Minia University
Faculty of Medicine

Program Specification for Master Degree in Rheumatology, Rehabilitation and Physical medicine department

A. Basic Information:

1. **Programme title:** Master Degree in Rheumatology, Rehabilitation and Physical medicine
2. **Final award:** Master Degree in Rheumatology, Rehabilitation and Physical medicine
3. **Program type:** single
4. **Offered department:** Rheumatology, Rehabilitation and Physical medicine Department
5. **Departments involved in the program:** Rheumatology, Rehabilitation and Physical medicine department, forensic medicine and toxicology department, internal medicine department, medical physiology department and anatomy department.
6. **Program duration: 2 years**
7. **Number of program courses:** 5
8. **Program code: RR200**
9. **Academic year: 2022/2023**
10. **Date of approval: 6/3/2023**
11. **Coordinator:**
    Dr. Al Shimaa Mamdouh
    Dr. Esraa Fathy
    Dr. Haidy Mohamed
    Dr. Aya Hassan
    Dr. Reem Mohammed
    Dr. Doaa Mahmoud
12. **evaluators:**

- **External evaluators: Prof. Dr. Waleed Muhammad Salah, Professor of Rheumatology & Rehabilitation from Banha University.**
- **Internal evaluators: Prof. Dr. Fatma Ali Gad, Professor of Rheumatology, Rehabilitation and Physical medicine from Minia University.**

B. Professional information:

I. Program aims

The aim of this program is to provide the postgraduate student with the medical knowledge and skills essential for the practice of specialty and necessary to gain further training and practice in the field of Rheumatology, Rehabilitation and Physical Medicine through providing scientific knowledge and ethical principles essential for practice of Rheumatology, immunology, Rehabilitation and Physical Medicine, encouragement of active participation in community needs and problems solving and maintenance of learning abilities and research interest necessary for continuous medical education.

II. GRADUATE ATTRIBUTES	
By the end of Program in Rheumatology, Rehabilitation and physical medicine, the candidate must be able to:	
1.	Apply the basics and methodologies for scientific research in the area of Rheumatology, Rehabilitation and physical medicine.
2.	Implement the analytical methods and its applications in the area of Rheumatology, Rehabilitation and physical medicine.
3.	Apply the knowledge related to the field of Rheumatology, Rehabilitation and physical medicine in integration with applications and professional practice
4.	Develop awareness of the current problems with modern visions related to the field of Rheumatology, Rehabilitation and physical medicine..
5.	Analyze the professional problems related to the field of Rheumatology, Rehabilitation and physical medicine in an attempt to reach the proper relevant solutions.
6.	Implement perfectly wide range of Rheumatology, Rehabilitation and physical medicine specialized professional skills with the proper use of possible technological means to serve the professional practice
7.	Communicate effectively with implementation of all skills related to the proper team leading in the field of Rheumatology, Rehabilitation and physical medicine.
8.	Take the proper decisions in the usual and difficult professional contexts related to Rheumatology, Rehabilitation and physical medicine.
9.	Bring the greatest benefit and maintenance to the field of Rheumatology, Rehabilitation and physical medicine from employing all available human and financial resources.
10.	Develop awareness of all possible roles in the development of society and the preservation of the environment taking into consideration the variables in the field of Rheumatology, Rehabilitation and physical medicine.

11.	Show commitment to the integrity and credibility and the rules related to the professional medical practice in the field of Rheumatology, Rehabilitation and physical medicine.
12.	Ensure continuous learning and self-development academically and professionally in the areas related to Rheumatology, Rehabilitation and physical medicine.

III. Intended learning outcomes of program (ILOs)

A. Knowledge and understanding: By the end of the program the candidate should;

A1) Explain basic scientific knowledge related to Rheumatic diseases and human musculoskeletal system including biomechanics, physiological aspects of body systems and clinical immunology with integration of other systems.

A2) Summarize the mutual influence between the proper professional practice in Rheumatology & Rehabilitation and impact on surrounding environment

A3) Identify ethical and medico legal aspects of practice, malpractice and avoid common medical errors in the field of Rheumatology, Rehabilitation and physical medicine

A4) Identify Principles and the basics of quality in the implementation of practical skills and professionalism in Rheumatology, Rehabilitation and physical medicine

A5) Define Issues related to the basics and ethical items needed for implementation of scientific research methodology in Rheumatology, Rehabilitation and physical medicine.

A6) Demonstrate common rheumatic diseases and immunological problems causing disabilities and illustrate the pathological and psychological basis of different rheumatological, musculoskeletal disorders and disabilities.

A7) Define basic concepts of immunological laboratory procedures imaging technique and elecrodiagnostic studies related to inflammatory and non-inflammatory rheumatological and musculoskeletal problems.

A8) Define modern knowledge and in management of rheumatological diseases according to updated recommendations of ACR (Annex1) and EULAR (Annex 2).

A9) Explain various aspects of medical ethics and malpractice.

B. *Intellectual skills*: By the end of the program the candidate should be able to;

B1) Analyze symptoms & signs and construct a differential diagnosis for common rheumatological complaints.

B2) Design an appropriate plan for evaluation of common rheumatological complaints taking into consideration the nature of the clinical situation and the risks, benefits and costs to the patient.

B3) Interpret the results of different investigations related to immunological, rheumatological and musculoskeletal disorders.

B4) Construct treatment plans for common rheumatological problems taking into account the cultural and individual needs.

B5) Assess the importance and values of provided information to deal with problems related to the field of Rheumatology, Rehabilitation and physical medicine.

B6) Solve specialized problems related to Rheumatology, Rehabilitation and physical medicine with data.

B7) Construct important decisions in a variety of professional contexts related to the area of Rheumatology, Rehabilitation and physical medicine.

B8) Assess common ethical dilemma and its proper solution.

C. *Professional and practical skills*: By the end of the program the candidates should be able to;

C1) Compile clinical data specially the art of history taking required in rheumatological diseases.

C2) Examine and identify signs of common rheumatic and musculoskeletal disorders.

C3) Apply minimal invasive procedures for joint dysfunctions such as joint fluid aspiration, intra articular and soft tissue injections

C4) Judge or refer all rheumatological emergencies properly.

C5) Evaluate different types of disabilities and Plan an efficient program of rehabilitation.

C6) Utilize the basic and modern professional skills required to work in the area of Rheumatology & Rehabilitation.

C7) Make use properly and efficiently of the different methods and existing tools to serve the professional practice in the area of Rheumatology, Rehabilitation and physical medicine.

C8) Organize a proper medical report.

D. General and transferable skills: By the end of the program the candidates should be able to;

D1) Communicate with the patients to gain their confidence.

D2) Respond effectively to a patient's emotional and psychosocial concerns

D3) Communicate effectively with colleagues in the field of Rheumatology, Rehabilitation and physical medicine and with other health care providers.

D4) Appreciate team working.

D5) Acquire administrative skills that enable them to fulfill the paper work needed.

D6) Develop leadership skills that enable them to organize work and lead the juniors and paramedical staff.

D7) Apply continuous self-assessment to identify and improve the personal educational needs and to ensure the continuous self-learning and development for a better outcome in the area of Rheumatology, Rehabilitation and physical medicine.

D8) Make use of computer skills and information technology in the field of research, publication and health information system in the field of Rheumatology, Rehabilitation and Physical medicine.

D9) Utilize different medical data bases to collect, analyze and interpret data.

D10) Proper time management medical and professional practice.

. IV. Academic standards.

Academic reference standards:

- Faculty of medicine, Minia university adopted the general national academic reference standards (GARS) provided by the national authority for quality assurance and accreditation of education (NAQAAE) for all postgraduate programs. (Faculty Council Decree No.6854. in its cession No.177 Dated: 18/5/2009) (Annex3).
- Minia faculty of medicine had developed the academic reference standards (ARS) for master program (Msc) and was approved in faculty council decree No. 7528, in its session No. 191, dated 15/3/2010. Last update: 20/2/2023 (Annex4).
- Then, rheumatology, rehabilitation, & physical medicine department has developed the intended learning outcomes (ILOs) for Master Program (Msc) in rheumatology, rehabilitation, & physical medicine and date of program specifications first approved was by department council 13/5/2013, last update: 6/3/2023 (Annex5).

V. Program structure and contents.

Program duration: two years

Program structure:

Subject	No. of Hours/Week	
	Lectures	Practical
First part:		
Basic Sciences:		
• **Anatomy (annex-6)**	2	2

• **Physiology (annex-7)** • **Internal medicine (annex-8)** • **Medical ethics (annex-9)**	3 3 2	3 3 -------
Second part:		
	Lectures	Clinical
• Rheumatic Diseases	3	7
• Musculoskeletal disorders	3	7
• Immunology	2	2
• Physical medicine	2	6
• Rehabilitation Medicine, Orthoses and prostheses	2	6
•		

VI. Program admission requirements

I)

II) G

eneral Requirements:

A. Candidates should have either:
1. M.B.B.Ch Degree from any Egyptian Faculty of Medicine, or
2. Equivalent Degree from Medical Schools abroad approved by the Ministry of Higher Education.

B. Candidate should complete the house office training year

C. Those who are not university hospital residents should pass training for at least 12 months in one of the known hospitals

D. Follow postgraduate regulatory rules of Minia Faculty of Medicine

III) **Specific Requirements:**

A. Candidate graduated from Egyptian Universities should have at least "Good Rank" in their final years / cumulative year's examination, and grade of "Good Rank" in the Internal Medicine Rank too.
B. Candidate should know how to speak & write English well.

C. Candidate should have computer skills.

VII. Regulations for progression and program completion

Duration of program is 2 years, starting from registration till the 2nd part exam; divided to:

First Part: (≥6 months):

1. Program-related basic and clinical sciences and Applied Physics courses.
2. At least six months after registration should pass before the student can ask for examination in the 1st part.
3. Two sets of exams: 1st in April — 2nd in October.
4. For the student to pass the first part exam, a score of at least 60% in each curriculum is needed (with at least 40 % of the written exam).
5. Those who fail in one curriculum need to re-exam it only.

Thesis/Essay:

1. Start with registration and should be completed, defended and accepted at least after passing 6 months from documentation, and after passing the 1st part examination and at least two months before allowing entering the 2nd part final examination.

2. Accepting the thesis and publication of 1 paper derived from the thesis in national or international journals are enough to pass this part.

3. The department and the ethical committees must approve the protocol of the research. The thesis should include a review part and a research part.

4. The Thesis is supervised by one or more senior staff members from the Rheumatology and Rehabilitation department and may include other specialties according to the nature of the research. The thesis should be evaluated and approved by a committee of three professors including one of the supervisors and an external professor.

Second Part: (≥18 months):

1. Program related specialized science of Rheumatology, Rehabilitation and Physical Medicine courses and ILOs.

2. **After passing at least:**
a. University hospital residents: 24 months residency in the department of Rheumatology, Rehabilitation and physical medicine.
b. Residents in other places: 12 months training in the department of Rheumatology, Rehabilitation and physical medicine.

3. The student should pass the 1st part before asking for examination in the 2nd part.

4. 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 علمي 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 علمي موسع**

5. Two sets of exams: 1st in April – 2nd in October.

- For the student to pass the second part exam, a score of at least 60% is needed (with at least 40 % of the written exam).

VIII. Teaching and learning methods

Lectures (offline and online)	**المحاضرات**
Out patient clinic cases	**حالات العيادة الخارجية**
Rehabilitation cases	**حالات التأهيل**
Inpatient cases (shifts)	**النوبتجيات**
Grand rounds	**اجتماع علمي موسع**
Training courses	**دورات تدريبية**
Conference attendance	**حضور مؤتمرات علمية**
Thesis discussion	**حضور مناقشات رسائل**
Workshops	**حضور ورش عمل**
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Seminars	**لقاء علمي موسع**

IX. Assessment

Methods of Student assessment

Method of assessment		**Weighting of assessment**		**The assessed ILOs**
1) First part				
	Written Exam	**Practical Exam**	**Oral Exam**	
Anatomy	**40**	**10**	**50**	**Mentioned in the course specification**

Physiology	**40**	**-**	**60**	**Mentioned in the course specification**
Internal medicine	**200**	**100**	**-**	**Mentioned in the course specification**
Medical ethics	**40**	**30**	**30**	**Mentioned in the course specification**
2) Research assignment		-Fundamental to go through written exam		- A2, 3, 4, 5, 9 - B3, 5, 6, 7, 8 - C1, 2, 6 - D1, 2, 4, 5, 8, 9, 10
3) Second part				
Written Exams: • Short essay • MCQs • Problem solving		**140 × 2= 280**		- A1, 3, 5, 7, 8 - B1, 2, 3, 4, 5
Clinical Exams.		100 x 2= 200		-A 3, 9 -B 1, 3, 4, 5 -C 1, 2, 3, 5, 6, 7
CIVA		**95 degrees**; (35 radiology exam, 35 orthotics and prosthetics & 25 Electro diagnostics		-B 1, 3, 5, 6 -C 4, 7, 8
Oral Exams.		**Rheumatology: 75** **Rehabilitation: 50**		-A 1, 7, 8 -B 1, 3, 4, 6 -D 3, 6, 7, 10

- According to the Faculty of Medicine, Minia University Bylaws for postgraduate Programs,

  Students should be assessed at the end of the program**.**

<u>Assessment Schedule:</u>

Final Exam Part I

<u>Basic sciences</u>:

- **<u>Anatomy:</u>** Three-hours written exam (including short assay and multiple choice questions) + oral exam
- **<u>Physiology</u> :** Three-hours written exam (including short assay and multiple choice questions) + oral exam

- **Internal medicine:** Three-hour written exam (including short assay and multiple choice questions) + oral exam + clinical exam

  The written exam will be held in three days:
  Day one: Anatomy (3 hours)
  Day two: Physiology (3 hours)
  Day three: Internal Medicine (3 hours)
  This will be followed by clinical and oral exams in separate days

Final Exam Part 2

Rheumatology & Rehabilitation: Two written exams (Three-hours each) including short assay questions, and MCQ (including problem solving) + oral exam + clinical exam

Day one: *Rheumatology*
Day two: *Rehabilitation*
This will be followed by the clinical and oral exams in separate days.

X. Evaluation of program intended learning outcomes:

Evaluator	Tool	Sample
1- Senior students	Questionnaire	Student's Questionnaire reports are attached to the program (Annex 10)
2- Alumni	Questionnaire	11
3- Stake holders (Employers)	Meeting Questionnaire	30
4-External Evaluators and internal evaluators	Reports (attached to the file, annex11)	1
5-Quality assurance and accreditation unit	Revise programs and courses specifications	

Signatures

Head of Department

Prof. Faten Ismail Muhammad

Matrix between GARS and Faculty ARS and program ILOS

General Academic Reference Standards (GARS)	Faculty Academic Reference Standards (ARS)
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 والحفاظ 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 degree, 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……, 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……, 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……, 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.

General Academic Reference Standards (GARS)	**Faculty Academic Reference Standards (ARS)**	**Program ILOS**

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. Graduate Attributes:** *Graduate of master (MSC) degree of rheumatology, rehabilitation and physical medicine 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	*1. Apply the basics and methodologies for scientific research in the area of Rheumatology, Rehabilitation and physical medicine.*
2.1. تطبيق المنهج التحليلي واستخدامه في مجال التخصص	2.1. Critically analyze, evaluate, and effectively communicate findings, theories, and methods	*2. Implement the analytical methods and its applications in the area of Rheumatology, Rehabilitation and physical medicine.*
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.	*3.Apply the knowledge related to the field of Rheumatology, Rehabilitation and physical medicine in integration with applications and professional practice*
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	*4. Develop awareness of the current problems with modern visions related to the field of Rheumatology, Rehabilitation and physical medicine.*
5.1. تحديد المشكلات المهنية وإيجاد حلولا لها.	5.1. Demonstrating proficiency, required to solve current complex problems in his scholarly field.	*5. Analyze the professional problems related to the field of Rheumatology, Rehabilitation and physical medicine in an attempt to reach the proper relevant solutions.*
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.	*6. Implement perfectly wide range of Rheumatology, Rehabilitation and physical medicine specialized professional skills with the proper use of possible technological means to serve the professional practice*

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.	*7. Communicate effectively with implementation of all skills related to the proper team leading in the field of Rheumatology, Rehabilitation and physical medicine.*
8.1. اتخاذ القرار في سياقات مهنية مختلفة.	8.1. Take professional situational decisions and logically support them.	*8. Take the proper decisions in the usual and difficult professional contexts related to Rheumatology, Rehabilitation and physical medicine.*
9.1. توظيف الموارد المتاحة بما يحقق أعلي استفادة والحفاظ عليها	9.1. Optimal use of available resources to achieve research or best patient health care and ensure its maintenance.	*9. Bring the greatest benefit and maintenance to the field of Rheumatology, Rehabilitation and physical medicine from employing all available human and financial resources.*
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	*10. Develop awareness of all possible roles in the development of society and the preservation of the environment taking into consideration the variables in the field of Rheumatology, Rehabilitation and physical medicine.*
11.1. التصرف بما يعكس الالتزام بالنزاهة والمصداقية والالتزام بقواعد المهنة.	11.1. Exhibit ethical behavior that reflect commitment to the code of practice	*11. Show commitment to the integrity and credibility and the rules related to the professional medical practice in the field of Rheumatology, Rehabilitation and physical medicine.*
12.1. تنمية ذاته أكاديميا ومهنيا و قادرا علي التعلم المستمر.	12.1. Demonstrate the ability to sustain a lifelong personal and professional growth.	*12. Ensure continuous learning and self-development academically and professionally in the areas related to Rheumatology, Rehabilitation and physical medicine.*
٢.المعايير القياسية العامة:	**2. Faculty Academic Reference Standards**	

NAQAAE General Academic Reference Standards "GARS" for Master Programs	(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 degree, the graduate should have sufficient knowledge and understanding of:*	**A.Knowledge and understanding:** *By the end of the program the candidate should;*
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	*A1) Explain basic scientific knowledge related to Rheumatic diseases and human musculoskeletal system including biomechanics, physiological aspects of body systems and clinical immunology with integration of other* *A6) Demonstrate common rheumatic diseases and immunological problems causing disabilities and illustrate the pathological and psychological basis of different rheumatological, musculoskeletal disorders and disabilities.* *A7) Define' basic concepts of immunological laboratory procedures, imaging technique and elecrodiagnostic studies related to inflammatory and non-inflammatory rheumatological and musculoskeletal problems.*
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.	*A2) Relate the mutual influence between the proper professional practice in Rheumatology & Rehabilitation and impact on surrounding environment*
٢.١.٣. التطورات العلمية في مجال التخصص	2.1.3. Scientific developments in the field of	*A8) Define modern knowledge and in*

	specialization	*management of rheumatological diseases according to updated recommendations of ACR (Annex1) and EULAR (Annex 2)*
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	*A3) Interpret ethical and medico legal aspects of practice, malpractice and avoid common medical errors in the field of Rheumatology, Rehabilitation and physical medicine*
٢.١.٥. مبادئ وأساسيات الجودة في الممارسة المهنية في مجال التخصص	2.1.5. Quality principles in the scholarly field	*A4) Interpret Principles and the basics of quality in the implementation of practical skills and professionalism in Rheumatology, Rehabilitation and physical medicine*
٢.١.٦. أساسيات وأخلاقيات البحث العلمي	2.1.6. Basis of research methodology and medical ethics.	*A5) Define Issues related to the basics and ethical items needed for implementation of scientific research methodology in Rheumatology, Rehabilitation and physical medicine.* *A9) Explain various aspects of medical ethics and malpractice.*
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……, the graduate should be able to:	**B. Intellectual skills:** By the end of the program the candidate 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	*B1) Analyze symptoms & signs and construct a differential diagnosis for common rheumatological complaints.* *B3) Interpret the results of different investigations related to immunological, rheumatological and musculoskeletal disorders.*
2.2.2. حل المشاكل المتخصصة	2.2.2. Capable of integrating	*B6) Solve specialized*

مع عدم توافر بعض المعطيات	knowledge and dealing with complex subjects to solve problems	*problems related to Rheumatology, Rehabilitation and physical medicine with data*
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.	*B5) Assess the importance and values of provided information to deal with problems related to the field of Rheumatology, Rehabilitation and physical medicine.*
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	*B8) Assess common ethical dilemma and its proper solution.*
2.2.5. تقييم المخاطر في الممارسات المهنية في مجال التخصص	2.2.5. Be aware of risk management principles, and patient safety.	*B2) Design an appropriate plan for evaluation of common rheumatological complaints taking into consideration the nature of the clinical situation and the risks, benefits and costs to the patient.*
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	*B4) Construct treatment plans for common rheumatological problems taking into account the cultural and individual needs.*
2.2.7. اتخاذ القرارات المهنية في سياقات مهنية متنوعة.	2.2.7. Take professional situational decisions and logically support them.	*B7) Construct important decisions in a variety of professional contexts related to the area of Rheumatology, Rehabilitation and physical medicine.*
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……, the graduate must be able to:	***C.Professional and practical skills:*** By the end of the program the candidates should 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.	*C1) Compile clinical data specially the art of history taking required in rheumatological diseases.*

		C2) Examine and identify signs of common rheumatic and musculoskeletal disorders. *C3) Apply minimal invasive procedures for joint dysfunctions such as joint fluid aspiration, intra articular and soft tissue injections* *C5) Evaluate different types of disabilities and Plan an efficient program of rehabilitation.* *C6) Utilize the basic and modern professional skills required to work in the area of Rheumatology & Rehabilitation.*
٣.٢.٢كتابة و تقييم التقارير المهني.	3.2.2. Write and evaluate medical or scientific reports	*C4) Judge or refer all rheumatological emergencies properly.* *C8) Organize a proper medical report.*
٢.٣.٣تقييم الطرق والأدوات القائمة في مجال التخصص	3.2.3. Assess and evaluate technical tools during research	*C7) Make use properly and efficiently of the different methods and existing tools to serve the professional practice in the area of Rheumatology, Rehabilitation and physical medicine*
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……, the graduate should be able to:	**D. General and transferable skills:** By the end of the program the candidates 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.	*D1) Communicate with the patients to gain their confidence.* *D2) Respond effectively to a patient's emotional and psychosocial concerns* *D3) Communicate effectively with colleagues*

		in the field of Rheumatology, Rehabilitation and physical medicine and with other health care providers. *D5) Acquire administrative skills that enable them to fulfill the paper work needed.*
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.	*D8) Make use of computer skills and information technology in the field of research, publication and health information system in the field of Rheumatology, Rehabilitation and Physical medicine.*
4.2.**3**. لتقييم الذاتي وتحديد احتياجاته التعلمية الشخصية	4.2.3. Assess himself and identify personal learning needs	*D7) Apply continuous self-assessment to identify and improve the personal educational needs and to ensure the continuous self-learning and development for a better outcome in the area of Rheumatology, Rehabilitation and physical medicine.*
4.2.**4**. استخدام المصادر المختلفة للحصول على المعلومات والمعارف	4.2.4. Use various sources for information (physical and digital sources).	*D9) Utilize different medical data bases to collect, analyze and interpret data*
4.3.**5**. وضع قواعد ومؤشرات تقييم أداء الآخرين	4.2.5. Setting indicators for evaluating the performance of others	*D6) Develop leadership skills that enable them to organize work and lead the juniors and paramedical staff.*
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	*D4) Appreciate team working.*
4.2.**7**. إدارة الوقت بكفاءة	4.2.7. Manage time efficiently	*D10) Proper time management medical and professional practice*
٤.٢.٨.التعلم الذاتي والمستمر	4.2.8. Demonstrate skills of	*D7) Apply continuous*

	self-learning and lifelong learning needs of medical profession.	*self-assessment to identify and improve the personal educational needs and to ensure the continuous self-learning and development for a better outcome in the area of Rheumatology, Rehabilitation and physical medicine.*

Matrix between program courses and program ILOS

	No of units	No. of hours/week		Program ILOs
		Lect.	Prac/ Clin.	
First Part:				
Course Title				
Anatomy	4	2	2	**A 1, 4**
Physiology	4	3	3	**A 1, 4**
Internal medicine	4	3	3	**A 1, 4** **D 1, 2, 3**
medical ethics		2	-----	**A 3, 4, 9** **B 8** **C 8**
Master thesis				**A 5** **D 3, 4, 5, 8, 9, 10**
Second part:				
• Rheumatic Disease	6	3	7	**A** 1, 2, 3, 4, 5, 6, 7, 8 **B** 1, 2, 3, 4, 5, 6, 7 **C** 1, 2, 3, 4, 6, 7 **D** 1, 2, 3, 4
• Musculoskeletal disorders		3	7	**A** 1, 3, 4, 5, 6, 7, 8 **B** 1, 2, 3, 4, 5, 6, 7 **C** 1, 2, 3, 4, 5, 6, 7 **D** 1, 2, 3, 4
• Immunology	2	2	2	**A 1, 2, 4, 5, 6, 7, 8** **C- 1, 2, 4, 6, 7** **B- 1, 3, 4**, 2, 5, 6, 7 D 1, 2, 3, 4
• Physical medicine	3	2	6	A-6, 1, 4, 7 B-1, 2, 5, 6, 7 C-1, 3, 5, 6, 7 D-1,2, 3, 4
• Rehabilitation Medicine, Orthoses and prostheses	4	2	6	A 1, 4, 6, 7 B-1, 4, 2, 5, 6, 7 C-1,7, 8, 3, 5, 6 D 1, 2, 3, 4

Matrix between Teaching and learning methods and program ILOS

Teaching and learning methods	**program ILOS**			
	A-knowledge and understanding skills	**B- intellectual skills**	**C- professional and practical skills**	**D- general and transferable skills**
Lectures (offline and online)	1, 2, 3, 4, 5, 6, 7, 8, 9	1, 2, 3, 4, 5, 6, 7, 8	-----	------
Outpatient clinic cases	---------	--------	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 6, 7, 8
Rehabilitation cases	---------	--------	1, 2, 3, 5, 6, 7, 8	1, 2, 3, 4, 6, 7
Inpatient cases (shifts)	---------	----------	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 6, 7
Conference attendance	1, 2, 3, 4, 5, 6, 7, 8, 9	--------	--------	3, 4, 5, 7
Thesis discussion attendance	A5	-------	------	3, 5, 7
Workshops	3, 4, 5	--------	1, 2, 3, 4, 5, 6, 7, 8	3, 4, 5, 6, 7
Journal club (performing/ attendance**)**	2, 5, 6, 7, 8	---------	---------	3, 4, 7, 8, 9, 10
Case presentation (performing/ attendance**)**	---------	1, 2, 3, 4, 5, 6, 7	---------	1, 2, 3, 7, 8, 9, 10
Seminars (performing/ attendance**)**	1, 2, 3, 4, 5, 6, 7, 8, 9	---------	---------	3, 4, 7

Matrix between Methods of student assessment and program ILOS

Method of assessment	**The assessed ILOs**			
	A-knowledge and understanding skills	**B- intellectual skills**	**C- professional and practical skills**	**D- general and transferable skills**
1) Research assignment	1, 5, 6, 7, 8			1, 2, 3, 4, 5, 7, 8, 9, 10
2) Written Exams:				
-Short essay	1, 6, 7, 8	1, 2, 3, 4, 5, 6, 7	------	-----
-MCQs (including problem solving)	1, 6, 7, 8	1, 3, 5, 7	-------	-----
1) Clinical Exams. • **Long sheet(full history taking and examination)**	------	--------	1 ,2, 4, 5, 6 , 7	**1, 2**
2) CIVA				
• Short cases (regional examination)			1 ,2, 4, 5, 6 , 7	1, 2
• Imaging station	--------	----------	**1 ,2, 4, 5, 6 , 7**	----------
• Electrodiagnostic station			**1 ,2, 4, 5, 6 , 7**	
• Orthotics and prosthesis			**1 ,2, 4, 5, 6 , 7**	
5) Oral Exams.	1, 4, 5, 7, 8	1, 2, 3, 4, 5, 6, 7	------	**3 , 6**

Course Specification of Master degree
In Rheumatology, Rehabilitation and physical medicine

University: Minia

Faculty: Medicine

Department: Rheumatology, Rehabilitation and physical medicine

1. Course Information		
• **Academic Year/level:** 2022-2023	**Course Title:** master degree in Rheumatology, Rehabilitation and physical medicine.	• Code: RR200
• **Number of teaching hours:** - **Lectures:** Total of **192** hours; **12** hours/week **Practical/clinical:** Total of **448** hours; **28** - hours/week		
2. Overall Aims of the course	*By the end of the course the student must be able to:* 1. competently diagnose and manage Rheumatology, Clinical immunology and Rehabilitation medicine problems. 2. Apply national and international standards of patient care, using evidence-based medicine competently in practice. 3. Respond to the changing health needs of the Egyptian community.	
3. Intended learning outcomes of course (ILOs): ***Upon completion of the course, the student should be able to:***		

A- Knowledge And Understanding	**(1) Rheumatology & Clinical Immunology:** A1. explain the concept of autoimmune disease in the light of the normal functions of the immune system. A3. Identify the common rheumatic diseases and immunological and medical problems causing disabilities. A4. Illustrate the different Pediatric and Adolescent Rheumatology and Clinical Immunology disorders and their management modalities. A5. Describe the specific pathology of different rheumatological and immunological disorders. A6. Describe the psychological basis of rheumatological disorders and disabilities. A7. Demonstrate advanced concepts of immunological laboratory tests and procedures related to inflammatory and non-inflammatory rheumatological and clinical immunology problems. A8. Define the clinical pharmacology of different treatment modalities including indications, dosages, contraindications and precautions as well as

	the recent advances of biologic therapies. A9. Interpret the principles of advanced interventional procedures related to rheumatological disorders. **(2) Musculoskeletal Medicine and Regional Diseases:** A10. Define scientific knowledge underpinning the human musculoskeletal system including the anatomy, physiology and biomechanics, regional diseases and describe pathological changes of the musculoskeletal and neurological systems and the regional diseases. A11. Illustrate etiology, diagnosis and treatment of musculoskeletal pain. A12. Summerize common musculoskeletal and regional diseases causing disabilities. A13. Demonstrate the specific pathology of different musculoskeletal and regional disorders. A14. Identify basic concepts of laboratory and radiological investigations related to musculoskeletal and regional diseases. A15. Identify the indications, techniques and limitations Electrodiagnosis. A16. Summarize normal gait and abnormal gait patterns. A17. Outline different management modalities for common Problems including musculoskeletal and regional diseases. A18. Classify the principles of interventional procedures related to regional and musculoskeletal disorders. **(3) Physical Medicine and Rehabilitation:** A19. Identify the basis, indications, contraindications, precautions and Procedures of electrotherapy. A20. Illustrate the indications, procedures and types of therapeutic exercises. A21. Demonstrate the indications of different types of orthotics, wheelchairs, Assistive devices, walking aids and footwear modifications. A22. Show the Rehabilitation of the different disorders affecting the CNS, CVS, Urinary, respiratory and bowel and musculoskeletal systems.

	A23. Interpret the causes, types of amputation and Rehabilitation of the amputee with the indications and types of prostheses.
B- Intellectual Skills	**(1) Rheumatology & Clinical Immunology:** B1. Analyze the complex nature of Rheumatology and Clinical immunology diseases before giving the appropriate decision B2. Interpret the different clinical manifestations and investigations of Rheumatology and clinical immunology including laboratory, radiological and biopsy findings. B3. Classify patient's activity according to disease activity indices. B4. Construct the appropriate management plan of Rheumatology and Clinical immunology cases. B5. Make use of strategies to avoid disease flares and activity in Rheumatology patients. B6. Plan preventive measures for patients at high risk of complications. **(2) Musculoskeletal Medicine and Regional Diseases:** B7. Choose appropriate laboratory and radiological investigations for different Musculoskeletal Medicine and Regional disorders according to a goal-based approach. B8. Organize the results of different for Musculoskeletal and Regional disorders.

	B9. Build up medical and interventional solutions for Musculoskeletal and Regional Diseases. B10. Select treatment plans for Musculoskeletal Medicine and Regional disorders. **(3) Physical Medicine and Rehabilitation:** B11. Select rehabilitation medicine solutions for patients with disability and involve the patient's family in the strategy. B12. Construct proper rehabilitation treatment plans and follow up for patients. B13. Make use of total quality management related to Rehabilitation plans. B14. Interpret the results of different rehabilitation programs and follow up for patients with disabilities.
C- Professional	**(1) Rheumatology & Clinical Immunology:** C1. Analyze clinical data specially the art of history taking required in rheumatic diseases. **C2**. Examine and identify signs of common rheumatic disorders. **C3.** Classify the rheumatological emergencies and referal properly. **C4**. Construct the appropriate treatment plans for common and rare rheumatological disorders taking into consideration the individual needs and cost **(2) Musculoskeletal Medicine and Regional Diseases:** **C5**. Examine and identify signs of common musculoskeletal disorders. **C6.** Apply minimal invasive procedures for joint dysfunctions such as joint fluid aspiration, intra articular and soft tissue injections **(3) Physical Medicine and Rehabilitation:** **C7**. Evaluate different types of disabilities and Plan an efficient program of rehabilitation. **C8.** Construct proper and efficient rehabilitation programs for management of different musculoskeletal disorders and disabilities. **C9.** Make use of the different physical modalities and devices.

and Practical	**C10.** Apply electro diagnostic tools efficiently in the field of Rheumatology, Rehabilitation and physical medicine.
D- General and transferable skills:	D1. Evaluate and decide when to communicate with colleagues and patients and their families, and to involve them fully in planning management. D2. Explaine and simplify the nature of the illness, diagnostic and therapeutic plans, possible complications and outcomes to the patient and/or his relatives. D3. Simplify the situation and appropriate handling during difficult situations such as conveying bad News or dealing with patients' anger. D4. Interview with colleagues the progression of the patient's condition, therapeutic outcomes. D5. Develop optimal patient care and the same time appreciating the Cost effectiveness to allow maximum benefit from available resources.

4. Course Contents:

A)<u>Topics:</u>

Students will receive presentations on the following subjects:

<u>(1): Rheumatology & Clinical Immunology 9 topics</u>

1. Evaluation and diagnosis of patients with rheumatic symptoms.
2. Immune& inflammatory responses of rheumatic diseases.
3. Systemic connective tissue diseases
   i. Rheumatoid arthritis
   ii. Sjogren's Syndrome
   iii. Systemic lupus erythematosus
   iv. Systemic sclerosis
   v. Scleroderma mimics
   vi. Inflammatory muscle diseases
   vii. overlap disorders
   viii. Mixed connective tissue and undifferentiated connective tissue diseases

ix. Antiphospholipid syndrome
x. Adult onset Still's disease
xi. Polymyalgia Rheumatica

4. Vasculitides & related disorders
5. Seronegative Spondyloarthropathies
6. Pediatric Rheumatic diseases
7. Rheumatic disorders associated with systemic diseases
8. Arthritis related to infectious agents
9. Management of rheumatic diseases.

(2): Musculoskeletal Medicine and Regional diseases 7 topics:

1. Musculoskeletal and regional pain diseases etiology, diagnosis and treatment.
2. Electrodiagnosis: indications, techniques and limitations.
3. Fibromyalgia
4. Normal gait and abnormal gait patterns.
5. Crystal induced arthropathies
6. Osteoarthritis and related conditions
7. Metabolic bone disease (osteoporosis)

(3): Physical Medicine and Rehabilitation 11 topics

1. Physical modalities used in rehabilitation and physical medicine
2. Therapeutic exercises
3. Rehabilitation of stroke and Spasticity
4. Orthotics, prosthesis & Wheel chairs and assistive devices
5. Rehabilitation of pediatric disorders.
6. Rehabilitation after joint arthroplasty
7. Rehabilitation of the cardiovascular and respiratory diseases.
8. Rehabilitation of Myopathic disorders
9. Rehabilitation of Neuropathic disorders
10. Rehabilitation of regional musculoskeletal disorders.
11. Rehabilitation of burn.

III-B) Tutorial / Small Group Discussions

1) **<u>Appropriate History taking</u>.**
2) **<u>Musculoskeletal examination</u>.** The candidate should be able to identify**: i. Shoulder pathology:**
    a. Rotator cuff lesions.
    b. Glenohumeral/capsular pathology.
    c. Muscle wasting, proximal myopathy.
    d. S/C joint pathology – synovitis.
    e. A/C joint pathology – sy

ii. Elbow pathology:

a. Olecranon bursitis.
b. Elbow joint pathology.
c. Radio-ulnar joint pathology.
d. Medial or lateral epicondylitis.
e. Ulnar nerve entrapment.

iii. Hand & wrist pathology:

a. Radiocarpal joint pathology.
b. Distal radio-ulnar joint pathology.
c. MCP or IP joint pathology.
d. Hand deformities.
e. Muscle wasting.
f. Flexor or extensor tenosynovitis or tendon nodules.
g. Rupture or attenuation of flexor or extensor tendons of fingers or thumb.
h. De Quervain's tenosynovitis.
i. Carpal tunnel syndrome.

iv. Hip/pelvic pathology:

a. Trochanteric, iliopsoas, gluteal bursitis.
b. Hip joint pathology including dysplasia.
c. Real & apparent leg length inequality.
d. SI joint pathology.
e. Muscle wasting, proximal myopathy, Trendlenberg sign.
f. Deformities of the hip, Thomas' test.
g. Pathology of symphysis pubis.
h. Hip pain due to pain referred from lumbar region.
i. Lesions of tendons and entheses.

v. Knee pathology:

a. Knee joint pathology, including internal derangements.
b. Deformities.
c. Muscle wasting, myopathy.
d. Prepatellar, anserine bursitis.
e. Popliteal cyst.

f. Damage to collateral ligaments.

g. Knee pain due to pain referred from hip or lumbar spine.
h. Lesions of tendons and entheses.
i. Osgood-Schlatter's disease.
j. Adolescent anterior knee pain/Patello-femoral syndrome.

vi. Ankle & foot pathology:

a. Ankle (tibiotalar) pathology.
b. Subtalar/midtarsal joint pathology.
c. MTP & IP joint pathology.
d. Lesions of the Achilles tendon, enthesis and retrocalcaneal bursa.
e. Deformities of the ankle and foot.
f. Foot pain due to pain referred from lumbar spine.
g. Plantar fasciitis.
h. Tenosynovitis of tibialis post and peroneal tendons.
i. Rupture of tibialis posterior or Achilles tendon.
j. Lesions of bone (e.g. stress fracture).

vii. Spinal pathology:

a. Cervical, thoracic, and lumbar spine pathology.
b. Spinal nerve root entrapment syndromes.
c. Spinal deformities including scoliosis and kyphosis.

viii. Extra-articular pathology:

a. Raynaud's phenomenon.
b. Vasculitic skin lesions.
c. Rheumatoid nodules.
d. Rash – psoriasis, pustular psoriasis, onycholysis, balanitis, lupus rashes, erythema nodosum
e. Calcinosis.
f. Nail lesions – pitting, onycolysis, splinter haemorrhages, nailfold infarcts
g. Scleritis, episcleritis, conjunctivitis, iritis
h. Sclerodactyly.
i. Tophi.
j. Other medical complications of rheumatic diseases affecting internal organs.

3) **The differential diagnosis of:** monoarthropathy, oligoarthropathy, polyarthropathy, axial arthropathy, muscle weakness, regional limb pain, spinal musculoskeletal pain disorders, unexplained musculoskeletal pain and rheumatological emergencies.

4) **Management the following rheumatologic & immunologic cases:**

a. Musculoskeletal pain problems and soft tissue rheumatism including:

i. Neck pain.
ii. Spinal pain.
iii. Intervertebral disc disorders.
iv. Spinal canal or foraminal stenosis & related syndromes.
v. Limb pain syndromes, e.g.:
    1. Rotator cuff disease, enthesopathies including epicondylitis, plantar fasciitis, bursitis and non-specific limb pain
    2. Complex regional pain syndromes - algodystrophy
vi. Fibromyalgia and related somatoform disorders.
vii. Benign joint hypermobility.
viii. Pain problems specific to childhood, e.g. Osgood-Schlatter's disease, Perthe's disease and Nocturnal limb pain.

b. Autoimmune connective tissue diseases including:

i. Rheumatoid arthritis
ii. Sjögren's syndrome.
iii. Systemic lupus erythematosus.
iv. Systemic sclerosis.
v. Scleroderma mimics
vi. Inflammatory muscle disesess (dermatomyositis/polymyositis.
vii. Overlap syndromes.
viii. Mixed connective tissue disease.
ix. Anti-phospholipid syndrome.
x. Adult stills disease
xi. Polymyalgia rheumatica

And regarding each item the following are required;

- Pathogenesis of the diseases
- Systemic manifestations: including articular, skin, renal, respiratory, ocular, neurological, hematological, and CNS manifestations.
- Complications and comorbidities.
- Detailed modern principles and lines of management according to

international guidelines

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c. Vasculitides including:

1. Giant cell arteritis and polymyalgia rheumatica.
2. Wegener's granulomatosis.
3. Polyarteritis nodosa and microscopic polyangiitis.
4. Churg Strauss vasculitis.
5. Behçet's disease.
6. Takayasu's arteritis.
7. Cutaneous vasculitis.
8. Henoch Schoenlein purpura.
9. Cryoglobulinemia.

d. <u>Spondyloarthropathies including:</u>

i. Ankylosing spondylitis

ii. Psoriatic arthritis.

iii. Enteropathic arthropathies.

iv. Reactive arthritis

v. Whipple's disease.

e. <u>Pediatric Rheumatic diseases including;</u>

i. Approach to children with joint pain

ii. Juvenile idiopathic arthritis

iii. Juvenile systemic connective tissue diseases

f. <u>Musculoskeletal manifestations accompanying systemic disorders including:</u>

i. Endocrine disorders affecting bone, joint or muscle (e.g. diabetes, thyroid, parathyroid disorders Metabolic disorders affecting joints (haemochromatosis).

ii. Rheumatic manifestations of haemoglobinopathies.

iii. Rheumatic manifestations of hemophilia and other disorders of haemostasis.

iv. Amyloidosis

v. Sarcoidosis

vi. Familial Auto inflammatory syndromes.

g. **Rheumatological manifestaions and arthritis related to infection:**

i. Septic arthritis and Osteomyelitis.

ii. Viral arthritis.

iii. Rheumatic manifestations related to Hepatitis C &B.

iv. Rheumatic manifestations related to Covid 19 infection

h. Crystal associated arthropathies including:

i. Gout.

ii. Pseudogout.

i. Bone disorders including:

i. Osteoporosis.

ii. Rickets

iii. osteomalacia.

iv. Regional disorders: Paget's disease, hypertrophic pulmonary osteoarthropathy, osteonecrosis, Perthe's disease.

j. Management of Rheumatic diseases including;

i. Nonsteroidal anti-inflammatory drugs

ii. Glucocorticoids

iii. Systemic anti rheumatic drugs

iv. Immunosuppressive and immunoregulatory drugs

v. Biological agents

vi. Hyopourecemic drugs

vii. Bone strengthening agents

viii. Peri-operative management of patients with rheumatic diseases

ix. Management of covid19 in rheumatic patients.

x. Vaccinations with rheumatic disorders

.

(3): Physical Medicine, Rehabilitation including;

Proper evaluation of the patient and approach to physical medicine and rehabilitations and enable the resident to guide an efficient program for rehabilitation of the common disorders:

.

a. **Physical modalities used in rehabilitation and physical medicine including**
    i. Heat therapy(superficial and deep heat modalities)
    ii. Cold therapy modalities
    iii. Electrotherapy
b. **Therapeutic exercises including**
    i. Stretching and range of motion exercises
    ii. Strengthening exercises
    iii. Therapeutic massage
    iv. Manual therapy
    v. Traction therapy
c. **Rehabilitation of Stroke and Spasticity including**
    i. Introduction and neurological basics of cerebrovascular diseases
    ii. Stroke rehabilitation
    iii. Stroke rehabilitation issues and spasticity
d. **Bone and joint rehabilitation including**
    i. Care of post fractures complications (stiffness and limitations)
    ii. Post arthroplasty rehabilitation (knee and hip joints)
e. **Orthotics, prosthesis & assistive devices including**
    i. Orthosis (upper,lower limbs & Spinal orthosis)
    ii. Care after limb amputee
    iii. prosthesis (upper and lower limbs)
    iv. wheel chairs and assistive devices
f. **Rehabilitation of pediatric disorders including.**
    i. Cerebral palsy
    ii. Spina bifida
    iii. Scoliosis

iv. Erb's palsy

g. Rehabilitation of the cardiovascular and respiratory diseases including.

i. Cardiac rehabilitation

ii. Pulmonary rehabilitation

h. Rehabilitation of myopathy disorders including

i. Basics and approach of different types of myopathies

ii. Rehabilitation program for myopathic disorders

i. Rehabilitation of Neuropathic disorders

i. Basics and approach of different types of hereditary neuropathies
ii. Entrapment neuropathies
iii. Peripheral nerve injuries
iv. Rehabilitation program for neuropathic disorders

j. **Rehabilitation of burn**.

k. Rehabilitation of regional musculoskeletal disorders including.

Rehabilitation of different musculoskeletal disorder of the different joint pathologies:

i. Shoulder pathologies (Rotator cuff lesions, glenohumeral/capsular, stiffness, Muscle wasting, and proximal myopathy rehabilitation.

ii. Elbow pathologies: (Olecranon bursitis, medial or lateral epicondylitis and elbow joint &Radio-ulnar joint stiffness)

iii. Hand & wrist pathology :(Hand deformities and stiffness of joints and Muscle wasting

iv. Hip/pelvic pathology :(Hip joint pain, deformities and stiffness, trochanteric, iliopsoas, gluteal bursitis, leg length discrepancy, Muscle wasting and proximal myopathy)

v. Knee pathology :(deformities, osteoarthritis, muscle wasting, myopathy, ligamentous & menisci injuries and patello-femoral syndrome)

vi. Ankle & foot pathology: (Tibiotalar, subtalar/midtarsal joint stiffness, deformities of the ankle and foot.

vii. Spinal lesions including (degenerative spinal and disc diseases, scoliosis and post- surgical spinal diseases)

III-C) <u>Clinical CLASSES:</u>

1. Joint aspiration, lavage and/or injection.
2. Soft tissue and regional injection.
3. Examination of synovial fluid by Polarized microscopy.
4. Electromyography and nerve conduction studies.
5. Diagnostic musculoskeletal ultrasound.
6. Orthotics and prosthesis clinic.

5. Teaching and Learning methods	1. Lectures (online / offline) 2. Seminar 3. Journal club 4. Grand round Inpatient's staff round **5.** Attending or present scientific meetings, conferences, workshops and thesis discussion Clinical classes: • Outpatient clinic cases (Arthrocentesis and injection of joints and soft tissues skills) • Follow up clinic cases(Arthrocentesis and injection of joints and soft tissues skills) • Rehabilitation cases • Orthotics and prosthesis clinic • MSUS unit /cases(hands on) • Electrophysiology unit /cases(hands on) • •
6. Teaching and Learning Methods for students with limited Capacity	Not available
7. Student Assessment	
7.A. Student Assessment Methods	-Written exams to assess knowledge, intellectual skills. -Oral exams to assess Knowledge and intellectual skills. -clinical exams To assess clinical, professional, general and transferrable skills.

	-clinical image and video assessment (CIVA),

B. Assessment Schedule (Timing of Each Method of Assessment)	**2 sets at in April and October**
C. Weighting of Each Method of Assessment	**Written exams papers:** (Rheumatology / Rehabilitation (1/3 MCQ, 1/3 short essay, 1/3 problem solving) **280 degree** (140 degree / each paper) **Oral exams, 125 degrees**; (75 for rheumatology, 50 for rehabilitation) **Clinical exams 200 degrees (**long and short cases rheumatology & rehabilitation) **(Clinical image and video assessment CIVA), 95 degrees**; (35 radiology exam, 35 orthotics and prosthetics & 25 Electro
8 . List of References	
a. **Course Notes/handouts**	provided by staff members
b. Essential Books	1) Kelley's Textbook of Rheumatology: Firestein GS, Budd RC,Harris ED, McInnes IB, Ruddy S and Sergent JS (eds.), 11th edition, 2021 2) Primer on the Rheumatic Diseases: Klippel JH, Stone JH, Crofford LJ and White PH (eds.) 13th edition, 2008

		3) Braddom's physical medicine and rehabilitation: In Cifu, D. X., Eapen, B. C. (ed.), 6rd edition, 2021

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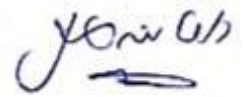
C.	**Recommended Text Books**	Oxford Textbook of Rheumatology: Isenberg DA, 1) Maddison PJ, Woo P, Glass D and Breedveld FC. (eds.), 4d edition, 2013 2) DeLisa's Physical Medicine and Rehabilitation: Principles and Practice: Frontera, WR, DeLisa, JA, Basford, J., & Boninger, M. (eds.), 6th edition, 2019
D.	**Periodicals, websites**	Selected articles from international journals will be 1) provided to Students 2) Area of Rheumatology and clinical immunology: European Board of Rheumatology and the American 3) College of Rheumatology High Impact Rheumatology Curriculum (***http://www.rheumatology.org/educ/hir/ppt.asp***) 4) Area of Rehabilitation medicine

Course Coordinator/s:

Dr. Alshiamaa Mamdouh
Dr. Israa Fathey
Dr. Haidy Mohammed
Dr. Reem Mohammed
Dr. Aya Hassan AbdelAzeem
Dr. Doaa Mahmoud

Head of Department:
Prof. Faten Ismail Muhammad



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

Matrix of Coverage of Course ILOs by MCS Contents

List of contents	*Intended Learning Outcomes (ILOs)*			
	A. Knowledge & Understanding	**B. Intellectual Skills**	**C. Professional & Practical skills**	**D. General & Transferable Skills**
	A	**B**	**C**	**D**
Evaluation and diagnosis of patients with rheumatic symptoms.	A1,A3,A6,	B1, B2, B3, B4, B5, B6	C1	D1, D2, D3, D4 ,D5
Immune& inflammatory responses of rheumatic diseases.	A2, A5 &A7	B1	C1	D2
Rheumatoid arthritis	A1, A8, A9	B1, B2, B3, B4, B5, B6	C1	D1, D2, D3, D4 ,D5
Sjogren's Syndrome	A7, A8, A9	B1, B2, B3, B4, B5, B6	C1	D1, D2, D3, D4 ,D5
Systemic lupus erythematosus	A7, A8, A9	B1, B2, B3, B4, B5, B6	C1	D1, D2, D3, D4 ,D5
Systemic sclerosis	A7, A8, A9	B1, B2, B3, B4, B5, B6	C1	D1, D2, D3, D4 ,D5
Scleroderma mimics	A7, A8, A9	B1, B2, B3, B4, B5, B6	C1	D1, D2, D3, D4 ,D5
Inflammatory muscle diseases	A7, A8, A9	B1, B2, B3, B4, B5, B6	C1	D1, D2, D3, D4 ,D5

overlap disorders	A7,A8, A9	B1, B2, B4&B6	C1	D1,D2
Mixed connective tissue and undifferentiated connective tissue diseases	A7, A8, A9	B1, B2, B3, B4, B5, B6	C1	D1, D2, D3, D4 ,D5
Antiphospholipid syndrome	A7, A8, A9	B1, B2, B4&B6	C1	D1, D2, D3, D4 ,D5
Adult onset Still's disease	A7, A8, A9	B1, B2, B4&B6	C1	D1, D2, D3, D4 ,D5
Polymyalgia Rheumatica	A7, A8, A9	B1, B2, B4&B6	C1	D1, D2, D3, D4 ,D5
Vasculitides & related disorders	A7, A8, A9	B1, B2, B3, B4, B5, B6	C1	D1, D2, D3, D4 ,D5
Seronegative Spondyloarthropathies	A7, A8, A9	B1, B2, B3, B4, B5, B6	C1	D1, D2, D3, D4 ,D5
Pediatric Rheumatic diseases	A4, , A8, A9	B1, B2, B3, B4, B5, B6	C1	D1, D2, D3, D4 ,D5
Rheumatic disorders associated with systemic diseases	A7, A8, A9	B1, B2, B4&B6	C1	D1, D2, D3, D4 ,D5
Arthritis related to infectious agents	A7, A8, A9	B1, B2, B4&B6	C1	D1, D2, D3, D4 ,D5
Management of rheumatic diseases.	A7, A8, A9	B4, B6	C1	D1, D2, D3, D4 ,D5
Musculoskeletal Medicine and Regional diseases	A1, A10—A18	B7,B8, B9& B10	C1	D1, D2, D3, D4 ,D5
Physical modalities used in rehabilitation and physical medicine	A19	B11, B12, B13 &B14	C1	D1
Therapeutic exercises	A20	B11, B12, B13 &B14	C1	D1

Rehabilitation of stroke and Spasticity	A22	B11, B12, B13 &B14	C1	D1, D2, D3, D4 ,D5
Orthotics, prosthesis & Wheel chairs and assistive devices	A21, A23	B11, B12, B13 &B14	C1	D1, D3
Rehabilitation of pediatric disorders.	A22	B11, B12, B13 &B14	C1	D2
Rehabilitation after joint arthroplasty	A10, A13, A14	B11, B12, B13 &B14	C1	D1,D2,D3
Rehabilitation of the cardiovascular and respiratory diseases.	A22	B11, B12, B13 &B14	C1	D1,D2,D3,D4
Rehabilitation of Myopathic disorders	A12, A18	B11, B12, B13 &B14	C1	D1,D2,D3,D4
Rehabilitation of Neuropathic disorders	A22	B11, B12, B13 &B14	C1	D1,D2,D3,D4
Rehabilitation of regional musculoskeletal disorders.	A1, A10 to A18	B11, B12, B13 &B14	C1	D1,D2,D3,D4
Rehabilitation of burn.	A17. A18	B11, B12, B13 &B14	C1	D1,D2,D3,D4

Matrix of Coverage of Master 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**
Lectures	**A1 to A23**	B1,B2,B3.B4, B5,B6,B7,B8, B9,B10,B12,B 13,B14		
Clinical (grand rounds)			**C1,c2,c3, c4,c5, c6,c7,c8,c9,c10**	**D1,D2,D3,D4, D5**
Master Thesis			**C1**	**D1,D2,D4.D5**
Presentations /seminar (performing and attendance	**A1, A2 ,A3**	**B1, B2, B3, B4, B5, B6, B12, B13, B14**		**D4,D5**
Training courses & Workshops			C1,c2,c3, c4,c5, c6,c7,c8,c9,c10	D1,D2, D4,D5

Matrix of Coverage of Master 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 exams	**All A**	**All B**		
CIVA	**A5, A15, A20, A21, A22**	**B2, B3, B8, B10, B14**	**C1**	
Clinical exam long and short cases history and examination			**All C**	**D1, D2, D3, D4,D5**
Oral Exam	**A1 to A23**	**All B**		**All D**

جامعة/أكاديمية : .....المنيا.....
كلية / معهد: .....الطب البشري .....
قسم: .....الفسيولوجيا الطبية.....

Medical Physiology Course Specifications

For 1st Part Master (MSc) Degree in Rheumatology

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 Rheumatology.
Major or minor element of program(s): Medical Physiology.
Academic year/level: 1st part MSc degree in Rheumatology.
Date of specification approval: **2022-2023**

Basic Information

Title: Physiology course specifications for 1st part MSC degree of Rheumatology
Code: RR200 **Credit Hours:** Not applicable
Lectures: 2 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 Rheumatology 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 Hematological System (Blood):

1.1. Identify general composition & functions of blood components.
1.2. Clinical conditions resulting from abnormalities of blood components.

A2. Physiology of Autonomic Nervous System (ANS):

2.1. Distribution & functions of sympathetic and parasympathetic**.**
2.2. Chemical transmission in ANS.

A3. Physiology of Central Nervous System (CNS):

3.1. Identify types, mechanism, body reactions and control mechanisms of Pain.

A4. Physiological basis of Metabolism:

4.1. Describe regulatory mechanisms of body temperature & disorders.

A5. Physiological basis of Endocrinal System:

5.1. describe in brief mechanisms of Ca^{+2} & Glucose homeostasis.

A6. Physiology of Upper Respiratory System:

6.1. Acid-base balance.

6.2. Enumerate different types of hypoxia, cyanosis and their effects on the body.

A7. Special Topics:

7.1. The molecular functions of the contractile proteins .

7.2. Types of skeletal muscle fibers (slow muscle versus fast) .

7.3. Molecular basis of muscle contraction & identify sliding theory .

7.4. Neuromuscular junction; transmission & clinical disorders .

7.5. Mechanism of excitation contraction coupling & muscle relaxation.

7.6. Difference between isometric and isotonic contraction .

7.7. The length-duration relationship .

7.8. The relation between load & velocity of contraction .

7.9. Muscle fatigue, metabolic changes & mechanical efficiency .

7.10. The motor unit .

7.11. Effect of denervation on skeletal muscle performance (LMNL).

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 related to Rheumatology to 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 related to Rheumatology.

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 Haematological System (Blood): • General composition & functions of blood components. • Clinical conditions resulting from abnormalities of blood components.	1	2
2. Autonomic Nervous System: • Distribution & functions of sympathetic and parasympathetic. • Chemical transmission in ANS.	1	2
3. Central Nervous System: • Pain sensation.	1	2
4. Respiratory System: • Acid-base balance. • Mechanism of respiration, hypoxia and cyanosis.	1	2
5. Metabolism: • Regulation of body temperature & fever.	1	2
6. Endocrine System: • Calcium homeostasis. • Glucose Homeostasis.	1	2
7. Special Topics: • The molecular functions of the contractile proteins. • Types of skeletal muscle fibres (slow muscle versus fast). • Molecular basis of muscle contraction & identify sliding theory. • Neuromuscular junction; transmission & clinical disorders. • Mechanism of excitation contraction coupling & muscle relaxation. • Difference between isometric and isotonic contraction. • The length-duration relationship. • The relation between load & velocity of contraction. • Muscle fatigue, metabolic changes & mechanical efficiency. • The motor unit. • Effect of denervation on skeletal muscle performance (LMNL).	6	12

Total	**12**	**24**

TEACHING AND LEARNING METHODS:

1. Lectures (2hr/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** **40** marks (40%)
- **Final oral exam** **60** marks (60%)
- **Total** **100** 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, **Head of Department,**

Dr. Eman Elbassuoni **Prof. Dr. Merhan Mamdouh Ragy**
Professor of Medical Physiology Prof. & Head of Medical Physiology Department
Faculty of Medicine, Minia University Faculty of Medicine, Minia University

Date of last update & approval

by Department council: 2/2023

جامعة/أكاديمية : .....المنيا.....
كلية / معهد: .....الطب البشري.....
قسم: .....الفسيولوجيا الطبية.....

Physiology course specifications for 1st Part MSc degree in Rheumatology	مسمى المقرر
RR200	كود المقرر

A. 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	
	A	B	C	
Lectures	X	X	-	
Self-learning activities	X	X	-	

ntents	Intended Learning Outcomes ILOs		
	A. Knowledge & Understanding	B. Intellectual skills	Ge Transf

	A 1.1	A 1.2	A 2.1	A 2.2	A 3.1	A 4.1	A 5.1	A 6.1	A 6.2	A 7.1	A 7.2	A 7.3	A 7.4	A 7.5	A 7.6	A 7.7	A 7.8	A 7.9	A 7.10	A 7.11	B 1	B 2	D 1	D 2
gy of ical System	X	X																			X	X	X	X
gy of tem (ANS)			X	X																	X	X	X	X
gy of vous System					X																X	X	X	X
gical basis of sm						X															X	X	X	X
gical basis of al System							X														X	X	X	X
gy of ratory System								X	X												X	X	X	X
opics										X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

B. Matrix of Coverage of Course ILOs by Contents

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,
Dr. Eman Elbassuoni
Professor of Medical Physiology

Head of Department,
Prof. Dr. Merhan Mamdoh Ragy
Prof. & Head of Medical Physiology Department

Faculty of Medicine, Minia University

Date of last update & approval by Department council: 2/2023

Blueprint of Physiology course for Master degree (1st part)
Rheumatology Medicine (PR200)

Topic	ILOs	Contact Hours	Knowledge %	Intellectual %	
Physiology of Hematological System (Blood): general composition & functions of blood components. Clinical conditions resulting from abnormalities of blood components. **Physiology of Cardiovascular System (CVS):** the factors affecting and regulation of	1 & 2	12	70	30	1

arterial blood pressure (ABP).					
Physiology of Central Nervous System (CNS): types, mechanism, body reactions and control mechanisms of Pain.	3	6	70	30	8
Physiological basis of Metabolism: regulatory mechanisms of body temperature & disorders. **Physiological basis of Endocrinal System:** mechanisms of Ca^{+2} & Glucose homeostasis.	4 & 5	12	70	30	1
Physiology of Upper Respiratory System: Acid-base balance. different types of hypoxia, cyanosis and their effects on the body.	6	6	70	30	8
Physiology of ANS System: Distribution & functions of sympathetic and parasympathetic**.** Chemical transmission in ANS.	7	6	70	30	8
Physiology of Nerve & Muscle	8	30	70	30	4
Total	**-**	**72**			

Mohan M. Ragy

Medical ethics

Course Specification of Medical Ethics
Master degree of rheumatology, rehabilitation and physical medicine
(2022-2023)

University: Minia

Faculty: Medicine

Program on which the course is given: Master degree of rheumatology, rehabilitation and physical medicine
Major or minor element of program: Medical ethics, ethics of medical research
Department offering the program: rheumatology, rehabilitation and physical medicine Department
Department offering the course: Forensic Medicine & Clinical Toxicology Department
Academic year / Level: First part
Date of specification approval: Last date of approval: **7/11/2021**

A. Basic Information		
1. Academic Year/level: Post graduate; 1st Part MSC, rheumatology, rehabilitation and physical medicine	**2. Course Title**:	**3. Code**:

4. Number of teaching hours:

- **Lectures:** Total of 30 hours; ٢ 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.

TOPIC	Lecture Hours	Practical Hours	Total hours

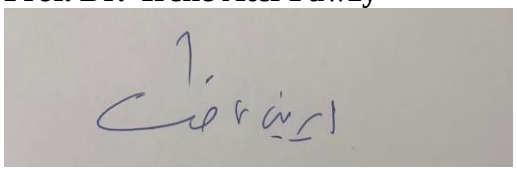
	D.5- Identify how to participate in the national and social affairs and responsibilities.

3- Course Contents

Medical Responsibility and Duties of the physician	2	1	3
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			
• **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.		
Professional secrecy	2	1	3
Physician disciplinary proceedings	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

	*Practical exam: to assess practical and professional skills.
• **Assessment Schedule**	• Final Written exam week: 24-28 • Oral exam week: 24-28 • Practical exam week: 24-28
• **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



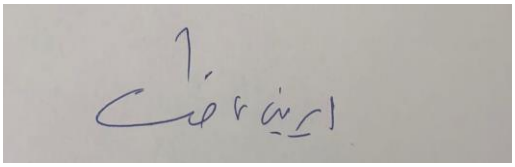
Course Specification of Medical Ethics Master degree of rheumatology, rehabilitation and physical medicine **(First part))**	**مسمى المقرر**
	كود المقرر

جامعة/أكاديمية : .....المنيا.....
كلية / معهد: .....الطب البشرى.....
قسم: .....الطب الشرعى والسموم الأكلينكية.....

A. The Matrix of Coverage of Course IL by Contents

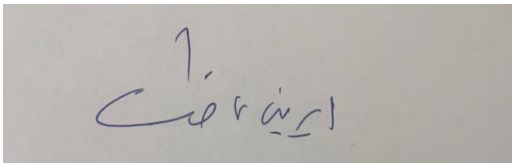
Contents	**Intended Learning Outcomes (ILOs)**			
	A. Knowledge & Understanding	**B. Intellectual Skills**	**C. Professional & Practical skills**	**D. General & Transferable Skills**
	A	**B**	**C**	**D**
Medical Responsibility and Duties of the physician	**A1,3**	**B4**	**C1**	**D1,2**
Medicolegal aspect 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	**A1,6**	**B3,5**	**C3**	**D1,4**

certificates				



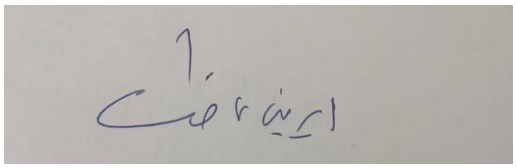
Matrix of Coverage of Course ILOs by Methods of Teaching & Learning

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	-	-



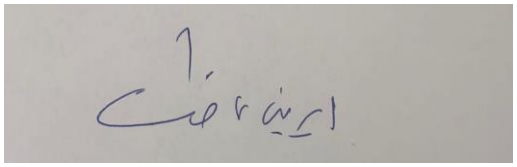
Blueprint of Forensic Medicine and Clinical Toxicology Department

Blueprint of 1st master of all clinical specialties

	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 & Medical malpractice**	4	70	30	**13.32**	1	1	**5.32**	1	**10**	**5.32**	**5**
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**

Postgraduates" Medical Ethics Examination Paper (40 marks)



Internal medicine

نموذج ١١
University: Minia
Faculty: Medicine
Department: Internal Medicine

1) Course information	
Program in which the Course is Given	Master Degree Rheumatology and rehabilitation Medicine
Academic Year / level	1st part master
Course title	Internal medicine
Course code	
Number of teaching Hours ➢ **Lectures** ➢ **Practical/clinical**	 Total of 2 hours/week Total of 2 hours/week

2) Overall Aims of the course:
By the end of the course the student must be able to: 1. Gain further training and practice in the field of rheumatology. 2. Practice internal medicine topics relevant to rheumatology practice. 3. Be able to reach proper diagnosis and management of patients in the field of internal medicine related to rheumatology including diagnostic, problem solving and decision making. 4. Know ethical principles related to the practice in this specialty. 5. Participate in community needs assessment and problem solving.

3) Intended Learning Outcomes (ILOs) *Upon completion of the course, the student should be able to:*	
A. Knowledge and understanding	A1 -Identify clinical and molecular genetics, etiology, pathogenesis, and basic mechanisms of rheumatic diseases and related disorders A2- Recognize pathological cascades of patients with musculoskeletal complaint, and describe the basic pathology of systemic and regional musculoskeletal disorders and relevant common internal medicine diseases and identify their mutual influence. A3- Identify the spectrum of clinical symptoms and signs of musculoskeletal disorders and common medical conditions with multisystem affection.
B. Intellectual skills	B1- Integrate patient's symptomatology, historic data, abnormal physical signs and investigations into a comprehensive differential diagnosis of various musculoskeletal disorders. B2- Solve patients problems according to the available data collected from patient's evaluation and suggest investigations related to the patient's condition. B 21- Resolve specialized problems with non-availability of some data. B3- Apply ethical issues and resolve ethical dilemmas in relation to clinical practice B4- Incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care as appropriate

	B5-Advocate for quality patient care and optimal patient care systems
C.Professional and Practical Skills	C1-Take a good medical history, conduct a proper general examination, demonstrate normal and abnormal physical signs and develop the clinical skills of eliciting abnormal physical signs in the examination of various systems. C2- Write and evaluate medical reports, clinical sheets including all collected data relevant to the patient's condition and physiotherapy treatment regimen sheets. C3- Apply sound ethical principles in practice (e.g., informed consent, confidentiality, veracity, provision or withholding of care). C4- Demonstrate : (1) compassion, integrity, and respect for others; (2) responsiveness to patient needs that supersedes self-interest; (3) respect for patient privacy and autonomy; (4) accountability to patients, society and the profession; and, (5)sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.
D. General Skills	D1- Retrieve, manage, and manipulate information by all means. D2- Communicate ideas and arguments effectively. D3- Demonstrate caring/respectful behaviors with patients and staff. D4- Work effectively within a team and leadership teams in health care team or other various professional contexts. D5-Communicate effectively in its different forms with other specialties and generate the ethos of a multidisciplinary approach in the clinical setting. D6- Demonstrate compassion, integrity, and respect for all patient's rights and treat all patients equally regardless to their believes, culture and behavior. D7- Recognize one's own limitation of knowledge and skills and refer patients to appropriate specialized health facility at appropriate stage. D8- Maintain comprehensive, timely, and legible medical records, if applicable.

4) Course contents			
Topics	**Lecture hours/week**	**Practical/Clinical hours/week**	**Total No. of hours hours/week**

Chest Medicine: 1. Interstitial lung disorders **2.** Pleural effusion	**1** **1**	**1** **1**	**4**
Endocrine: 1. D.M	2	1	3
Infection: 1. PUO, 2. Infection in immunocompromised patient	1 1	1 1	4
Gastro-enterology: 1. Autoimmune hepatitis 2. Chronic diarrhea 3. Acute Hepatitis 4. Chronic Hepatitis 5. Jaundice 6. Inflammatory bowel disease	1 1 1 1 1	1	6
Nephrology: 1. AKI, 2. CKD, 3. Bone mineral disorders 4. kidney in systemic diseases	1 1 2 1	1	6
Cardiovascular Medicine 1. Heart failure 2. Infective endocarditis 3. Pulmonary embolism 4. Pulmonary hypertension	1 1 1 1	1	5
Hematology: 1. Anemia, 2. Bleeding diathesis 3. Microangiopathies	1 1 2	1	5
Total	24	9	33

5) Teaching and learning methods:

Lectures/Seminar:

1. Conventional (didactic) method
2. Problem solving (interactive discussion).
3. Seminar.

Clinical/Practical:

1. Attending clinical ward rounds, taking history, and examine patients.
2. Demonstration of medical diagnostic procedures and investigations (x-rays, ultrasonography…..etc.).
3. Interactive discussion during case presentations.
4. Encourage postgraduates to revise educational CDs, as well as websites on the internet.

6) Teaching and Learning Methods for Students with limited capacity

Not available

7) Student assessment	
A. Student Assessment Methods	**I) Written examination** comprising one paper in internal medicine to assess the level of achievement in acquiring knowledge and skills. It includes long and short essay questions, problem solving. **II) Clinical Examination** (one long and two short cases) to assess the intellectual, professional and general skills. **III) Oral Examination** to assess the level of achievement in acquiring knowledge & understanding, and to assess intellectual and general skills.
B. Assessment Schedule (Timing of each method of assessment)	Twice per year (April and November).
C. Weighing of Each Method of Assessment:	I. **Written examination:** 50% (200 marks). II. **Clinical Examination:** 25% (100 marks). III. **Oral Examination:** 25% (100 marks).

8) List of References:	
A. Course Notes/handouts	Lecture notes given by the course instructor
B. Essential Books	Kumar and Clarke Textbook of Medicine Davidson's Principles and Practice of Medicine.
C. Recommended Text Books	Cecil textbook of medicine Harrison's Principles of Internal Medicine. Current medical diagnosis and treatment
D. Periodicals, Web Sites	American Journal of Medicine Annals of Internal Medicine http://emedicine.medscape.com/ http://www.medscape.com/

A. **Matrix of Coverage of Course ILOs by Contents**

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

of course topics)	Week No	Intended Learning Outcomes (ILOs)			
		A. Knowledge and understanding	B. Intellectual skills	C. Professional and Practical Skills	D. Gen
		A	B	C	
		1,3,5	1	1,2	1,2
		2,4	2	2	2
		3,4	1,2	2,3	3
ogy		4,5	1,2	1,4	1
r Medicine		1,2,5	1	1,2	2
e		1,3,5	1	1,2	1,2
		2,4	2	2	2

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

	Understanding			
	A	B	C	D
Lecture	1,2,3,4	1,2	1	1,3,5
Practical	2,3	2	2	2,4
Clinical (Including grand rounds)	3,4	2,3	1,2	3,4
Presentation/seminar	1,4	1,4	1,2	4,5
Journal club	2,4	1,2	1	1,2,5
Thesis discussion	4	4	1	1,3,5
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Methods of Assessment	Intended Learning Outcomes (ILOs)

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

	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	1	1,3,5
Practical exam	2,3	2	2	2,4
Clinical exam	3,4	2,3	1,2	3,4
Oral Exam	12,3,4	1,2,4	1,2	4,5
Assignment	2,4	1,2	1	1,2,5
Other/s(Specify)	1,3	1,2	1	1,3,5

Course Coordinator
Name: prof. Dr Ahmed Ali Abo elfaadl
Prof Dr Amal Kamal
Dr Shaimaa Fathi
Signature:

Head of Department
Name: Prof. Dr. Yousef Ismael Mousa
Signature:

Date of last update & approval by department council:
2022

Blue Print of Internal Medicine for candidates of master degree in Rheumatology and Rehabilitation (first part) examination paper (40 marks)

	Topic	Hours	Knowledge %	Intellectual%	% of topic	Knowledge mark	Intellectual Mark	Marks	Actual Mark
1	Chest	4	70	30	10				4

	Medicine								
2	**Endocrine**	2	75	25	5				**2**
3	**Infection**	4	75	25	10				**4**
4	**Gastro-enterology**	8	75	25	20				**8**
5	**Nephrology**	8	75	25	20				**8**
6	**Cardiovascular Medicine**	8	75	25	20				**8**
7	**Hematology**	6	75	25	15				**6**
	Total	40			100%				**40**

منسق البلوك
رئيس قسم الباطنة العامة
ا.د/ أحمد ابو الفضل
ا.د/ يوسف اسماعيل
ا.د/ أمل كمال
د/ شيماء فتحي

نموذج رقم (١٦)

تقرير مقرر دراسي

Course report of Internal Medicine/MSc in Rheumatology and Rehabilitation [May 2022]

University: Minia

Faculty: Medicine

Department: Internal Medicine

A-Basic Information

1-Course Title and Code: Internal Medicine/MSc in Rheumatology and Rehabilitation

2-Specialty: Rheumatology and Rehabilitation

3-Level/year: 1st part

4-Number of courses: 1

5-Adopted system for selection & formation of examiners' committee:

Available [√] Not available [ ]

6-System of external evaluation of the exam:

Available [√] Not available [ ]

7-Number & Names of teaching staff members: 49

1. Prof. Dr. Yossef Ismail Moussa (head of the department).
2. Prof. Dr. Mahmoud Mahmoud Aboel-Enin Khattab
3. Prof. Dr. Amr Mahmoud Ahmed Abdel-Wahab.
4. Prof. Dr. Mona Abdel-Rahman Hassanen Abu El-Makarem.
5. Prof. Dr. Ahmed Mohamed Saad El-din Salama
6. Prof. Dr. Fatima El-Zahraa Sayed
7. Prof. Dr. Noussa Mahmoud El-Adawy.
8. Prof. Dr. Mohamed Emad Abdel-Fattah.
9. Prof. Dr. Mahmoud Saad Abdel-Aleem.
10. Prof. Dr. Mahmoud Hassan Khedr.
11. Prof. Dr. Yehia Zakaria Mahmoud.
12. Prof. Dr. Osama Mohammed Kamal Elminshawy.
13. Prof. Dr. Ahmed Ali Mohamed Abdel-Aleem.
14. Prof. Dr. Hesham Abdel-Halim Ali.
15. Prof. Dr. Sahar Hossam El-Din Labib Elhiny
16. Prof. Dr. Mohammed Elsayed Abdel-Aal Shatat.
17. Prof. Dr. Amal Kamal Helmy

18. Prof. Dr. Ghada Mohamed Elsaghir.
19. Prof. Dr, Mohamed Ahmed Shaarawy.
20. Prof. Dr. Atef Farouk Elakkad.
21. Ass. Prof. Ashraf Ali Samy.
22. Ass. Prof. Asmaa Kasem Ahmed.
23. Ass. Prof. Ragaa Abdel-Shaheed Matta
24. Ass. Prof. Alyaa Sayed Abdel-Fattah.
25. Ass. Prof. Elham Ahmed Mohamed.
26. Ass. Prof. Mohamed Omar Abdel-Aziz.
27. Ass. Prof. Hesham Mustafa Tawfik.
28. Ass. Prof. Hesham Kamal Habib.
29. Ass. Prof. Mahmoud Ragab Mohammed.
30. Dr. Maha Tarafawy Mohammed.
31. Dr. Eman Heussein Khalil.
32. Dr. Shereen Mohammed Mohammed Elsaghir.
33. Dr. Hatem Ahmed Hassan.
34. Dr. Fatma Mokhtar Shaaban.
35. Dr. Basma Fathy Hassan.
36. Dr. Sharehan Abdel-Rahman Ebrahim
37. Dr. Shaimaa fathy kamel.

38. Dr. Fatma Moahmed Mohamed Kamel
39. Dr. Marwa Ebrahim Mohamed Ahmed
40. Dr. Rasha Fathy Rady.
41. Dr. Amira Taha Zaki.
42. Dr. Ahmed Mohamed Mady.
43. Dr. Nadia Ismail Abd Elhamid Mohamed.
44. Dr. Shaimaa Hassan Hamdy.
45. Dr. Mohamed Mamdouh Seddik.
46. Dr. Osama Nady Mohamed.

B- Professional Information

1-Statistical Information:

- No. of students attended/joined the course	No.	2	%	
- No. of students completed the course & attended the exam	No.	2	%	

- Results:

Passed :	No:	١٠٠	%	**100**	Failed :	No: **0**	%

Excellent	No:	2	%	**100**	Very good:	No:		%	
Good	No:		%		Pass:	No:		%	

- Success percentages & distribution according to the grades of passed students:
- Success percentages : 100%
- Distribution :

2- Course Teaching:

- **Course topics taught.**

Topic	No. Of hours [Lectures]	Practical or clinical No. of hours	Staff member name
1. Nephrology	4	4	- Prof. Dr. Mahmoud Saad Abdel-Aleem. - Prof. Dr. Osama Mohammed Kamal Elminshawy. - Prof. Dr. Amal Kamal Helmy - Prof. Dr, Mohamed Ahmed Shaarawy. - Prof. Dr. Atef Farouk Elakkad. - Ass. Prof. Hesham Mustafa Tawfik. - Ass. Prof. Hesham Kamal Habib. - Ass. Prof. Mahmoud Ragab Mohammed. - Dr. Basma Fathy Hassan. - Dr. Fatima Moahmed Mohamed Kamel - Dr. Osama Nady Mohamed.
2. Hematology	2	2	- Prof. Dr. Mona Abdel-Rahman Hassanen Abu El-Makarem. - Prof. Dr. Mohamed Emad Abdel-Fattah. - Prof. Alyaa Sayed Abdel-Fattah. - Dr. Shaimaa fathy kamel. - Dr. Amira Taha Zaki.
3. Cardiovascular system	4	4	- Prof. Dr. Mona Abdel-Rahman Hassanen Abu El-Makarem. - Prof. Dr. Noussa Mahmoud El-Adawy. - Prof. Dr. Ahmed Ali Mohamed Abdel-Aleem. - Ass. Prof. Ashraf Ali Samy. - Dr. Sharehan Abdel-

			Rahman Ebrahim
4. Endocrinology	8	8	- Prof. Dr. Amr Mahmoud Ahmed Abdel-Wahab. - Prof. Dr. Ahmed Mohamed Saad El-din Salama - Prof. Dr. Yehia Zakaria Mahmoud. - Prof. Dr. Sahar Hossam El-Din Labib Elhiny - Prof. Dr. Ghada Mohamed Elsaghir. - Ass. Prof. Asmaa Kasem Ahmed. - Dr. Maha Tarafawy Mohammed. - Dr. Marwa Ebrahim Mohamed Ahmed - Dr. Rasha Fathy Rady.
5. Gastointestinal and hepatobiliary diseases.	8	8	- Prof. Dr. Mahmoud Mahmoud Aboel-Enin Khattab - Prof. Dr. Youssef Ismail Moussa - Prof. Dr. Ahmed Ali Mohamed Abdel-Aleem. - Prof. Dr. Hesham Abdel-Halim Ali. - Prof. Dr. Mohammed Elsayed Abdel-Aal Shatat. - Dr. Hatem Ahmed Hassan. - Dr. Ahmed Mohamed Mady. - Dr. Mohamed Mamdouh Seddik.
6. Chest Diseases	8	8	- Prof. Dr. Fatima El-Zahraa Sayed - Prof. Dr. Mahmoud Hassan Khedr. - Ass. Prof. Elham Ahmed Mohamed. - Dr. Sharehan Abdel-Rahman Ebrahim - Dr. Nadia Ismail Abd Elhamid Mohamed. - Dr. Shaimaa Hassan Hamdy.

7. Infection	6	6	- Dr. Sharehan Abdel-Rahman Ebrahim - Dr. Nadia Ismail Abd Elhamid Mohamed. - Dr. Shaimaa Hassan Hamdy

- Total percentage of the essential course topics that actually covered: 100 %

- Obligation/commitment of the teaching staff to the specified course content:

>85%	√	**60-84 %**		**<60%**	

- The extent to which the exam covered the course topics:

>85%	√	**60-84 %**		**<60%**	

- Teaching and Learning Methods:

Lectures	√
Practical/laboratory training	
Clinical training	√
Grand rounds	√
Case presentation & case study	√
Semester work/class activities	√
Training courses and workshops	
Seminars	√
Self-learning	√
Others (specify)	

3- Student Assessment:

Method of Assessment	**Marks**	**%**
Written examination	40	
Oral examination	30	

Practical/ Laboratory examination		
Clinical examination	30	
Assignments/ activities/log book		
Total	100	100%

4- Facilities available for Teaching:

- **Scientific references:**

Available	√	**Available to some extent**		**Unavailable**	

- **Assistant aids/tools:**

Available	√	**Available to some extent**		**Unavailable**	

- **Other materials, supplies and requirements:**

Available		**Available to some extent**	√	**Unavailable**	

5- Administrative & regulatory Constraints:

No	√	**Yes**	

6 – Results of student feedback as a result of course evaluation:

- المقرر له اهداف واضحه (١٠٠%)
- المقرر يحفزنى على التغيير(١٠٠%)
- مفيد فى التطبيق العملى (٩٠%)فيد فى التطبيق العملى (٩٠%)
- يوفر امثله علميه(١٠٠%)
- اكسبنى مهارات تفيد فى تكوين شخصيتى(١٠٠%)

- .

7- External evaluator/s comments:

- Good results with increase clinical training.

8- Completed actions related to course development in the last year:

- More clinical Training.

8-Non-completed actions related to course development in the last year:

- student hand out.

9-Action plan for the next academic year:

-Fields/areas of course development

Actions Required	Completion Date	Responsible Person
More clinical training.		All staff members
Exam should include more MCQs		All staff members

Coordinators:

1. Prof. Dr. Ahmed Ali Mohamed Abdel-Aleem

Head of department: Prof. Dr. Youssef Ismail Moussa.

Date: 7-2022

Course Specifications of Human Anatomy and Embryology as a part of the postgraduate (MSC) program in Rheumatology

University: Minia

Faculty: Medicine

Department: Human Anatomy and Embryology

<table>
<tr><td colspan="3">1. Course Information</td></tr>
<tr><td>• Academic Year/level: first part (2022- 2023)</td><td>• Course Title: Course Specifications of Human Anatomy and Embryology in Master degree in RHEUMATOLOGY</td><td>• Code: RR200</td></tr>
<tr><td colspan="3">• Number of teaching hours:
- Lectures: Total of 22 hours
- Practical/clinical: Total of 10 hours</td></tr>
<tr><td>2. Overall Aims of the course</td><td colspan="2">By the end of the course the student must be able to:
Have the professional knowledge of human anatomy and embryology of musculoskeletal system.</td></tr>
<tr><td colspan="3">3. Intended learning outcomes of course (ILOs):
Upon completion of the course, the student should be able to:</td></tr>
<tr><td>A- Knowledge and Understanding</td><td colspan="2">A1. Define the normal structure and function of the musculoskeletal system on the macro levels.
A2. Describe basic anatomy, including the anatomy of lumbosacral and brachial plexuses, different dermatomes, and the brain and spinal cord.
A3. State the basic principles of structure of the different joints of the human body, their biomechanics, and how each adapts to its function with the muscles acting upon each joint.
A4. Identify early embryo development & normal growth and development of the musculoskeletal system.
A5. List the recent advances in the abnormal structure,</td></tr>
</table>

	function, growth and development of musculoskeletal system.
B- Intellectual Skills	B1. Link between knowledge for Professional problems solving. B2. Integrate the anatomy of the muscles, nerves and vertebral column of the human body with clinical examination of musculoskeletal system and utilize major clinical applications of anatomical facts. B3. Apply the surface landmarks of the underlying joints , bones , muscles and tendons in clinical examination of these parts, diagnosis of specific disorders of these structures and therapeutic injection. B4. Conduct research study and / or write a scientific study on a research problem. B5. Diagnosis of diseases based on anatomical disruptions.
C- Professional and Practical Skills	C1. Acquire professional and modern medical skills in the area of internal medicine. C2. Apply the anatomical facts during musculoskeletal examination in order to reach a proper diagnosis C3. Describe different diseases and anomalies based on anatomical data. C4. Demonstrate appropriate positioning in relation to the patient in the exam room to facilitate good rapport with patients.
D- General and transferable Skills	D1. Use information technology to serve the development of professional practice D2. Assess himself and identify personal learning needs. D3. Retrieve, manage, and manipulate information by all means. D4. Use different resources to gain knowledge and information related to applying anatomy in rheumatology and rehabilitation fields.

4. Course Contents

Topic	Lecture hours/week	Practical/ Clinical hours/week	Total No. of hours hours/week
Anatomy of axial skeleton, vertebrae, skull, ribs and joints.	4	2	6
Anatomy of peripheral skeleton, bones of limbs, and joints.	4	2	6
Nerve plexuses anatomy and development.	2	1	3
Peripheral nerves anatomy.	3	–	3
Mechanism of walking and gait	3	2	5
Abnormal gaits	2	1	3

Clinical correlates to anatomy of joints.	2	–	2
Revision	2	2	4
Total	22	10	32

5. Teaching and Learning Methods	• Lectures • Practical **{**skill lab, cadavers, plastinated and plastic models: instructor guided} • Presentation/seminar • Group discussion
6. Teaching and Learning Methods for students with limited Capacity	
7. Student Assessment	
A. 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**.
B. 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
C. Weighting of Each Method of Assessment	Final-term Final written exam (paper based exam) Examination: 40 Oral Examination: 50 Practical Examination; skill lab exams: 10

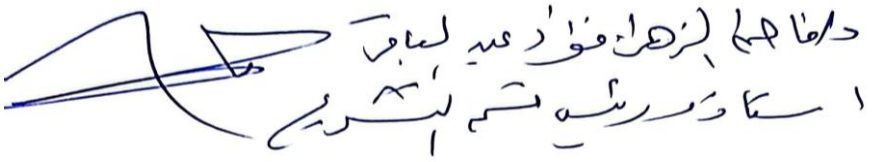
8. List of References: - **Standring,S, Ellis, H., Healy, J.C., Johnson, D., and Williams, J.C., 2016. Gray's anatomy. 50th edition.** - **Junqueira, L.C. and Carneiro, J., 2015. Basic histology. 10th edition.** - **Moore K.L., and Agur A.M.R., 2016. Essential clinical anatomy. 14th edition.** - **Romanes G.J., 2015. Cunningham's manual of practical anatomy, Oxford.** - **Rheumatology & Rehabilitation and Physical Medicine Faculty of Medicine- Mansoura University**	
A. Course Notes/handouts	Lecture notes prepared by staff members in the department.
B. Essential Books	Gray's Anatomy.
C. Recommended Text Books	A colored Atlas of Human anatomy and Embryology.
D. Periodicals, websites	American J. of Anatomy Cochrane Library,Medline & Popline

Course Coordinator/s:

Prof. Dr. Mohammed Ahmed Desouky

Head of Department:

Prof. Dr. Fatma Alzahraa Fouad Abdel- Baky



Date of last update & approval by department Council:

3 /2023

مسمى المقرر	التشريح
كود المقرر	

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

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
Anatomy of axial skeleton, vertebrae, skull, ribs and joints.	1	1,3,4,5	1	1,2,4	1,2,3
Anatomy of peripheral skeleton, bones of limbs, and joints.	2	2,3,4,5	3	2,3,4	2,4
Mechanism of walking and gait	3	3,4,5	1,2	1,2	3,4
Abnormal gaits	4	1,4,5	1	1,2	4
Nerve plexuses anatomy and development.	5	1,2,3,4	2,3	1,3	1,2,3
Peripheral nerves anatomy.	6	1,2,3	1,2	2	2,4
Clinical correlates to anatomy of joints.	8	1,2,4	1,3	1	1,2
Revision	9	1,2,4	1,2	1	1,3

Methods of Teaching & Learni	Intended Learning Outcomes (ILOs)			
	A	**B**	**C**	**D**
Lecture	**1,2,3,4, 5**	**1,2,4**		
Practical{skill lab,: instructor guided}			**2,4**	
Presentation/seminar	**1,4**			**1,3,4**

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

Group discussion	**4**		**1**	**1,3,4**

B. 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 { paper based}	1,2,3,4,5	1,4		
Practical exam { skill lab}			1,2,3,4	
Oral Exam	1,2,3,4	1,2,4		1,2,3,4

Course Specification of Master degree
In Rheumatology, Rehabilitation and physical medicine

University: Minia

Faculty: Medicine

Department: Rheumatology, Rehabilitation and physical medicine

1. Course Information		
• **Academic Year/level:** 2022-2023	**Course Title:** master degree in Rheumatology, Rehabilitation and physical medicine.	• Code: RR200
• **Number of teaching hours:** - **Lectures:** Total of **192** hours; **12** hours/week - **Practical/clinical:** Total of **448** hours; **28** hours/week		
2. Overall Aims of the course	*By the end of the course the student must be able to:* 1. competently diagnose and manage Rheumatology, Clinical immunology and Rehabilitation medicine problems. 2. Apply national and international standards of patient care, using evidence-based medicine competently in practice. 3. Respond to the changing health needs of the Egyptian community.	
3. Intended learning outcomes of course (ILOs): ***Upon completion of the course, the student should be able to:***		
A- Knowledge And	**(1) Rheumatology & Clinical Immunology:** A1. explain the concept of autoimmune disease in the light of the normal functions of the immune system. A3. Identify the common rheumatic diseases and immunological and medical problems causing disabilities. A4. Illustrate the different Pediatric and Adolescent Rheumatology and Clinical Immunology disorders and their management modalities. A5. Describe the specific pathology of different	

	Understanding	rheumatological and immunological disorders. A6 Describe the psychological basis of rheumatological disorders and disabilities. A7. Demonstrate advanced concepts of immunological laboratory tests and procedures related to inflammatory and non-inflammatory rheumatological and clinical immunology problems. A8. Define the clinical pharmacology of different treatment modalities including indications, dosages, contraindications and precautions as well as

	the recent advances of biologic therapies. A9. Interpret the principles of advanced interventional procedures related to rheumatological disorders. **(2) Musculoskeletal Medicine and Regional Diseases:** A10. Define scientific knowledge underpinning the human musculoskeletal system including the anatomy, physiology and biomechanics, regional diseases and describe pathological changes of the musculoskeletal and neurological systems and the regional diseases. A11. Illustrate etiology, diagnosis and treatment of musculoskeletal pain. A12. Summerize common musculoskeletal and regional diseases causing disabilities. A13. Demonstrate the specific pathology of different musculoskeletal and regional disorders. A14. Identify basic concepts of laboratory and radiological investigations related to musculoskeletal and regional diseases. A15. Identify the indications, techniques and limitations Electrodiagnosis. A16. Summarize normal gait and abnormal gait patterns. A17. Outline different management modalities for common Problems including musculoskeletal and regional diseases. A18. Classify the principles of interventional procedures related to regional and musculoskeletal disorders. **(3) Physical Medicine and Rehabilitation:** A19. Identify the basis, indications, contraindications, precautions and Procedures of electrotherapy. A20. Illustrate the indications, procedures and types of therapeutic exercises. A21. Demonstrate the indications of different types of orthotics, wheelchairs, Assistive devices, walking aids and footwear modifications. A22. Show the Rehabilitation of the different disorders affecting the CNS, CVS, Urinary, respiratory and bowel and musculoskeletal systems. A23. Interpret the causes, types of amputation and Rehabilitation of the amputee with the indications and types of prostheses.

B- Intellectual Skills	**(1) Rheumatology & Clinical Immunology:** B1. Analyze the complex nature of Rheumatology and Clinical immunology diseases before giving the appropriate decision B2. Interpret the different clinical manifestations and investigations of Rheumatology and clinical immunology including laboratory, radiological and biopsy findings. B3. Classify patient's activity according to disease activity indices. B4. Construct the appropriate management plan of Rheumatology and Clinical immunology cases. B5. Make use of strategies to avoid disease flares and activity in Rheumatology patients. B6. Plan preventive measures for patients at high risk of complications. **(2) Musculoskeletal Medicine and Regional Diseases:** B7. Choose appropriate laboratory and radiological investigations for different Musculoskeletal Medicine and Regional disorders according to a goal-based approach. B8. Organize the results of different for Musculoskeletal and Regional disorders.

	B9. Build up medical and interventional solutions for Musculoskeletal and Regional Diseases. B10. Select treatment plans for Musculoskeletal Medicine and Regional disorders. **(3) Physical Medicine and Rehabilitation:** B11. Select rehabilitation medicine solutions for patients with disability and involve the patient's family in the strategy. B12. Construct proper rehabilitation treatment plans and follow up for patients. B13. Make use of total quality management related to Rehabilitation plans. B14. Interpret the results of different rehabilitation programs and follow up for patients with disabilities.
C- Professional	**(3) Rheumatology & Clinical Immunology:** C1. Analyze clinical data specially the art of history taking required in rheumatic diseases. **C2.** Examine and identify signs of common rheumatic disorders. **C3.** Classify the rheumatological emergencies and referal properly. **C4.** Construct the appropriate treatment plans for common and rare rheumatological disorders taking into consideration the individual needs and cost **(4) Musculoskeletal Medicine and Regional Diseases:** **C5.** Examine and identify signs of common musculoskeletal disorders. **C6.** Apply minimal invasive procedures for joint dysfunctions such as joint fluid aspiration, intra articular and soft tissue injections **(3) Physical Medicine and Rehabilitation:** **C7.** Evaluate different types of disabilities and Plan an efficient program of rehabilitation. **C8.** Construct proper and efficient rehabilitation programs for management of different musculoskeletal

and Practical	disorders and disabilities. **C9.** Make use of the different physical modalities and devices. **C10.** Apply electro diagnostic tools efficiently in the field of Rheumatology, Rehabilitation and physical medicine.
D- General and transferable skills:	D1. Evaluate and decide when to communicate with colleagues and patients and their families, and to involve them fully in planning management. D2. Explaine and simplify the nature of the illness, diagnostic and therapeutic plans, possible complications and outcomes to the patient and/or his relatives. D3. Simplify the situation and appropriate handling during difficult situations such as conveying bad News or dealing with patients' anger. D4. Interview with colleagues the progression of the patient's condition, therapeutic outcomes. D5. Develop optimal patient care and the same time appreciating the Cost effectiveness to allow maximum benefit from available resources.

5. **Course Contents:**

B) Topics:

Students will receive presentations on the following subjects:

(1): Rheumatology & Clinical Immunology 9 topics

10. Evaluation and diagnosis of patients with rheumatic symptoms.
11. Immune& inflammatory responses of rheumatic diseases.
12. Systemic connective tissue diseases
    - xii. Rheumatoid arthritis
    - xiii. Sjogren's Syndrome
    - **xiv.** Systemic lupus erythematosus
    - xv. Systemic sclerosis
    - xvi. Scleroderma mimics
    - xvii. Inflammatory muscle diseases
    - xviii. overlap disorders
    - xix. Mixed connective tissue and undifferentiated connective tissue diseases

xx. Antiphospholipid syndrome
xxi. Adult onset Still's disease
xxii. Polymyalgia Rheumatica

13. Vasculitides & related disorders
14. Seronegative Spondyloarthropathies
15. Pediatric Rheumatic diseases
16. Rheumatic disorders associated with systemic diseases
17. Arthritis related to infectious agents
18. Management of rheumatic diseases.

(2): Musculoskeletal Medicine and Regional diseases 7 topics:

8. Musculoskeletal and regional pain diseases etiology, diagnosis and treatment.
9. Electrodiagnosis: indications, techniques and limitations.
10. Fibromyalgia
11. Normal gait and abnormal gait patterns.
12. Crystal induced arthropathies
13. Osteoarthritis and related conditions
14. Metabolic bone disease (osteoporosis)

(3): Physical Medicine and Rehabilitation 11 topics

12. Physical modalities used in rehabilitation and physical medicine
13. Therapeutic exercises
14. Rehabilitation of stroke and Spasticity
15. Orthotics, prosthesis & Wheel chairs and assistive devices
16. Rehabilitation of pediatric disorders.
17. Rehabilitation after joint arthroplasty
18. Rehabilitation of the cardiovascular and respiratory diseases.
19. Rehabilitation of Myopathic disorders
20. Rehabilitation of Neuropathic disorders
21. Rehabilitation of regional musculoskeletal disorders.
22. Rehabilitation of burn.

III-B) Tutorial / Small Group Discussions

4) **Appropriate History taking.**
5) **Musculoskeletal examination.** The candidate should be able to identify**: i. Shoulder pathology:**
    a. Rotator cuff lesions.

b. Glenohumeral/capsular pathology.
c. Muscle wasting, proximal myopathy.
d. S/C joint pathology – synovitis.
e. A/C joint pathology – sy

ii. Elbow pathology:

f. Olecranon bursitis.
g. Elbow joint pathology.
h. Radio-ulnar joint pathology.
i. Medial or lateral epicondylitis.
j. Ulnar nerve entrapment.

jjj. Hand & wrist pathology:

a. Radiocarpal joint pathology.
b. Distal radio-ulnar joint pathology.
c. MCP or IP joint pathology.
d. Hand deformities.
e. Muscle wasting.
f. Flexor or extensor tenosynovitis or tendon nodules.
g. Rupture or attenuation of flexor or extensor tendons of fingers or thumb.
h. De Quervain's tenosynovitis.
i. Carpal tunnel syndrome.

vi. Hip/pelvic pathology:

a. Trochanteric, iliopsoas, gluteal bursitis.
b. Hip joint pathology including dysplasia.
c. Real & apparent leg length inequality.
d. SI joint pathology.
e. Muscle wasting, proximal myopathy, Trendlenberg sign.
f. Deformities of the hip, Thomas' test.
g. Pathology of symphysis pubis.
h. Hip pain due to pain referred from lumbar region.
i. Lesions of tendons and entheses.

vii. Knee pathology:

a. Knee joint pathology, including internal derangements.
b. Deformities.
c. Muscle wasting, myopathy.
d. Prepatellar, anserine bursitis.
e. Popliteal cyst.
f. Damage to collateral ligaments.

k. Knee pain due to pain referred from hip or lumbar spine.
l. Lesions of tendons and entheses.
m. Osgood-Schlatter's disease.
n. Adolescent anterior knee pain/Patello-femoral syndrome.

ix. Ankle & foot pathology:

a. Ankle (tibiotalar) pathology.
b. Subtalar/midtarsal joint pathology.
c. MTP & IP joint pathology.
d. Lesions of the Achilles tendon, enthesis and retrocalcaneal bursa.
e. Deformities of the ankle and foot.
f. Foot pain due to pain referred from lumbar spine.
g. Plantar fasciitis.
h. Tenosynovitis of tibialis post and peroneal tendons.
i. Rupture of tibialis posterior or Achilles tendon.
j. Lesions of bone (e.g. stress fracture).

x. Spinal pathology:

a. Cervical, thoracic, and lumbar spine pathology.
b. Spinal nerve root entrapment syndromes.
c. Spinal deformities including scoliosis and kyphosis.

xi. Extra-articular pathology:

a. Raynaud's phenomenon.
b. Vasculitic skin lesions.
c. Rheumatoid nodules.
d. Rash – psoriasis, pustular psoriasis, onycholysis, balanitis, lupus rashes, erythema nodosum
e. Calcinosis.
f. Nail lesions – pitting, onycolysis, splinter haemorrhages, nailfold infarcts
g. Scleritis, episcleritis, conjunctivitis, iritis
h. Sclerodactyly.
i. Tophi.
j. Other medical complications of rheumatic diseases affecting internal organs.

5) **The differential diagnosis of:** monoarthropathy, oligoarthropathy, polyarthropathy, axial arthropathy, muscle weakness, regional limb pain, spinal musculoskeletal pain disorders, unexplained musculoskeletal pain and rheumatological emergencies.

6) **Management the following rheumatologic & immunologic cases:**

k. Musculoskeletal pain problems and soft tissue rheumatism including:

i. Neck pain.
ii. Spinal pain.
iii. Intervertebral disc disorders.
iv. Spinal canal or foraminal stenosis & related syndromes.
v. Limb pain syndromes, e.g.:
    1. Rotator cuff disease, enthesopathies including epicondylitis, plantar fasciitis, bursitis and non-specific limb pain
    2. Complex regional pain syndromes - algodystrophy
vi. Fibromyalgia and related somatoform disorders.
vii. Benign joint hypermobility.
viii. Pain problems specific to childhood, e.g. Osgood-Schlatter's disease, Perthe's disease and Nocturnal limb pain.

l. Autoimmune connective tissue diseases including:

i. Rheumatoid arthritis
ii. Sjögren's syndrome.
iii. Systemic lupus erythematosus.
iv. Systemic sclerosis.
v. Scleroderma mimics
vi. Inflammatory muscle disesess (dermatomyositis/polymyositis.
vii. Overlap syndromes.
viii. Mixed connective tissue disease.
ix. Anti-phospholipid syndrome.
x. Adult stills disease
xi. Polymyalgia rheumatica

And regarding each item the following are required;

- Pathogenesis of the diseases
- Systemic manifestations: including articular, skin, renal, respiratory, ocular, neurological, hematological, and CNS manifestations.
- Complications and comorbidities.
- Detailed modern principles and lines of management according to international guidelines

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m. Vasculitides including:

1. Giant cell arteritis and polymyalgia rheumatica.
2. Wegener's granulomatosis.
3. Polyarteritis nodosa and microscopic polyangiitis.
4. Churg Strauss vasculitis.
5. Behçet's disease.
6. Takayasu's arteritis.
7. Cutaneous vasculitis.
8. Henoch Schoenlein purpura.
9. Cryoglobulinemia.

n. <u>Spondyloarthropathies including:</u>

vi. Ankylosing spondylitis
vii. Psoriatic arthritis.
viii. Enteropathic arthropathies.
ix. Reactive arthritis
x. Whipple's disease.

o. <u>Pediatric Rheumatic diseases including;</u>

iv. Approach to children with joint pain
v. Juvenile idiopathic arthritis
vi. Juvenile systemic connective tissue diseases

p. <u>Musculoskeletal manifestations accompanying systemic disorders including:</u>

i. Endocrine disorders affecting bone, joint or muscle (e.g. diabetes, thyroid, parathyroid disorders Metabolic disorders affecting joints (haemochromatosis).

ii. Rheumatic manifestations of haemoglobinopathies.

iii. Rheumatic manifestations of hemophilia and other disorders of haemostasis.

iv. Amyloidosis

v. Sarcoidosis

vi. Familial Auto inflammatory syndromes.

q. **<u>Rheumatological manifestaions and arthritis related to infection:</u>**

i. Septic arthritis and Osteomyelitis.

ii. Viral arthritis.

iii. Rheumatic manifestations related to Hepatitis C &B.

iv. Rheumatic manifestations related to Covid 19 infection

r. Crystal associated arthropathies including:

i. Gout.

ii. Pseudogout.

s. Bone disorders including:

i. Osteoporosis.

ii. Rickets

iii. osteomalacia.

iv. Regional disorders: Paget's disease, hypertrophic pulmonary osteoarthropathy, osteonecrosis, Perthe's disease.

t. Management of Rheumatic diseases including;

xi. Nonsteroidal anti-inflammatory drugs

xii. Glucocorticoids

xiii. Systemic anti rheumatic drugs

xiv. Immunosuppressive and immunoregulatory drugs

xv. Biological agents

xvi. Hyopourecemic drugs

xvii. Bone strengthening agents

xviii. Peri-operative management of patients with rheumatic diseases

xix. Management of covid19 in rheumatic patients.

xx. Vaccinations with rheumatic disorders

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(3): Physical Medicine, Rehabilitation including;

Proper evaluation of the patient and approach to physical medicine and rehabilitations and enable the resident to guide an efficient program for rehabilitation of the common disorders:

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a. **Physical modalities used in rehabilitation and physical medicine including**
   iv. Heat therapy(superficial and deep heat modalities)
   v. Cold therapy modalities
   vi. Electrotherapy
b. **Therapeutic exercises including**
   vi. Stretching and range of motion exercises
   vii. Strengthening exercises
   viii. Therapeutic massage
   ix. Manual therapy
   x. Traction therapy
c. **Rehabilitation of Stroke and Spasticity including**
   iv. Introduction and neurological basics of cerebrovascular diseases
   v. Stroke rehabilitation
   vi. Stroke rehabilitation issues and spasticity
d. **Bone and joint rehabilitation including**
   iii. Care of post fractures complications (stiffness and limitations)
   iv. Post arthroplasty rehabilitation (knee and hip joints)
e. **Orthotics, prosthesis & assistive devices including**
   v. Orthosis (upper,lower limbs & Spinal orthosis)
   vi. Care after limb amputee
   vii. prosthesis (upper and lower limbs)
   viii. wheel chairs and assistive devices
f. **Rehabilitation of pediatric disorders including.**
   v. Cerebral palsy
   vi. Spina bifida
   vii. Scoliosis
   viii. Erb's palsy
g. **Rehabilitation of the cardiovascular and respiratory diseases including.**
   iii. Cardiac rehabilitation
   iv. Pulmonary rehabilitation

h. Rehabilitation of myopathy disorders including

iii. Basics and approach of different types of myopathies

iv. Rehabilitation program for myopathic disorders

i. Rehabilitation of Neuropathic disorders

v. Basics and approach of different types of hereditary neuropathies

vi. Entrapment neuropathies

vii. Peripheral nerve injuries

viii. Rehabilitation program for neuropathic disorders

j. **Rehabilitation of burn**.

k. Rehabilitation of regional musculoskeletal disorders including.

Rehabilitation of different musculoskeletal disorder of the different joint pathologies:

viii. Shoulder pathologies (Rotator cuff lesions, glenohumeral/capsular, stiffness, Muscle wasting, and proximal myopathy rehabilitation.

ix. Elbow pathologies: (Olecranon bursitis, medial or lateral epicondylitis and elbow joint &Radio-ulnar joint stiffness)

x. Hand & wrist pathology :(Hand deformities and stiffness of joints and Muscle wasting

xi. Hip/pelvic pathology :(Hip joint pain, deformities and stiffness, trochanteric, iliopsoas, gluteal bursitis, leg length discrepancy, Muscle wasting and proximal myopathy)

xii. Knee pathology :(deformities, osteoarthritis, muscle wasting, myopathy, ligamentous & menisci injuries and patello-femoral syndrome)

xiii. Ankle & foot pathology: (Tibiotalar, subtalar/midtarsal joint stiffness, deformities of the ankle and foot.

xiv. Spinal lesions including (degenerative spinal and disc diseases, scoliosis and post- surgical spinal diseases)

III-C) Clinical CLASSES:

7. Joint aspiration, lavage and/or injection.
8. Soft tissue and regional injection.
9. Examination of synovial fluid by Polarized microscopy.
10. Electromyography and nerve conduction studies.
11. Diagnostic musculoskeletal ultrasound.
12. Orthotics and prosthesis clinic.

5. Teaching and Learning methods	1. Lectures (online / offline) 2. Seminar 3. Journal club 4. Grand round Inpatient's staff round **5.** Attending or present scientific meetings, conferences, workshops and thesis discussion Clinical classes: • Outpatient clinic cases (Arthrocentesis and injection of joints and soft tissues skills) • Follow up clinic cases(Arthrocentesis and injection of joints and soft tissues skills) • Rehabilitation cases • Orthotics and prosthesis clinic • MSUS unit /cases(hands on) • Electrophysiology unit /cases(hands on) • •
6. Teaching and Learning Methods for students with limited Capacity	Not available
7. Student Assessment	
7.A. Student Assessment Methods	-Written exams to assess knowledge, intellectual skills. -Oral exams to assess Knowledge and intellectual skills. -clinical exams To assess clinical, professional, general and transferrable skills. -clinical image and video assessment (CIVA),

D. Assessment Schedule (Timing of Each Method of Assessment)	**2 sets at in April and October**
E. Weighting of Each Method of Assessment	**Written exams papers:** (Rheumatology / Rehabilitation (1/3 MCQ, 1/3 short essay, 1/3 problem solving) **280 degree** (140 degree / each paper) **Oral exams, 125 degrees**; (75 for rheumatology, 50 for rehabilitation) **Clinical exams 200 degrees (**long and short cases rheumatology & rehabilitation) **(Clinical image and video assessment CIVA), 95 degrees**; (35 radiology exam, 35 orthotics and prosthetics & 25 Electro
8 . List of References	
a. **Course Notes/handouts**	provided by staff members
b. Essential Books	1) Kelley's Textbook of Rheumatology: Firestein GS, Budd RC,Harris ED, McInnes IB, Ruddy S and Sergent JS (eds.), 11th edition, 2021 2) Primer on the Rheumatic Diseases: Klippel JH, Stone JH, Crofford LJ and White PH (eds.) 13th edition, 2008 6) Braddom's physical medicine and rehabilitation: In Cifu, D. X., Eapen, B. C. (ed.), 6rd edition, 2021
C. Recommended Text Books	1) Oxford Textbook of Rheumatology: Isenberg DA, Maddison PJ, Woo P, Glass D and Breedveld FC. (eds.), 4d edition, 2013 2) DeLisa's Physical Medicine and Rehabilitation: Principles and Practice: Frontera, WR, DeLisa, JA, Basford, J., & Boninger, M. (eds.), 6th edition, 2019
D. Periodicals, websites	1) Selected articles from international journals will be provided to Students 2) Area of Rheumatology and clinical immunology: 3) European Board of Rheumatology and the American College of Rheumatology High Impact Rheumatology Curriculum

(***http://www.rheumatology.org/educ/hir/ppt.asp***)

4) Area of Rehabilitation medicine

Course Coordinator/s:

Dr. Alshiamaa Mamdouh
Dr. Israa Fathey
Dr. Haidy Mohammed
Dr. Reem Mohammed
Dr. Aya Hassan AbdelAzeem
Dr. Doaa Mahmoud

Head of Department:

Prof. Faten Ismail Muhammad

Date of <u>last update</u> & approval by department Council: 6/3/2023

Matrix of Coverage of Course ILOs by MCS Contents

List of contents	*Intended Learning Outcomes (ILOs)*			
	A. Knowledge & Understanding	**B. Intellectual Skills**	**C. Professional & Practical skills**	**D. General & Transferable Skills**
	A	**B**	**C**	**D**
Evaluation and diagnosis of patients with rheumatic symptoms.	A1,A3,A6,	B1, B2, B3, B4, B5, B6	C1	D1, D2, D3, D4 ,D5
Immune& inflammatory responses of rheumatic diseases.	A2, A5 &A7	B1	C1	D2
Rheumatoid arthritis	A1, A8, A9	B1, B2, B3, B4, B5, B6	C1	D1, D2, D3, D4 ,D5
Sjogren's Syndrome	A7, A8, A9	B1, B2, B3, B4, B5, B6	C1	D1, D2, D3, D4 ,D5
Systemic lupus erythematosus	A7, A8, A9	B1, B2, B3, B4, B5, B6	C1	D1, D2, D3, D4 ,D5
Systemic sclerosis	A7, A8, A9	B1, B2, B3, B4, B5, B6	C1	D1, D2, D3, D4 ,D5
Scleroderma mimics	A7, A8, A9	B1, B2, B3, B4, B5, B6	C1	D1, D2, D3, D4 ,D5
Inflammatory muscle diseases	A7, A8, A9	B1, B2, B3, B4, B5, B6	C1	D1, D2, D3, D4 ,D5
overlap disorders	A7,A8, A9	B1, B2,	C1	D1,D2

		B4&B6		
Mixed connective tissue and undifferentiated connective tissue diseases	A7, A8, A9	B1, B2, B3, B4, B5, B6	C1	D1, D2, D3, D4 ,D5
Antiphospholipid syndrome	A7, A8, A9	B1, B2, B4&B6	C1	D1, D2, D3, D4 ,D5
Adult onset Still's disease	A7, A8, A9	B1, B2, B4&B6	C1	D1, D2, D3, D4 ,D5
Polymyalgia Rheumatica	A7, A8, A9	B1, B2, B4&B6	C1	D1, D2, D3, D4 ,D5
Vasculitides & related disorders	A7, A8, A9	B1, B2, B3, B4, B5, B6	C1	D1, D2, D3, D4 ,D5
Seronegative Spondyloarthropathies	A7, A8, A9	B1, B2, B3, B4, B5, B6	C1	D1, D2, D3, D4 ,D5
Pediatric Rheumatic diseases	A4, , A8, A9	B1, B2, B3, B4, B5, B6	C1	D1, D2, D3, D4 ,D5
Rheumatic disorders associated with systemic diseases	A7, A8, A9	B1, B2, B4&B6	C1	D1, D2, D3, D4 ,D5
Arthritis related to infectious agents	A7, A8, A9	B1, B2, B4&B6	C1	D1, D2, D3, D4 ,D5
Management of rheumatic diseases.	A7, A8, A9	B4, B6	C1	D1, D2, D3, D4 ,D5
Musculoskeletal Medicine and Regional diseases	A1, A10—A18	B7,B8, B9& B10	C1	D1, D2, D3, D4 ,D5
Physical modalities used in rehabilitation and physical medicine	A19	B11, B12, B13 &B14	C1	D1
Therapeutic exercises	A20	B11, B12, B13 &B14	C1	D1
Rehabilitation of stroke and Spasticity	A22	B11, B12, B13 &B14	C1	D1, D2, D3, D4 ,D5
Orthotics, prosthesis & Wheel chairs and assistive devices	A21, A23	B11, B12, B13 &B14	C1	D1, D3

Rehabilitation of pediatric disorders.	A22	B11, B12, B13 &B14	C1	D2
Rehabilitation after joint arthroplasty	A10, A13, A14	B11, B12, B13 &B14	C1	D1,D2,D3
Rehabilitation of the cardiovascular and respiratory diseases.	A22	B11, B12, B13 &B14	C1	D1,D2,D3,D4
Rehabilitation of Myopathic disorders	A12, A18	B11, B12, B13 &B14	C1	D1,D2,D3,D4
Rehabilitation of Neuropathic disorders	A22	B11, B12, B13 &B14	C1	D1,D2,D3,D4
Rehabilitation of regional musculoskeletal disorders.	A1, A10 to A18	B11, B12, B13 &B14	C1	D1,D2,D3,D4
Rehabilitation of burn.	A17. A18	B11, B12, B13 &B14	C1	D1,D2,D3,D4

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

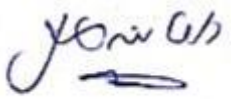
Methods of Teaching & Learning	**Intended Learning Outcomes (ILOs)**			
	A. Knowledge & Understanding	**B. Intellectual Skills**	**C. Professional & Practical skills**	**D. General & Transferable Skills**
Lectures	**A1 to A23**	B1,B2,B3.B4,B5,B6,B7,B8,B9,B10,B12,B13,B14		

Clinical (grand rounds)			**C1,c2,c3, c4,c5, c6,c7,c8,c9,c10**	**D1,D2,D3,D4, D5**
Master Thesis			**C1**	**D1,D2,D4.D5**
Presentations/seminar (performing and attendance	**A1, A2 ,A3**	**B1, B2, B3, B4, B5, B6, B12, B13, B14**		**D4,D5**
Training courses & Workshops			C1,c2,c3, c4,c5, c6,c7,c8,c9,c10	D1,D2, D4,D5

Matrix of Coverage of Master 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 exams	**All A**	**All B**		
CIVA	**A5, A15, A20, A21, A22**	**B2, B3, B8, B10, B14**	**C1**	
Clinical exam long and short cases history			**All C**	**D1, D2, D3, D4,D5**

and examination				
Oral Exam	**A1 to A23**	**All B**		**All D**



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Blueprint of Rheumatology& Clinical Immunology "master degree" Examination Paper

(140 marks)

	Topic	Hours	Knowledge %	Intellectual %	Knowledge Mark	Intellectual Mark	Marks	Actual Mark
1	**Immunology of Rheumatic diseases.**	32	80%	20%	**28**	7	**35**	**35**
2	**Systemic Rheumatic diseases**	48	60%	40%	**32**	21	**52.5**	**53**
3	**Musculoskeletal and regional pain disorders.**	48	60%	40%	**30**	22	**52.5**	**52**
	Total	**128**			**90**	50	**140**	140

Blueprint of Rheumatology, Rehabilitation and physical medicine Department

Blueprint of Rehabilitation and physical medicine "master degree" Examination Paper

(140 marks)

	Topic	Hours	Knowledge %	Intellectual %	Knowledge	Intellectual	Marks	Actual Mark
					Mark	Mark		
1	**Physical modalities used in rehabilitation and physical medicine**	32h	70%	30%	**49**	**21**	**70**	**70**
2	**Rehabilitation, orthotics, prosthesis & assistive devices**	32 h	60%	40%	**42**	**28**	**70**	**70**
	Total	**64 h**			**91**	**49**	**140**	140