Examination Paper
(10 marks)

	Topic	Hours	Knowledge %	Intellectual %	% of topic	No of items per topic	Knowledge		ntellectual		Marks	Actual mark
							No of Items	*Mark*	*No of Items*	*Mark*		
1	**Carbohydrate Metabolism**	6	70	30	**20**	2	1	1	1	1	**2**	**2**
2	**Lipid metabolism**	6	70	30	**20**	2	1	1	1	1	**2**	**2**
3	**Protein metabolism**	3	70	30	**10**	2	1	0.5	1	0.5	**1**	**1**
4	**Purines and pyrimidine Metabolism**	1.5	75	25	**5**	2	1	0.75	1	0.75	**0.5**	**0.5**
5	**Enzymes**	1.5	75	25	**5**	2	1	0.75	1	0.75	**0.5**	**0.5**
6	**Minerals**	3	75	25	**10**	2	1	0.5	1	0.5	**1**	**1**
7	**Hormones**	1.5	80	20	**5**	2	1	0.75	1	0.75	**0.5**	**0.5**
8	**Vitamins**	3	80	20	**10**	2	1	0.5	1	0.5	**1**	**1**
9	**Xenobiotics**	1.5	70	30	**5**	2	1	0.75	1	0.75	**0.5**	**0.5**

10	**Gene Therapy**	1.5	75	25	**5**	2	1	0.75	1	0.75	**0.5**	**0.5**
11	**Hemoglobin metabolism**	1.5	75	25	**5**	2	1	0.75	1	.075	**0.5**	**0.5**
	Total	**30**			**100 %**						**10**	**10**

Medical Physiology Course Specifications

For 1st Part Master (MSc) Degree in Internal Medicine

University: Minia

Faculty: Medicine

Faculty offering the program: Faculty of Medicine.
Department offering the course: Medical Physiology Department.
Program(s), on which the course in given: MSc Degree in Internal Medicine.
Major or minor element of program(s): Medical Physiology.
Academic year/level: 1st part MSc degree in Internal Medicine.
Date of specification approval: 2020-2021 Last update: 2023

Basic Information

Title: Physiology course specifications for 1st part MSC degree of Internal Medicine
Code: GM200 **Credit Hours:** Not applicable
Lectures: 1.5 hours / week
Tutorial/Practical: Not applicable

Professional information

1) OVERALL AIM OF COURSE:

The aim of the course are to provide the postgraduate students with knowledge about the physiological principles underlying internal medicine diseases that aid in interpretation of symptoms, investigations and management.

INTENDED LEARNING OUTCOMES OF COURSE (ILOs)

A. Knowledge and Understanding:

By the end of the course, the student should be able to:

A1. Physiology of Blood:

1.1. Identify General constituents of blood and their functions.
1.2. Explain RBCs, Erythropoiesis and its clinical disorders.
1.3. Describe blood groups and principles of blood transfusion.
1.4. Describe WBCs and Immune response.

1.5. Discuss the mechanisms of Haemostasis and its clinical disorders.

A2. Physiology of Cardiovascular System (CVS):

2.1. Identify Properties of cardiac muscle.
2.2. Discuss Heart rate and its regulation.
2.3. Describe Cardiac cycle, ECG and arrhythmia.
2.4. Describe ABP and its regulation.
2.5. Explain COP and factors affecting it**.**
2.6. Recognize effects of Hemorrhage and body compensatory mechanisms.

A3. Physiology of Central and autonomic nervous system:

3.1. Identify Sensory division, types, pathways and clinical disorders.
3.2. Discuss Motor division, types, pathways and clinical disorders.
3.3. Enumerate distribution and functions of sympathetic NS.
3.4. Enumerate distribution and functions of sympathetic NS.
3.5. Explain chemical transmitters and receptors.

A4. Physiological basis of Metabolism:

4.1. Describe regulation of body temperature and mechanism of fever & disorders.
4.2. Discuss regulation of food intake.
4.3. Discuss obesity and starvation and their effects on the body.

A5. Physiological basis of Endocrinal System:

5.1. Discuss pituitary gland hormones.

5.2. Discuss Thyroid gland hormones.

5.3. Discuss suprarenal gland hormones.

5.4. Describe mechanisms of Ca^{+2} & Glucose homeostasis.

A6. Physiology of Respiratory System:

6.1. Identify mechanism of respiration.
6.2. Explain gas transport and related disorders.
6.3. Enumerate central and peripheral regulation of respiration.
6.4. Describe pulmonary function tests.

A7. Physiology of Digestive System:

7.1. Explain mechanisms of upper GIT motility (mastication, deglutition, gastric motility and vomiting).
7.2. List the functions, types and control of salivary, pancreatic, bile secretion and jaundice.
7.3. Describe intestinal motility and secretion and GIT hormones.

A8. Physiology of Urinary system:

8.1. Discuss in details mechanisms of renal tubular transport.
8.2. Explain water, electrolyte balance and acid base balance and common disorders.
8.3. Recognize renal function tests.

B. Intellectual Skills:

By the end of the course, the student should be able to:

B1. Develop the skills for demonstrating different functions of the body systems and diagnose deviation from normality as detected disease state.

B2. Assess the problems associated with different factors, which affect the normal function of different body systems.

C. Practical Skills:

Practical hours: -

D. General and Transferable Skills:

By the end of the course, the student should be able to:

D1. Adopt the principles of lifelong learning.

D2. Prepare and present clearly and effectively a scientific topic in a tutorial, a staff meeting or the yearly scientific day.

D3. Work efficiently within a team, honor and respect his colleagues.

Curriculum structure & contents:

Topic:	No. of Lectures	Total no. of hours
1. Physiology of Blood: - General constituents of blood and their functions. - RBCs, Erythropoiesis and its clinical disorders. - Blood groups and principles of blood transfusion. - WBCs and Immune response. - Mechanisms of Haemostasis and its clinical disorders.	**2**	**3**
2. Physiology of Cardiovascular System (CVS): - Properties of cardiac muscle. - Heart rate and its regulation. - Describe Cardiac cycle, ECG and arrhythmia. - ABP and its regulation. - COP and factors affecting it. - Recognize Effects of haemorrhage, and body compensatory mechanisms.	**3**	**4.5**
3. Physiology of Central Nervous System and autonomic NS: - Sensory division, types, pathways and clinical disorders. - Motor division, types, pathways and clinical disorders. - Distribution and functions of sympathetic NS. - Distribution and functions of sympathetic NS. - Chemical transmitters and receptors.	**4**	**6**
4. Physiological basis of Metabolism: - Regulation of body temperature and mechanism of fever & disorders. - Regulation of food intake. - Obesity and starvation and their effects on the body.	**2**	**3**
5. Physiological basis of Endocrinal System: - Pituitary gland hormones. - Thyroid gland hormones. - Suprarenal gland hormones. - Mechanisms of Ca^{2+} & Glucose homeostasis.	**4**	**6**
6. Physiology of Respiratory System: - Mechanism of respiration. - Gas transport and related disorders. - Central and peripheral regulation of respiration.	**3**	**4.5**

- Pulmonary function tests. **7. Physiology of Digestive System:** - Mechanisms of upper GIT motility (mastication, deglutition, gastric motility and vomiting). - Functions, types and control of salivary secretion, pancreatic secretion, bile and jaundice. - Intestinal motility and secretion and functions of gastrointestinal hormones. **8. Physiology of Urinary System:** - Mechanisms of renal tubular transport. - Water and electrolyte balance, acid base balance and its clinical disorders - Renal function tests.	**3** **3**	**4.5** **4.5**
Total	**24**	**36**

TEACHING AND LEARNING METHODS:

1. Lectures (1.5hr/wk.) throughout the academic year interchangeable with recorded lectures.
2. Self-learning activities such as use of internet and multimedia.

STUDENT ASSESSMENT METHODS:

1. **Written exam** to assess the student's knowledge in the form of short essay questions and /or MCQs.
2. **Oral exam** to assess student's knowledge, intellectual and general skills as well as assessing the verbal communication abilities.
3. **Log book.**

Assessment Schedule:

- **Assessment 1:** Final written exam.
- **Assessment 2:** Final oral exam.

Weighting of assessment:

- **Final written exam** **20** marks (40%)
- **Final oral exam** **30** marks (60%)
- **Total** **50** marks (100%)

LIST OF REFERENCES:

1. **Department books and notes.**
   Prepared by Medical Physiology Department staff members, Faculty of Medicine, Minia University.
2. **Essential books (Text Books):**
   - Ganong review of medical physiology.
   - Guyton text book of medical physiology.
3. **Periodicals, Web sites… etc.**

FACILITIES REQUIRED FOR TEACHING AND LEARNING:

1. Classrooms with data show for lectures.
2. Computers and internet facilities.

Course Coordinator,
Dr. Adel Hussien Saad
Professor of Medical Physiology Faculty Department of Medicine, Minia University

Head of Department,
Dr. Merhan M. Ragy
Prof. & Head of Medical Physiology of Medicine, MiniaUniversity

جامعة/أكاديمية : ....المنيا................

كلية / معهد: ....الطب البشري ....

قسم: ....الفسيولوجيا الطبية....................

Physiology course specifications for 1st Part MSc degree in Internal Medicine	مسمى المقرر
GM200	**كود المقرر**

A. Matrix of Coverage of Course ILOs by Contents

Contents	**Intended Learning Outcomes ILOs**																																					
	A. Knowledge & Understanding																																		**B. Intellectual skills**		**D. General & Transferable Skills**		
	A1.1	**A1.2**	**A1.3**	**A1.4**	**A1.5**	**A2.1**	**A2.2**	**A2.3**	**A2.4**	**A2.5**	**A2.6**	**A3.1**	**A3.2**	**A3.3**	**A3.4**	**A3.5**	**A4.1**	**A4.2**	**A4.3**	**A5.1**	**A5.2**	**A5.3**	**A5.4**	**A5.5**	**A6.1**	**A6.2**	**A6.3**	**A6.4**	**A7.1**	**A7.2**	**A7.3**	**A8.1**	**A8.2**	**A8.3**	**B1**	**B2**	**D1**	**D2**	**D3**
1. **Physiology of Blood**	X	X	X	X	X																														X	X	X	X	X
2. **Physiology of Cardiovascular System (CVS)**						X	X	X	X	X	X																								X	X	X	X	X
3. **Physiology of**												X	X	X	X	X																			X	X	X	X	X

Central and autonomic NS																																							
4. Physiological basis of Metabolism																	X	X	X																X	X	X	X	X
5. Physiological basis of Endocrinal System																				X	X	X	X	X											X	X	X	X	X
6. Physiology of Respiratory System																									X	X	X	X							X	X	X	X	X
7. Physiology of Digestive System																													X	X	X				X	X	X	X	X
8. Physiology of Urinary System																																X	X	X	X	X	X	X	X

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
Lectures	X	X	-	X
Self-learning activities	X	X	-	

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	X	X	-	-
Oral Exam	X	X	-	X
Log Book	X	X	-	X

Course Coordinator,
Head of Department,

Dr. Adel Hussien Saad
Dr. Merhan M. Ragy
Professor of Medical Physiology
Professor & Head of Medical Physiology Department
Faculty of Medicine, Minia University
Faculty of Medicine, Minia University
Date of last update & approval by Department council: 9/2020

Blueprint of Postgraduate Physiology Course for Master's degree (1st part) of Internal Medicine Department (Code: GM 200) (20 marks)

Topic	Hours	Knowledge %	Intellectual%	Weight %	ILOs	Actual mark	Modified mark
1. **Physiology of Blood:** General constituents of blood and their functions. RBCs, Erythropoiesis and its clinical disorders. Blood groups and principles of blood transfusion. WBCs and Immune response. Mechanisms of Haemostasis and its clinical disorders	3	75	25	8.3	A1	1.65	2
2. Physiology of Cardiovascular System: Properties of cardiac muscle. Heart rate and its regulation. Describe Cardiac cycle, ECG and arrhythmia. ABP and its regulation. COP and factors affecting it**.** Recognize Effects of haemorrhage, and body compensatory mechanisms	4.5	75	25	12.4	A2	2,2	2
3. Physiology of Central and autonomic nervous system: Sensory division, types, pathways and clinical disorders. Motor division, types, pathways and clinical disorders. Distribution and functions of sympathetic NS. Distribution and functions of sympathetic NS. Chemical transmitters and receptors.	6	75	25	16.6	A3	3.3	4
4. Physiological basis of Metabolism: Regulation of body temperature and mechanism of fever	3	75	25	8.3	A4	1.65	2

& disorders. Regulation of food intake. Obesity and starvation and their effects on the body							
5. Physiological basis of Endocrinal System: Pituitary gland hormones**.** Thyroid gland hormones**.** Suprarenal gland hormones**.** Mechanisms of Ca^{2+} & Glucose homeostasis.	6	75	25	16.6	A5	3.3	4
6. Physiology of Respiratory System: Mechanism of respiration. Gas transport and related disorders. Central and peripheral regulation of respiration. Pulmonary function tests.	4.5	75	25	12.4	A6	2.2	2
7. Physiology of Digestive System: Mechanisms of upper GIT motility (mastication, deglutition, gastric motility and vomiting). Functions, types and control of salivary secretion, pancreatic secretion, bile and jaundice. Intestinal motility and secretion and functions of gastrointestinal hormones.	4.5	75	25	12.4	A7	2,2	2
8. Physiology of Urinary system: Mechanisms of renal tubular transport. Water and electrolyte balance, acid base balance and its clinical disorders Renal function tests.	4.5	75	25	12.4	A8	2,2	2
Total	36			100%	-	20	20

Merhan M. Ragy

نموذج رقم١٢

Course Specifications of Histology for master degree (1st part) of internal medicine

University: Minia

Faculty: Medicine

Department: Histology and cell biology

Course Information ١		
• **Academic Year/level:** master degree (1st part) of internal medicine	• **Course Title:** Histology and cell biology	• **Code**:
• **Number of teaching hours: 12** - **Lectures:** Total of **12** hours; **1/2** hours/week - **Practical:** -		
2 Overall Aims of the course	*By the end of the course the student must be able to:* 1. Provide the postgraduate students with the medical Knowledge and skills essential for the practice of specialty and necessary to gain. 2. Provide master students with basic information about the structure and function of different tissues and organs affected in many diseases. 3. Maintenance of learning abilities necessary for continuous medical education. 4. Maintenance of research interest and competences.	
3. Intended learning outcomes of course (ILOs): ***Upon completion of the course, the student should be able to:***		

A- Knowledge and Understanding	A1. Define the histological structure of body tissues and organs A2. List the structure and function of the different cells and organs. A3. List the basic abnormalities that might affect the tissue as a result of diseases A4. Identify the ability of different tissue to regenerate following the treatment of diseased condition.
B- Intellectual Skills	B1. Interpret histological changes in diseases compared to the normal histology
C- Professional and Practical Skills	C1. Teamwork, practicing and participation in scientific activities. C2. Master the basic and modern medical skills in the area of specialty. C3. Examine histological slides and identify the structure of different cells and organs.
D- General and transferable Skills	D1. Practice in groups, as a leader or as a colleague. D2. Use the advanced biomedical information to remain current with advances in knowledge and practice (self-learning). D3. Play role in the medical progress by having advanced medical information. D4. Be aware about the presentation skills through the attendance and participation in scientific activities.

1. Course Contents

Topic	Lecture hours/week	Practical/Clinical hours/week	Total No. of hours hours/week
Introduction	1/2	-	1/2
Blood 1	1/2	-	1/2
Blood2	1/2		1/2
Blood 3	1/2		1/2
Blood4	1/2		1/2
Cardiovascular system1	1/2		1/2
Cardiovascular system2	1/2	-	1/2
Cardiovascular system3	1/2		1/2
Cardiovascular system4	1/2		1/2
Lymphatic system1	1/2	-	1/2

Lymphatic system2	1/2		1/2
Lymphatic system3	1/2		1/2
Lymphatic system4	1/2		1/2
Gastrointestinal tract	1/2	-	1/2
liver	1/2	-	1/2
pancreas	1/2	-	1/2
salivary glands	1/2	-	1/2
Endocrine system1	1/2	-	1/2
Endocrine system2	1/2		1/2
Urinary system1	1/2	-	1/2
Urinary system2	1/2		1/2
Respiratory system1	1/2	-	1/2
Respiratory system2	1/2		1/2
Revision	1/2		1/2
Total	١٢	-	12

5. Teaching and Learning Methods	● Lectures & group discussions. ● Assignments and practical activities . ● Attending and participating in scientific conferences and workshops to acquire the general and transferable skills needed
6.Teaching and Learning Methods for students with limited Capacity	Additional lectures, adjusting time and place of lectures according to their schedule and capacity
7 Student Assessment	
A. Student Assessment Methods	●Written exam to assess capability of students to assimilate and applicate knowledge included in the course. ●Oral exam to assess the student intellectual and communicatio abilities regarding basic knowledge and understanding of the co topics, and to help the teaching staff to evaluate the percentage achievement of the intended learning outcome of the course.
B. Assessment Schedule (Timing of Each Method of Assessment)	**Assessment 1:** written exams by the end of the course. **Assessment 2:** Oral exam, after the written exam. **Formative only assessment:** simple research assignment, logbook, slide box.
C. Weighting of Each Method of Assessment	**Written examination:** 15 **Oral examination**: 22.5 **Total**: 37.5
8 List of References	
A. Course Notes/handouts	Notes of department and practical notebook

B. Essential Books	1. Basic histology, Junqueira et al. 2. Bloom and Fawcett: Concise Histology. 3. Fawcett., Cell biology and histology. Gartner et al. 4. Lippincott Illustrated review: integrated systems 5. Oxford Handbook of Medical sciences
C. Recommended Text Books	1. Wheater's Functional Histology A Text and Colour Atlas. 7th Edition - April 3, 2023. 2. Stevens & Lowe's Human Histology (Fourth Edition) Book. 4th Edition. 2015.
D. Periodicals, websites	**Web Sites:** To be determined and update during the course work. 1. http://www.histology-world.com. 2. http://histo.life.illinois.edu/histo/atlas/slides.php **Periodicals:** 1. Journal of molecular histology 2. Egyptian J of Histology 3. Egyptian J of Anatomy 4. Acta Anatomica 5. International J of Experimental Research 6. Cell and Tissue Research

1-Assisstant prof. Soha Abel Kawy

2- Assistant Lecturer: Reham Abo El-Leil

Head of Department:

Prof. Dr. Seham Abd El-Raouf Abd El-Aleem

Date of last update & approval by department Council: March / 2023

نموذج رقم (١١أ)

مسمى المقرر	master degree (1st part) of internal medicine
كود المقرر	GM200 GM200

جامعة/أكاديمية : ..المنيا.....

كلية / معهد: .....الطب.....

قسم: .....الهستولوجي وبيولوجيا الخلية.....

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
Introduction	1	A1			
Blood 1	2	A1,A2,A3,A4	B1	-	D1,D2,D3,D4
Blood2	3	A1,A2,A3,A4	B1	-	D1,D2,D3,D4
Blood 3	4	A1,A2,A3,A4	B1	-	D1,D2,D3,D4
Blood4	5	A1,A2,A3,A4	B1	-	D1,D2,D3,D4
Cardiovascular system1	6	A1,A2,A3,A4	B1	-	D1,D2,D3,D4
Cardiovascular system2	7	A1,A2,A3,A4	B1	-	D1,D2,D3,D4
Cardiovascular system3	8	A1,A2,A3,A4	B1	-	D1,D2,D3,D4
Cardiovascular system4	9	A1,A2,A3,A4	B1	-	D1,D2,D3,D4

Lymphatic system1	**10**	**A1,A2,A3,A4**	**B1**	-	**D1,D2,D3,D4**
Lymphatic system2	**11**	**A1,A2,A3,A4**	**B1**	-	**D1,D2,D3,D4**
Lymphatic system3	**12**	**A1,A2,A3,A4**	**B1**	-	**D1,D2,D3,D4**
Lymphatic system4	**13**	**A1,A2,A3,A4**	**B1**	-	**D1,D2,D3,D4**
Gastrointestinal tract	**14**	**A1,A2,A3,A4**	**B1**	-	**D1,D2,D3,D4**
liver	**15**	**A1,A2,A3,A4**	**B1**	-	**D1,D2,D3,D4**
pancreas	**16**	**A1,A2,A3,A4**	**B1**	-	**D1,D2,D3,D4**
salivary glands	**17**	**A1,A2,A3,A4**	**B1**	-	**D1,D2,D3,D4**
Endocrine system1	**18**	**A1,A2,A3,A4**	**B1**	-	**D1,D2,D3,D4**
Endocrine system2	**19**	**A1,A2,A3,A4**	**B1**	-	**D1,D2,D3,D4**
Urinary system1	**20**	**A1,A2,A3,A4**	**B1**	-	**D1,D2,D3,D4**
Urinary system2	**21**	**A1,A2,A3,A4**	**B1**	-	**D1,D2,D3,D4**
Respiratory system1	**22**	**A1,A2,A3,A4**	**B1**	-	**D1,D2,D3,D4**

Respiratory system2	**23**	**A1,A2,A3,A4**	**B1**	**-**	**D1,D2,D3,D4**
Revision	**24**	**A1,A2,A3,A4**	**B1**	**-**	**D1,D2,D3,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**
Lecture	**A1,A2,A3,A4**	**B1**		
Practical			**-**	
Presentation/seminar **Training courses & workshops**	**A1,A2,A3,A4**	**B1**	**-**	**D1,D2,D3,D4**

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

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**	**B1**	**-**	**-**
Oral Exam	**A1,A2,A3,A4**	**B1**	**-**	**-**

Blueprint of Histology and cell biology department for candidates of master degree “first part” examination paper (15 marks)

	Topic	Hours	Knowledge %	Intellectual %	% of topic	N of items per topic	Knowledge		Intellectual		Marks
							N of items	mark	N of items	mark	
1	Introuduction	.5	100	-	4,16						-
2	Blood	2	80	20	16,6						2.5
3	Cardiovascular	2	80	20	16,6						2.5
4	lymphatic	2	80	20	16,6						2.5
5	Gastrointestinal	2	80	20	16,6						2.5
6	Endocrine	1	80	20	8,3						1.25
7	Urinary	1	80	20	8,3						1.25
8	Respiratory	1	80	20	8,3						1.25
9	Revision	.5	80	20	4,16						-
10	Total	12			100%						15

Pharmacology course specification for master degree in Internal Medicine (First part)

University: *Minia*
Faculty: *Medicine*
Department: Pharmacology
Last date of approval 6/3/2023

12.Basic Information		
• **Academic Year/level:** First Part of Master Degree	• **Course Title**: First Part of Master Degree in **Internal Medicine**	• **Code**:
• **Number of teaching hours:** **Lectures: 32 hours; 2 hours/week** **Practical: 0**		
13.Overall Aims of the course	***By the end of the course the student must be able to:*** 1. Provide the postgraduate student with the medical Knowledge and skills essential for the practice of specialty and necessary to gain. 2-Understand all molecular basics and diseases. 3-Detect different molecular techniques and their advanced applications. 4-Better understand and use the research tools including internet and differentlaboratory equipment.	

	5-Know retrieving the literature and understanding the evidence-basedmedicine 6-Maintain learning abilities necessary for continuous medical education. 7-Maintain research interest and abilities.
14.Intended learning outcomes of course (ILOs): ***Upon completion of the course, the student should be able to:***	
A.Knowledge and Understanding	A1. Mention the basic biochemical and physiological activities, their disturbances and how to be corrected. A.2 Define general pharmacokinetics as well specific properties of different groups of drugs putting into consideration age, sex and genetic-related variations that affect the response to drugs (pharmacogenetics). A.3 Recall general pharmacodynamics as well specific properties of different groups of drugs that include the drug's mechanism of action and pharmacological effects. A.4 List pharmacotherapeutics which reflects the role of drugs in prevention, diagnosis and treatment of diseases as well as prevention of conception. It includes also pathopharmacology of diseases and drugs, indications, contraindications, adverse reactions and drug interactions especially in high risk groups (extremes of age, pregnancy and lactation, liver kidney and cardiac diseases). Pharmaco-economics is included in this category. A.5 Memorize Systemic pharmacology which includes drugs acting on different body systems such as cardiovascular, autonomic, respiratory, gastrointestinal, endocrine, blood ,……. A.6 Discuss the basic, and ethics of scientific research. A.7. List the principles of quality in professional practice in the field of therapeutics and applied pharmacology.
B- Intellectual Skills	B.1 Selecting and using drugs safely and efficiently knowing their limits and the potential risks B.2 Solve medical problems arising from use of drugs and the development of resistance or tolerance encouraging them to search for alternative approaches after revising the diagnosis. B.3 Relate an investigatory and analytic thinking "problem-solving" approaches to relevant situations related to Medical

	Pharmacology. B.8 Design management plans and alternative decisions in different situations in the field of Pharmacology.
C- Professional and Practical Skills	By the end of the study of master program in **Pharmacology** the candidate should be able to: C.1 Practice different skills of research including how to retrieve the literature and use the different laboratory equipment such as centrifuge, homogenizer, spectrophotometer and Ph meter. C.2 Evaluate the need of his/her career to join the major advances in drug information C.3 Perform the basic lab skills essential to the course. C.4 Prepare plans for performing experiments related to pharmacology.
D-General and transferable Skills	After completing the course, the student should be able to D1- Perform practice-based improvement activities using a systemic methodology (share in audits and risk management activities and use logbooks). D3- Collect and verify data from different sources. D4- Analyze and interpret data. D5-Appraise evidence from scientific studies. D6- Use information technology to manage information, access on-line medical researches to support his/her own education.

4- Course Contents

Topic	Lecture hours/week	Practical/Clinical hours/week	Total No. of hours hours/week
Pharmacokinetic variables	3	-	3
Autonomic Pharmacology	3	-	3
Drug induced liver diseases	1	-	1

Drug induced renal diseases	1	--	1
Drug induced blood diseases	1	--	1
Drug interaction and adverse drug reaction	2	-	2
Pharmacology of the cardiovascular system and Diuretics	3	--	3
Drugs affecting blood diseases	2	--	2
Pharmacology of GIT	2	--	2
Corticosteroids	1	--	1
Drugs used in diabetes	2	-	2
Nonsteroidal anti-inflammatory drugs and treatment of gout	2	-	2
Sedative hypnotic drugs	2	-	2
Chemotherapy	6	-	6
Pharmacology of the respiratory tract	1	-	1
Total	32		32
5-Teaching and Learning Methods	1-Lectures & discussions. 2-Assignments 3-Attending and participating in scientific conferences and workshops to acquire the general and transferable skills needed		
6-Teaching and Learning Methods for students with limited Capacity	Additional lectures, adjusting time and place of lectures according to their schedule and capacity		

7- Student Assessment

A-Student Assessment Methods	**1- Written exam** to assess the capability of the student for assimilation and application of the knowledge included in the course. **2-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 **3- Practical exam** to assess the student's ability to identify different methods of identification of different drug actions and interactions.
B-Assessment Schedule (Timing of Each Method of Assessment)	***Assessment 1: one written exam*** *by the end of the course* **Assessment 2: *Oral exam,*** *after the written exam* **Assessment 3: *Practical exam***
8-Weighting of Each Method of Assessment	**Written examination: 30 marks 40%** **Oral and practical examination: 45 marks 60%** **Total: 75 marks 100%**

9- List of References

E. Course Notes/handouts	Lecture notes prepared by the staff members in the department.
F. Essential Books	Lippincotts pharmacology 6th Edition (2015)
G. Recommended Text Books	- Goodman & Gilman, 14th edition - Katzung Basic and clinical pharmacology 15th edition -Rang and Dale's Pharmacology, 7th Edition-

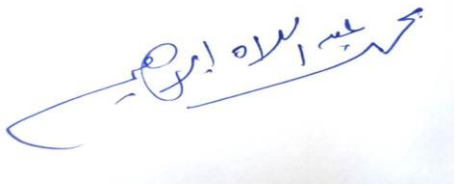
H. Periodicals, websites	Pharmacological Reviews - Journal of Pharmacology and Experimental therapeutics - British journal of pharmacology - European journal of pharmacology - Pharmacological research **http://www.ncbi.nlm.nih.gov/pubmed/**

Course Coordinator/s:

Dr. Ass. Prof. Dr. Seham Abdelwakeel

Head of Department:

Professor Dr. Mohamed Abdellah Ibrahim



Date of last update & approval by department Council:

6/3/ 2023

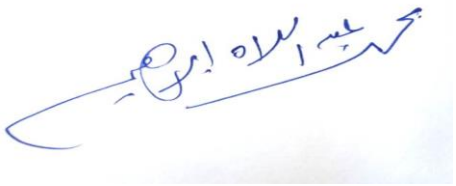
مسمى المقرر	جزء اول ماجستير الباطنة العامة
كود المقرر	

جامعة/أكاديمية : ..المنيا
كلية / معهد..... :الطب.....
قسم : **الفارماكولوجي**

A. Matrix of Coverage of Course ILOs By Contents

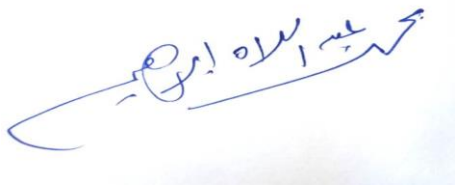
Contents (List of course topics)	Week No.	Intended Learning Outcomes (ILOs)			
		A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
		A	B	C	D
Pharmacokinetic variables		+	+		
Autonomic Pharmacology		+	+	+	
Drug induced liver diseases		+	+	+	
Drug induced renal diseases		+	+	+	
Drug induced blood diseases		+	+	+	
Drug interaction and adverse drug reaction		+	+	+	
Pharmacology of the cardiovascular		+	+	+	+

system and Diuretics					
Drugs affecting blood diseases		+	+	+	+
Pharmacology of GIT		+	+	+	
Corticosteroids		+	+	+	
Drugs used in diabetes		+	+	+	+
Nonsteroidal anti-inflammatory drugs and treatment of gout		+	+	+	+
Sedative hypnotic drugs		+	+	+	
Chemotherapy		+	+	+	+
Pharmacology of the respiratory tract		+	+	+	



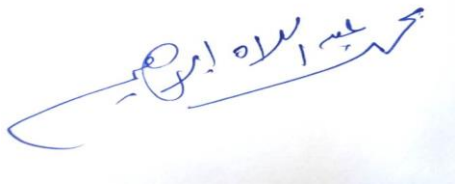
B. Matrix of Coverage of Course ILOs by Methods of Teaching & Learning

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	x	x		
Practical				
Presentation/seminar	x	x	X	
Journal club				
Thesis discussion				
Training courses & workshops		x	X	X



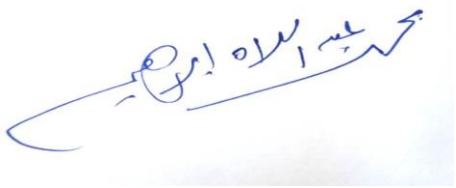
C. Matrix of Coverage of Course ILOs by Methods of Assessment

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	x	x		
Oral Exam	x	x	X	x
Practical exam	x	x	X	



Blueprint of Internal Medicine MSC (Pharmacology Examination Paper) 30 Mark

	Topics	HOURS	Knowledge %	Intellectual %	% of topics	Mark	Actual mark
1	Pharmacokinetic variables	3	100	0	9.37	2.81	2.5
2	Autonomic Pharmacology	3	70	30	9.37	2.81	2.5
3	Drug induced liver diseases	1	100	0	3	0.9	1
4	Drug induced renal diseases	1	100	0	3	0.9	1
5	Drug induced blood diseases	1	100	0	3	0.9	1
6	Drug interaction and adverse drug reaction	2	70	30	6	1.8	1.5
7	Pharmacology of the cardiovascular system and Diuretics	3	70	30	9.37	2.81	3
8	Drugs affecting blood diseases	2	70	30	6	1.8	2
9	Pharmacology of GIT	2	80	20	6	1.8	2
10	Corticosteroids	1	80	20	3	0.9	1
11	Drugs used in diabetes	2	100	0	6	1.8	2
12	Nonsteroidal anti-inflammatory drugs and treatment of gout	2	70	30	6	1.8	2
13	Sedative hypnotic drugs	2	80	20	6	1.8	2
14	Chemotherapy	6	60	40	18.75	5.62	5.5
15	Pharmacology of the respiratory tract	1	75	25	3	0.9	1
	Total	**32**			**100%**		**30**



Course Specifications of human Anatomy and Embryology in Master degree internal medicine

University: Minia

Faculty: Medicine

Department: human Anatomy and Embryology

15. Course Information

• **Academic Year/level:** first part **(2022-2023)**	• **Course Title:** Course Specifications of human Anatomy and Embrylogy in Master degree in **internal medicine**	**Code** : (GM 200)
• **Number of teaching hours:** - **Lectures:** Total of **20** hours - **Practical/clinical**: Total of 8 hours		
16. Overall Aims of the course	*By the end of the course the student must be able to:* have the professional knowledge anatomy and embryology of internal body systems.	
17. Intended learning outcomes of course (ILOs): ***Upon completion of the course, the student should be able to:***		
I- Knowledge and Understanding	A1. Mention the normal structure and function of nervous system on the macro levels. A2. State early embryo development & normal growth and development of the nervous system systems. A3. List the recent advances in the abnormal structure, function, growth and development of skull, spine and peripheral nerves. A4. Demonstrate the anatomical basis of surface anatomy and radiologic anatomy	
J- Intellectual Skills	B1. Link between knowledge for Professional problems solving. B2. Conduct research study and / or write a scientific study on a research problem.	

	B3. Diagnosis of diseases based on anatomical disruptions. B4. Establish goals to improve performance in the field of anatomy of the nervous system.
K- Professional and Practical Skills	C1. Perform the basic and modern medical skills in the area of internal medicine. C2. Describe diseases and anomalies based on anatomical data.
L- General and transferable Skills	d1. Communicate effectively by all types of effective communication. d2. Use information technology to serve the development of professional practice. d3. Assess the candidate himself and identify personal learning needs. d4. Use different sources to obtain information and knowledge d5. Assess the performance of others

18.Course Contents

Topic	Lecture hours/week	Practical/Clinical hours/week	Total No. of hours hours/week
Anatomy of GIT system (alimentary tract and digestive organs	2	1	3
Normal and abnormal development of the digestive tract, liver and pancreas.	2	2	4
Anatomy and development of the respiratory system.	2	1	3
Anatomy and development of peritoneum and peritoneal spaces.	2	1	3
Cardiovascular anatomy and development.	2	1	3
Urinary system anatomy and development.	3	-	3
Autonomic supply and lymphatic drainage of abdominal and pelvic organs.	3	-	3
congenital anomalies	2	-	2
Revision	2	2	4
Total	20	8	28

19.Teaching and Learning Methods	Lectures Practical {skill lab, cadavers, plastinated and plastic models: instructor guided} Presentation/seminar Group discussion
20.Teaching and Learning Methods for students with limited Capacity	
21.Student Assessment	

D. Student Assessment Methods	1- **written exam: paper based exams** **1 paper for 1st part exam** Short assay: to assess Knowledge, understanding Problem solving: asses intellectual skills Multiple choice: assess Knowledge, understanding and intellectual skills Periodic quizzes: assess Knowledge, understanding and intellectual skills 2-**Practical exams (**skill lab exams): **to assess practical skills as well as intellectual skills.** **3-Oral exam: to assess understanding, intellectual skills and transferrable**.
E. Assessment Schedule (Timing of Each Method of Assessment)	Assessment 1 ... Final practical exam (skill lab exams Week: 20-22 Assessment 2…. Final written exam (paper based exam). Week : 22-24 Assessment 3…..Final oral exam Week: 22-24
F. Weighting of Each Method of Assessment	Final-term Final written exam (paper based exam) Examination: 15 Oral Examination: 17.5 Practical Examination; skill lab exams: 5 Total: 37.5

22. List of References:

- **Standring,S, Ellis, H., Healy, J.C., Johnson, D., and Williams, J.C., 2016. Gray's anatomy. 50th edition.**
- **Junqueira, L.C. and Carneiro, J., 2015. Basic histology. 10th edition.**
- **Moore K.L., and Agur A.M.R., 2016. Essential clinical anatomy. 14th edition.**

I. Course Notes/handouts	Lecture notes prepared by staff members in the department.
J. Essential Books	Gray's Anatomy.
K. Recommended Text Books	A colored Atlas of Human anatomy and Embryology.
L. Periodicals, websites	American J. of Anatomy Cochrane Library,Medline & Popline

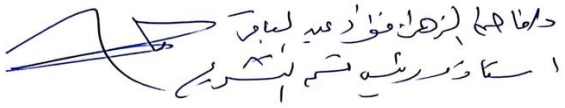
Course Coordinator/s:

Dr. Samah Mohammed Mahmoud

Head of Department:
Prof. Dr. Fatma Alzahraa Fouad Abdel- Baky

Date of last update & approval by department Council:

2023\3



نموذج رقم (١١)

جامعة/أكاديمية : المنيا
كلية / معهد: الطب
قسم: التشريح

مسمى المقرر	التشريح
كود المقرر	(Code: GM 200)

B. 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
Anatomy of GIT system (alimentary tract and digestive organs)	**1**	2,3	**1**	1	1,3,5
Normal and abnormal development of the digestive tract, liver and pancreas.	**2**	2,3	**2**	2	2,4
Anatomy and development of the respiratory system.	**3**	3,4	**3**	1,2	3,4
Anatomy and development of peritoneum and peritoneal spaces	**4**	1,4	**1**	1,2	4,5

Cardiovascular anatomy and development. ..	**5**	2,4	**4**	1	1,2,5
Urinary system anatomy and development	**6**	2,3	**2**	2	2,4
. . Autonomic supply and lymphatic drainage of abdominal and pelvic organs	**7**	1,4	**4**	1,2	4,5
congenital anomalies.	**8**	2,4	**1**	1	1,2,5
Revision		**1,2,4**	**2**	1	1,3,5

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	1,2,3,4	1,2		
Practical			2	
Clinical (Including grand rounds)				
Presentation/seminar	1,4			4,5
Journal club				
Group discussion	4		1	1,3,5
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	1,2,3,4	1,2		
Practical exam			2	
Clinical exam				
Oral Exam	2,3	1,2,4		4,5
Assignment				

Blueprint of internal medicine MSC" Examination Paper" in human anatomy and embryology

	Topic	Hours	Knowledge %	Intellectual %	% topic	No. of items per topic	Knowledge mark	Intellectual mark	Mark	Actual mark
1	Anatomy of GIT system (alimentary tract and digestive organs	2	75%	25%	13.3%		1.5	0.5	1.99	2
2	Normal and abnormal development of the digestive tract, liver and pancreas	2	67%	33%	13.3%		1.3	0.7	1.99	2
3	Anatomy and development of the respiratory system.	2	67%	33%	13.3%		1.3	0.7	1.99	2
4	Anatomy and development of peritoneum and peritoneal spaces.	2	67%	33%	13.3%		1.3	0.7	1.99	2
5	Cardiovascular anatomy and development	2	67%	33%	13.3%		1.3	0.7	1.99	2
6	Urinary system anatomy and development.	3	67%	33%	13.3%		1.3	0.7	1.99	2
7	Autonomic supply and lymphatic drainage of abdominal and pelvic organs.	3	67%	33%	13.3%		1.3	0.7	1.99	2
8	congenital anomalies	2	67%	33%	6.6%		0.6	0.4	1	1
	Total	18			100%		69.5	30.5	15	15

"15 Marks"