MSc. ROGRAMME SPECIFICATION

Rheumatology and Rehabilitation Department

Faculty of Medicine– Mansoura University

Prepared by: Dr. Shereen Aly Machaly

Assistant Prof. of Rheumatology and Rehabilitation

PROGRAMME SPECIFICATION

Master degree of Rheumatology & Rehabilitation and Physical Medicine

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme Title & Code	Postgraduate Master degree of Rheumatology & Rehabilitation and Physical Medicine/ REH 500
(2) Final award/degree	Master of Science degree (M.Sc.)
(3) Department	Rheumatology & Rehabilitation and Physical Medicine department
(4) Coordinator	Dr. Shereen Aly Machaly
(5) External evaluator (s)	Prof Dr/ Abdel-Samad El-Hewala Professor of Rheumatology and Rehabilitation-Zagazeg University
(6) Date of approval by the Department`s council	15/8/2010
(7) Date of last approval of programme specification by Faculty council	17/8/2010

(B) Professional information

(1) Programme Aims:

The broad aims of the Programme are as follows:

1- To respond to the educational and research training needs of doctors with a special interest in rheumatology and rehabilitation medicine.

2- To prepare the candidate for Systems-based Practice where they must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care (www.acgme.org) / (acgme competencies).

3- To provide 8 basic study modules (4 rheumatology &4 rehabilitation medicine), designed to give candidates a sound understanding of concepts and research in rheumatic diseases

4- To support evidence-based rheumatologic practice by encouraging trainees to undertake research that will establish evidence about rheumatic diseases where it is not otherwise available.

5- To give fellows the opportunity to produce a detailed thesis on a special topic of interest with respect to rheumatic diseases or rehabilitation medicine.

6- To allow the fellows to develop an educational role in the course by communicating their understanding to their peer groups, by means of presentations, lectures. The emphasis will be on self-learning.

7- The programme promotes an understanding of the ways in which research can be used to improve health care in rheumatic diseases by enabling candidate to:

- Understand the principles of the scientific basis of rheumatology and rheumatic diseases.
- Identify, critically appraise and incorporate the results of basic and clinical research in rheumatic diseases.

8- The programme will also provide an opportunity and encouragement for appropriate candidates to apply for a MD by research on related topics.

(2) Intended Learning Outcomes (ILOs):

Intended learning outcomes (ILOs); Are four main categories: knowledge & understanding to be gained, intellectual qualities, professional/practical and transferable skills.

A- Knowledge and Understanding

Candidates must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social behavioral sciences, as well as the application of this knowledge to patient care. On successful completion of the programme, the candidate will be able:

A 1- Describe basic anatomy, relevant to the musculoskeletal system including anatomy of lumbosacral and brachial plexuses, different dermatomes, brain and spinal cord.

A 2 - Recognize 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.

A3-Identify theories and fundamentals related to the physiology of musculoskeletal system and the immune system of human and its response.

A 4 -Outline epidemiology, frequency and risk factors of the spectrum of diseases affecting the musculoskeletal system, and their impact on global health.

A 5 -Identify clinical and molecular genetics, aetiology, pathogenesis, and basic mechanisms of rheumatic diseases and related disorders.

A6- 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.

A7- Identify the spectrum of clinical symptoms and signs of musculoskeletal disorders and common medical conditions with multisystem affection.

A 8- Explain the scientific basis of the methodology, and list indications of laboratory tests, physical tests and imaging procedures used in diagnosis and monitoring of different rheumatic, orthopedic, neurologic disorders and others in need for rehabilitation.

A9- Identify indications, advantages, and limitations for electrodiagnostic studies, electromyography and nerve conduction studies.

A 10- Recognize pharmacology and pharmacokinetics - including drug metabolism, adverse effects, indications and interactions- of commonly used drugs in treatment of rheumatic diseases.

A 11- List the pharmacological therapeutic and other treatment options for rheumatic diseases, including complementary and alternative therapies.

A 12- Describe basic principles of rehabilitation medicine, impairments, disability and handicapping.

A13- Recognize principles of assessment, evaluation and management of patients in a Rehabilitation setting.

A14- Understand mechanical, manual and functional rehabilitation approaches.

A15- Identify different categories of physiotherapy modalities and understand their physiologic effects on soft tissues and describe their various mechanisms related to the management of rheumatic, orthopedic, neurological and other disorders.

A16- Identify benefits and hazards of uses of physical agents in the field of rheumatology and rehabilitation medicine

A17- Understand exercise guidelines, benefits and hazards and understand physiologic effect of exercise on soft tissues.

A18- Recognize the benefits of rehabilitation on the patient's quality of life and its role on improving the patient's illness impact on global health.

A 19- Identify basics of health and patient's safety and safety procedures during practice.

A 20- Identify proper patient care and patient's rights to obtain the optimum health care and effective treatment of rheumatic diseases.

A 21 -Identify basics of ethics, medicolegal aspects, malpractice and common medical errors in rheumatology & rehabilitation medicine.

A22- Recognize principles and basics of quality assurance during practice and professionalism.

A23- Demonstrate knowledge of effects and hazards of professional practice in rheumatology field and rehabilitation medicine on environment and identify mutual influence between professional practice and its impacts on the environment.

A24- Identify principles, methodology, tools and ethics of scientific research in rheumatology and rehabilitation medicine fields.

B- Intellectual skills

B1 - 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.

B2- 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.

B3- Analyze and evaluate the information of the body physiology and immunology and analogies to solve rheumatological and musculoskeletal problems.

B4- Integrate basic science of pathology, genetics, immunology, and biochemistry of connective tissue, bone, joint, and muscle with clinical care of patients with rheumatic disorders and/or patients in rehabilitation setting.

B5- Integrate patient's symptomatology, historic data, abnormal physical signs and investigations into a comprehensive differential diagnosis of various musculoskeletal disorders.

B6- Analyze and evaluate data of different patients attending physical medicine and rehabilitation units, compare data and conclude results adding to the available literature.

B 7- Differentiate between types of arthritis and other musculoskeletal disorders and predict prognoses

B8- Integrate knowledge of physical science in the context of managing different musculoskeletal disorders according to the type of lesion.

B 9- Select from different diagnostic alternatives and interpret various diagnostic procedures to reach a final diagnosis.

B 10- Combine the use of nonsteroidal anti-inflammatory drugs, disease modifying drugs, biological response modifiers, glucocorticoids, cytotoxic drugs, antihyperuricemic drugs, and antibiotic therapy (for septic arthritis) into the medical care of patients and monitor their effects.

B11- Solve patients problems according to the available data collected from patient's evaluation and suggest investigations related to the patient's condition.

B12 -Formulate appropriate management plans for individual patients presenting with musculoskeletal diseases, autoimmune rheumatological disorders and related internal medical disorders.

B13- Apply physical medicine and design rehabilitation program in patients with rheumatologic, neurological, orthopedics and other medical disorders.

B14- Compose exercise/therapy prescription with specific diagnosis and recommended emphasis of treatment.

B 15- Evaluate, manage, and construct rehabilitation of exercise-related (sports) illnesses.

B 16- Describe, prescribe and evaluate orthosis and prostheses of different parts of the body.

B17- Compare use of various treatment methods including alternative and complementary medicine in the context of patient satisfaction, efficacy, and cost-benefit.

B 18- Make decisions needed in different situations of clinical practice based on evidence-based medicine in rheumatology and rehabilitation medicine, using appropriate problem solving skills.

B19- Apply appropriate assessment & measurement tools to evaluate functional status or outcomes of type of treatment used.

B20- Assess risks in the clinical emergencies in the field of rheumatology and rehabilitation

B 21- Resolve specialized problems with non-availability of some data.

B22- Consider effects of personal, social and cultural factors in the disease process and patient management.

B23- Apply ethical issues and resolve ethical dilemmas in relation to clinical practice

B24- Participate in identifying system errors and implementing potential systems solutions.

B25- Coordinate patient care within the health care system relevant to their clinical specialty

B26- Incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care as appropriate

B27-Advocate for quality patient care and optimal patient care systems

B28- Critically evaluate research; design and conduct of a research project

B29- Analyze literature, generate hypothesis, design and criticize protocol, organize and present data.

B30- Investigate and evaluate care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning.

- B30.a: Discover strengths, deficiencies, and limits in one's knowledge and expertise.
- B30.b: Set learning and improvement goals.
- B30.c: Identify and perform appropriate learning activities.
- B30.d: Systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement.
- B30.e: Incorporate formative evaluation feedback into daily practice.
- B30.f: Locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems.
- B30.g: Use information technology to optimize learning.
- B30.h: participate in the education of patients, families, students, residents and other health professionals.

C- Professional/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.

C 2- Examine patients, to include a specific examination of structure and function of all joints, both axial and peripheral, as well as periarticular structure and muscle units, to evaluate the musculoskeletal system and nervous system in an accurate manner

C 3 - Apply the anatomical facts during musculoskeletal examination in order to reach a proper diagnosis.

C4- Demonstrate appropriate positioning in relation to the patient in the exam room to facilitate good rapport with patients.

C 5 - Perform diagnostic aspiration and analysis of synovial fluid.

C6- Investigate immune system by proper laboratory and immunological tests for accurate diagnosis and management of autoimmune rheumatic diseases and use professionally the immune therapy for some rheumatological diseases.

C7- Apply and integrate knowledge of electrophysiology to perform and interpret electromyography and nerve conduction studies. Use of electrophysiological studies in biofeedback mechanisms in rehabilitation of certain patients.

C 8- Interpret bone and joint imaging techniques applying the facts of anatomical structures and interpret bone density measurement.

C 9- Perform therapeutic injection of synovial joints, bursae, tenosynovial structures and enthuses.

C10- Write and evaluate medical reports, clinical sheets including all collected data relevant to the patient's condition and physiotherapy treatment regimen sheets.

C11- Deal efficiently with physiotherapy modalities and professional prescribing for appropriate conditions with proper positioning of the patient.

C12- Apply sound ethical principles in practice (e.g., informed consent, confidentiality, veracity, provision or withholding of care).

C 13- 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.

C14- Work effectively in various health care delivery settings and systems relevant to their clinical specialty.

D- Communication & Transferable skills

D 1- Be prepared for the lifelong learning needs of the profession in rheumatology & rehabilitation medicine.

D 2- Use information and communication technology effectively in the field of rheumatology and rehabilitation medicine.

D 3- Retrieve, manage, and manipulate information by all means.

D 4- Use different resources to gain knowledge and information related to rheumatology and rehabilitation fields.

D 5- Present clearly, and effectively a scientific topic in front of audience using computer and power point skills.

D 6- Communicate ideas and arguments effectively.

D 7- Demonstrate caring/respectful behaviors with patients and staff.

D 8- Work effectively within a team and leadership teams in health care team or other various professional contexts.

D 9- Develop rules and indicators for assessing the performance of other stuff of the medical team within the field of rheumatology and rehabilitation medicine.

D10-Communicate effectively in its different forms with other specialties and generate the ethos of a multidisciplinary approach in the clinical setting.

D 11- Manage and lead scientific meetings

D 12- Analyze and use numerical data including the use of simple statistical methods.

D13- Organize workload in order to meet deadlines.

D14- Demonstrate ability to articulate the risks and benefits of different treatment options to patients, present information to patients, family members, caregivers & other health care providers in an effective manner and establish trust and maintain positive rapport with patients.

D15- Continue to self-learning and self-evaluation and demonstrate personal learning needs.

D16- Demonstrate an educational role in the course by communicating their understanding to their peer groups, by means of presentations and lectures.

D 17- Accept personal responsibility for own actions & decisions.

D18- Demonstrate compassion, integrity, and respect for all patient's rights and treat all patients equally regardless to their believes, culture and behavior.

D19- Recognize one's own limitation of knowledge and skills and refer patients to appropriate specialized health facility at appropriate stage.

D20- Maintain comprehensive, timely, and legible medical records, if applicable.

(3) Academic standards:

Academic standards for the programme are attached in Appendix I. in which **NARS** issued by the National Authority for Quality Assurance & Accreditation in Education are used. External reference points/Benchmarks are attached in Appendix II.

3. a- External reference points/benchmarks are selected to confirm the appropriateness of the objectives, ILOs and structure of assessment of the programme:

1- University of Oxford, Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, - MSc in Rheumatology. The Nuffield Orthopaedic Centre (NOC), is the largest musculoskeletal clinical centre in the UK, and a world class centre for orthopaedic and rheumatic diseases.

http://www.ndorms.ox.ac.uk/msc_rheumatology.php

2- King's College London, School of medicine- MSc in Rheumatology.

http://www.kcl.ac.uk/prospectus/graduate/index/name/Rheumatology

3.b- Comparison of the specification to the selected external reference/ benchmark:

- All programme aims of the Benchmarks are covered by the current program.
- The programme courses are matched by 90% degree to those offered by the international universities (as regard rheumatology courses) except in the context and number of credit hours, and the methods of assessment.
- About University of Oxford, they offer optional modules (out of 7). All our modules are compulsory but we included all other modules offered by them to our programme as components of rheumatology courses. However, they don't have separate courses for physical medicine and rehabilitation as we do.

(4) Curriculum structure and contents:

4.a- Duration of the programme (in years or months): 36 months

4.b- programme structure:

*The programme consists of two parts; the first part composed of six courses which are: Applied Anatomy, Applied Physiology, Internal Medicine, Applied Physics, Basic of clinical Immunology and Regional Musculoskeletal Disorders. The second part composed of two courses; Rheumatology & Immunology and Physical Medicine & Rehabilitation. All are compulsory courses.

*Candidates should fulfill a total of 45 credit hours.

●4.b.1: Number of credit hours (minimum) :

First part: 5 credit hours. Second part: 18 credit hours.

Thesis: 6 credit hours. Other scientific activities: 2 credit hours.

Activities included in the log book: 14 credit hours.

●4.b.2: Teaching hours/week:

First part:

Lectures: 5 hours/week. Total: 75 hours for 15 weeks (referred to the table below)

Second part:

	Credit hours	Lectures and/or tutorials	Clinical	Total
First semester:	7 hours/week	89/15weeks	32	121
Second semester:	5 hours/week	62/15weeks	26	88
Third semester:	6 hours/week	90/15weeks	-	90
Total:	18 hours	241/45weeks	58	299

(referred to the table below)

(5) Programme courses:

First part (15 weeks duration/6 months)

a- Compulsory courses:

Course Title	Course Code	NO. of hours per week					Total teaching hours/15 weeks	Programme ILOs covered (REFERRING TO MATRIX)
		Theoretical		Clinical /practical	Field	Total		
		Lectures	seminars					
Applied Anatomy	REH 501	2 hrs/week for 5 wks	------	------	----	10 hrs	10hrs/5wks	**A 1,2, B1,2 C 2,3,4,8 D 3,6,10,15,16**
Applied Physiology	REH 503	2 hrs/week for 5 wks	------	------	----	10 hrs	10hrs/5wks	**A** 3,9,17 **B** 3 **C** 1,7 **D** 3,6,10,15,16
Internal Medicine	REH 510 REH 510C	1 hr/week for 15 wks	------	------	----	15 hrs	15 hrs/15wks	**A** 5,6,7 **B**5,11,21,23,26,27 **C** 1,10,12,13 **D**3,6,7,8,10,18,19,20
Applied Physics	REH 516 AP	1 hr/week for 15 wks	------	------	----	15 hrs	15 hrs/15wks	**A 8,15,16 B 8,13,17 C 10,11,14 D 3-6,8-10,14,17,18,20**
Regional Musculoskeletal disorders	REH 516 MD	1 hr/week for 15 wks	------	------	----	15 hrs	15hrs/15wks	**A 4,6,8,11,19-23 B2,5,9,12,13,17,19,22,23 C2,3,8,9,10,11,12 D 1-8,14,17,18,19**
Basics of Clinical Immunology	REH 530	2 hrs/week for 5wks	------	-----	----	10 hrs	10hrs/5wks	**A 3,5,8 B 3,4,9 - C 6 D 3,6,8,10,15,16**

b- Elective courses: none

Second part (45 weeks duration/18 months)

a- Compulsory courses:

1. Rheumatology and Immunology.
2. Physical Medicine and Rehabilitation.

b- Elective courses: none

Course Title	Course Code	NO. of hours per week				Total teaching hours/45 weeks	Programme ILOs covered (REFERRING TO MATRIX)
		Theoretical		Clinical /practical	Total		
		Lectures	seminars				
Rheumatology and Immunology:	**REH 516 RH**		-----	Include clinical and practical training courses **(REH 516 RHC) (REH 530 IMP)**		122 lectures or tutorials hours and 26 clinical hours /45 weeks	**A** 2,4-8, 10,11,19-24 **B**1-5,7,9-12, 17-30 **C** 1,2,4-6,8,9,10,12-14 **D** 1-20
1- General concepts & scientific basis of rheumatic diseases.		4hrs/week For 5 weeks	----		4 hrs	20 hrs/ 5 weeks	**A** 2,4,
2- Mechanisms and clinical aspects of rheumatic diseases.		4 hrs/week For 10 wks	----		4 hrs	40 hrs/ 10 weeks	**A**4,5,6,7
3- Investigations, assessment and evaluation of the patient with rheumatic disorders,		1hr/week For 13 wks & 2hrs/wk for 2 wks	----	2hrs/week For 13 weeks	3 hrs	17 hrs lectures or tutorials and 26hrs clinical/15 weeks	**A** 8 **B**1-3,5,7,9,19,20 **C**1,2,4,5,6,8
4- Management of rheumatic diseases.		3 hrs/ week For 15 wks	----		3 hrs	45 hrs/15 weeks	**A**10,11,19,20,21, 22,23,24 **B**4,10,11,12,17, 18,21-27,30 **C**9,10,12-14 **D**4,7,8,10,13,14, 17-20
Physical Medicine and Rehabilitation:			------	Include clinical and practical training courses **(REH 516 PDTC) (REH 516 ROPP)**		119 lectures or tutorials hours and 32 clinical hours /45 weeks	**A** 8,9,11-24 **B** 4,6,8,12-30 **C**1,2,4,7,8,10-14 **D** 1-20
1- (a) Principles of evaluation in rehabilitation medicine.		1hr/wk for one week & 2hrs/week For 4 weeks	-----	2hrs/week For one week	3 hrs for one wk 2 hrs For 4 wks	9 hrs lectures or tutorials and 2 hrs clinical/ 5 weeks	**A**12,13,14,18 **B** 4

(b)-Diagnostic procedures including electrodiagnosis & electrophysiological studies		2hr/week For 10 weeks	-----	3hrs/week For 10 weeks	5hrs/ week For 10 weeks	20 hrs lectures or tutorials and 30 hours clinical /10 weeks	**A** 9 **B** 1,2,3,5.22.23 **C** 1-4, 7,10,12,13,14 **D** 1-4
2- (a) Management methods including the use of physical modalities in rehabilitation medicine.		2hrs/week For 15 weeks			2hrs	30 hrs/15 weeks	**A** 8,11,15,16,17, 19-23 **B** 4,6,8,12-15, 17,19,20,24-27,30 **C** 1,2,4,8,10-14 **D** 1,2,4,6,7,8,10, 13, 14,17,19,20
(b)- Indications, prescription and evaluation of orthosis and prothesis.		1hr/week For 15 wks			1 hr	15 hrs/ 15 weeks	**B** 16
3- Major rehabilitation problems and rehabilitation of specific disorders.		3hrs/week For 15 wks			3hrs	45 hrs/ 15 weeks	**B** 18,21-27,30 **C** 12-14 **D** 2,4,6,7,8,10,13, 14,17,19,20
Other scientific activities:						2 credit	**A** 19-23 **B** 22-27 **D** 1-20
Thesis						6 credit	**A** 24 **B** 28, 29 **D** 1-6, 11,12,13,15,20
Log book activities						14 credit	**A** 19-23 **B** 22-27, 30 **C** 1-14 **D** 1-20

Programme-Courses ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the course titles or codes are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

P.S. All courses` specifications are attached in Appendix III

Programme ILOs

Course Title/Code	A1	A2	A3	A4	A5	A6	A7	A8	A9	A 10	A 11	A 12	A 13	A 14	A 15	A 16	A 17	A 18	A 19	A 20	A 21	A 22	A 23	A 24
Applied anatomy	x	x																						
Applied physiology			x						x								x							
Internal Medicine					x	x	x																	
Applied physics								x							x	x								
Regional musculoskeletal disorders				x		x		x			x								x	x	x	x	x	
Basics of clinical immunology			x		x			x																
Rheumatology & immunology		x		x	x	x	x	x		x	x								x	x	x	x	x	x
Physical medicine and rehabilitation								x	x		x	x	x	x	x	x	x	x	x	x	x		x	x

Course Title/Code	B 1	B 2	B 3	B 4	B 5	B 6	B 7	B 8	B 9	B 10	B 11	B 12	B 13	B 14	B 15	B 16	B 17	B 18	B 19	B 20	B 21	B 22	B 23	B 24	B 25
Applied anatomy	x	x																							
Applied physiology			x																						
Internal Medicine					x						x										x		x		
Applied physics								x					x				x								
Regional musculoskeletal disorders		x			x				x			x	x				x		x			x	x		
Basics of clinical immunology			x	x					x																
Rheumatology & immunology	x	x	x	x	x		x		x	x	x	x					x	x	x	x	x	x	x	x	x
Physical medicine and rehabilitation				x		x		x				x	x	x	x	x	x	x	x	x	x	x	x	x	x

Course Title/Code	Programme ILOs																																						
	B 26	B 27	B 28	B 29	B 30	C 1	C 2	C 3	C 4	C 5	C 6	C 7	C 8	C 9	C 10	C 11	C 12	C 13	C 14	D 1	D 2	D 3	D 4	D 5	D 6	D 7	D 8	D 9	D 10	D 11	D 12	D 13	D 14	D 15	D 16	D 17	D 18	D 19	D 20
Applied anatomy							X	X	X				X									X			X				X					X					
Applied physiology						X						X										X			X				X					X	X				
Internal Medicine	X	X				X									X		X	X				X			X	X	X		X								X	X	X
Applied physics															X	X			X			X	X	X	X		X	X	X				X			X	X		X
Regional musculoskeletal disorders		X	X	X			X	X					X	X	X	X	X			X	X	X	X	X	X	X	X						X			X	X	X	
Basics of clinical immunology											X											X			X		X		X					X	X				
Rheumatology & immunology	X	X	X	X	X	X	X		X	X	X		X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Physical medicine and rehabilitation	X	X	X	X	X	X	X		X			X	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X

(6) Programme admission requirements:

●General requirements:

According to the faculty postgraduate bylaws Appendix IV.

●Specific requirements (if applicable):

No specific requirements

(7) Regulations for progression and programme completion:

● Student must complete minimum of 45 credit hours in order to obtain the Msc. degree, which include the courses of first and second parts, thesis and activities of the log book.

● Courses descriptions are included in Appendix III.

● Registration for the Msc. thesis is allowed 6 months from the day of registration to the programme and must fulfill a total of 6 credit hours including material collection, patients selection and evaluation, laboratory work, patients follow-up, and meetings with supervisors.

Log book fulfillment:

● Student must fulfill a minimum of 14 credits of log book activities including;

1. Rotational clinical training in the general and specialized outpatients clinics of rheumatology & rehabilitation department including rheumatology, obesity, low back pain, pediatric and local injection clinics. Clinical training must include also in-patients hospital requests.
2. Rotational training on all physiotherapy and rehabilitation units including; rheumatic diseases rehabilitation, orthopedic rehabilitation, neurological rehabilitation, spine, obesity units.
3. Electromyography and nerve conduction studies clinical training.
4. Conferences attendance or speaking.

● Student must present at least 2 case presentations, 2 rheumatology lectures, 2 rehabilitation lectures, one orthosis & prosthesis seminar, one musculoskeletal radiology seminar, 2 journal club seminars.

● Lectures and seminars of the previously described courses (page 11-13) must be documented in the log book and signed by the lecturer.

● Works related to thesis must be documented in the log book and signed by the supervisors.

●Any workshops, conferences and scientific meetings should be included in the log book and candidate must attend twenty five weekly department meeting, ten Rheumatology & Rehabilitation thesis discussion, five Rheumatology conferences.

Final exam:

First part

Tools	Mark	Percentage of the total mark
Written exam:		
- Applied anatomy (3 papers with time allowed 3 hours)	60	
- Applied physiology (3 papers with time allowed 3 hours)	60	
- Clinical immunology (3 papers with time allowed 3 hours)	60	
- Internal medicine (2 papers with time allowed 3 hours)	90	
- Regional musculoskeletal disorders (2 papers with time allowed 3 hours)	90	
- Applied physics (one paper with time allowed 3 hrs)	180	
Oral exam:		
- Applied anatomy	40	
- Applied physiology	40	
- Clinical immunology	40	
- Internal medicine	30	
- Regional musculoskeletal disorders	60	
- Applied physics	120	
Practical exam.:		
- Internal medicine	30	
Total marks: 900		

Second part

Tools	Mark	Percentage of the total mark
Written exam - Rheumatology (one paper with time allowed 3 hours) - Rehabilitation (one paper with time allowed 3 hours)	 250 250	
Oral exam - Rheumatology and Immunology - Physical medicine and rehabilitation	 100 100	
Practical exam - Rheumatology and immunology - Physical medicine and rehabilitation - Orthosis, prosthesis & EMG & NCS	100 100 100	
Total marks: 1000		

(8) Evaluation of Programme's intended learning outcomes (ILOs):

Evaluator	Tools*	Signature
Internal evaluator **(s)**	**Focus group discussion** **Meetings**	
External Evaluator **(s)** **Prof.Dr. Abdel-Samad El-Hewala**	**Reviewing according to external evaluator checklist report.**	
Senior student **(s)** **Dr.**		
Alumni	**none**	
Stakeholder **(s)**	**none**	
others	**none**	

* TOOLS= QUESTIONNAIRE, INTERVIEW, WORKSHOP, COMMUNICATION, E_MAIL

We certify that all information required to deliver this programme is contained in the above specification and will be implemented. All course specification for this programme are in place.	
Programme coordinator: Name: Shereen Aly Machaly	Signature & date:
Dean: Name:	Signature & date:
Executive director of the quality assurance unit: Name:	Signature & date:


قسم الروماتيزم و التأهيل
COURSE SPECIFICATION
OF
APPLIED ANATOMY
(REH 501)
Rheumatology and Rehabilitation Department

COURSE SPECIFICATION

OF APPLIED ANATOMY

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	Master of Science in physical medicine, Rehabilitation and Rheumatology
(2) Department offering the programme:	Physical Medicine, Rehabilitation and Rheumatology
(3) Department responsible for teaching the course:	Anatomy Department
(4) Part of the programme:	First semester
(5) Date of approval by the Department`s council	15/8/2010
(6) Date of last approval of programme specification by Faculty council	17/8/2010
(7) Course title:	Applied anatomy
(8) Course code:	REH 501
(9) Total teaching hours:	10 Hours

(B) Professional information

(1) Course Aims:

1- To provide the candidate with knowledge concerning the normal structure of the vertebral column, trunk, upper and lower limbs

2- To enable the student to acquire and become proficient in function and structure of the joints of the human body.

3-To correlate anatomical facts with their clinical applications.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A 1- Describe basic anatomy, relevant to the musculoskeletal system including anatomy of lumbosacral and brachial plexuses, different dermatomes, brain and spinal cord.

A 2 - Recognize 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.

B- Intellectual skills

B1 - 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.

B2- 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.

C- Professional/practical skills

C 2- Examine patients, to include a specific examination of structure and function of all joints, both axial and peripheral, as well as periarticular structure and muscle units, to evaluate the musculoskeletal system and nervous system in an accurate manner

C 3 - Apply the anatomical facts during musculoskeletal examination in order to reach a proper diagnosis.

C4- Demonstrate appropriate positioning in relation to the patient in the exam room to facilitate good rapport with patients.

C 8- Interpret bone and joint imaging techniques applying the facts of anatomical structures and interpret bone density measurement.

D- Communication & Transferable skills

D 3- Retrieve, manage, and manipulate information by all means.
D 6- Communicate ideas and arguments effectively.
D10-Communicate effectively in its different forms with other specialties and generate the ethos of a multidisciplinary approach in the clinical setting.
D15- Continue to self-learning and self-evaluation and demonstrate personal learning needs.
D16- Demonstrate an educational role in the course by communicating their understanding to their peer groups, by means of presentations and lectures.

(3) Course content:

Subjects	Lectures	Clinical	Laboratory	Field	Total Teaching Hours (10 hrs/5 weeks)
▪ Gross anatomy of central nerves system ▪ Cranial nerves	2 hrs/week For one wk				2 hrs/ one week
▪ Spinal nerves and dermatomes ▪ Nerve plexuses (cervical , brachial , lumber and sacral)	2 hrs/week For one wk				2 hrs/ one week
Muscles of the body	2 hrs/week For one wk				2 hrs/ one week
▪ Vertebral column ▪ Joints of the body	2 hrs/week For one wk				2 hrs/ one week
Surface anatomy	2 hrs/week For one wk				2 hrs/ one week

(4) Teaching methods:

4.1: Lectures

4.2: Seminars

(5) Assessment methods:

5.1 written exam: to assess **A**1,2 .

5.2 Oral exam : to assess **A**1,2 **B**1,2 **C**3,8 .

5,3 Log book : to assess **B**1 **C** 2,3,4,8 **D** 3,6,10,15,16

Assessment schedule:

Assessment 1:…at the end of first semester……(at the end of 6th month) ……

Assessment 2:…at the end of first semester……(at the end of 6th month) ……

Percentage of each Assessment to the total mark:

Written exam 60 % (60 marks)

Oral exam 40 % (40 marks)

(6) References of the course:

6.1: Hand books:

Lecture notes handed to student

6.2: Text books:

Last's textbook of regional and applied anatomy.

Gray's anatomy

6.3: Journals:

Am J of anatomy

Anatomical record

6.4: Websites:

WWW.visiblebody.com

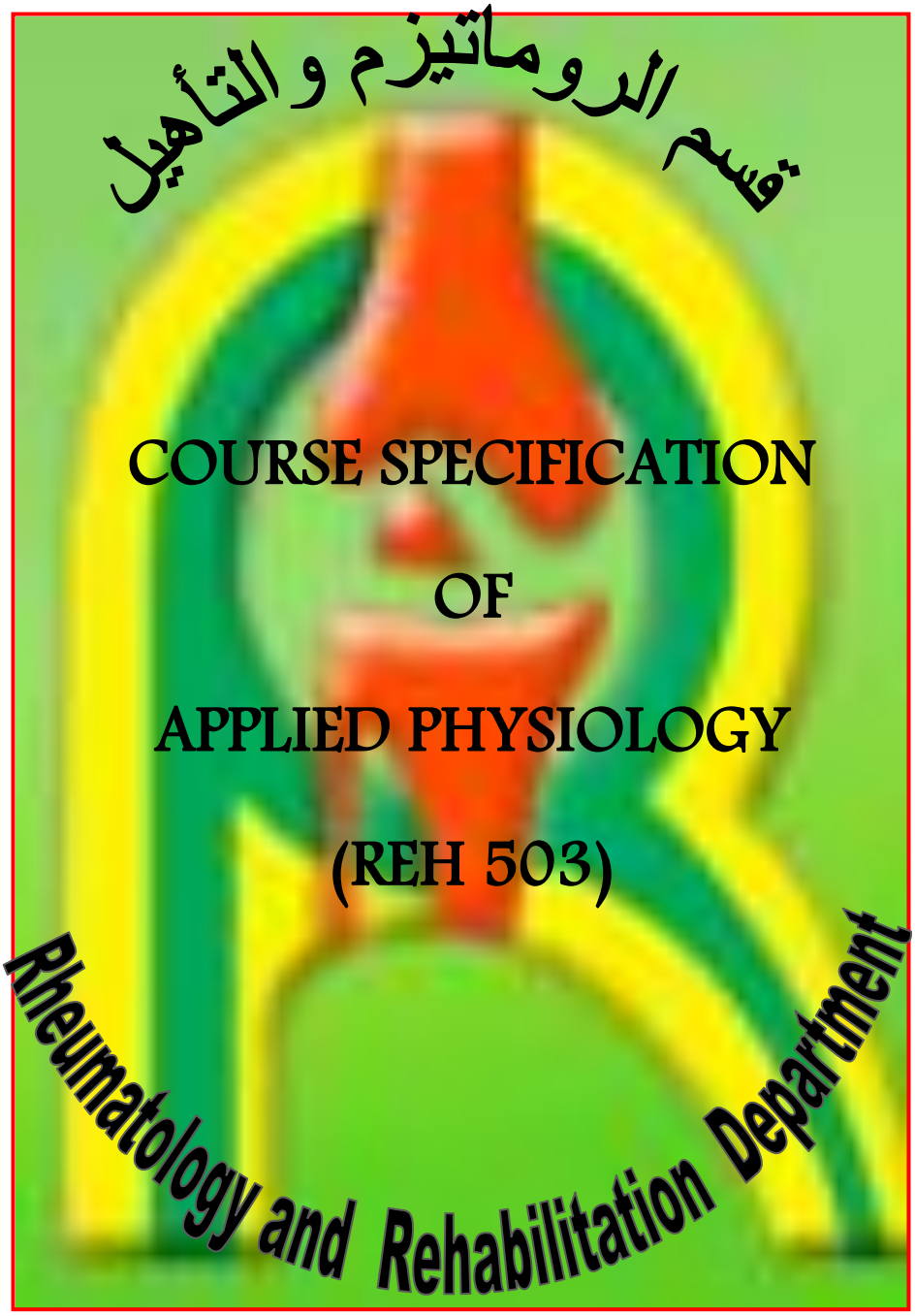
http://science.nhmccd.eud/biol/apl.html

http://anatomy- interactive.org

Course coordinator: Dr Shereen Aly Machaly

Prof. Dr. Atef El-Gaweet.

Head of the Department: Prof. Dr. Salah Hawas.


قسم الروماتيزم والتأهيل
COURSE SPECIFICATION
OF
APPLIED PHYSIOLOGY
(REH 503)
Rheumatology and Rehabilitation Department

COURSE SPECIFICATION
OF APPLIED PHYSIOLOGY
Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate Master degree of Rheumatology, Physical medicine and Rehabilitation /REH 500
(2) Department offering the programme:	Physical medicine, Rehabilitation and Rheumatology Department
(3) Department responsible for teaching the course:	Physiology Department
(4) Part of the programme:	First part
(5) Date of approval by the Department`s council	15-8-2010
(6) Date of last approval of programme specification by Faculty council	17-8-2010
(7) Course title:	Applied physiology
(8) Course code:	REH 503
(9) Total teaching hours:	10 hrs/ 5 weeks

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows: This course provides fellows with the ability to:

1-Apply specialized knowledge in physiological science and integrate with the knowledge of the relationship in professional practice

2-Master the appropriate scale of the professional skills, and use appropriate technological means to serve the professional practice in rheumatology and rehabilitation medicine

3-Use the resources available to achieve the highest benefit

4-Behave in a manner reflecting the commitment to integrity, credibility and commitment to the rules of the profession

5-Develop performance academically and professionally and be able to continuous learning

(2) Intended Learning Outcomes (ILOs):

Intended learning outcomes (ILOs); Are four main categories: knowledge & understanding to be gained, intellectual qualities, professional/practical and transferable skills.

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A3-Identify theories and fundamentals related to the physiology of musculoskeletal system and the immune system of human and its response.

A9- Identify indications, advantages, and limitations for electrophysiological studies, electromyography and nerve conduction studies.

A17- Understand exercise guidelines, benefits and hazards and understand physiologic effect of exercise on soft tissues.

B- Intellectual skills

B3- Analyze and evaluate the information of the body physiology and immunology and analogies to solve rheumatological and musculoskeletal problems.

C- Professional/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.

C7- Apply and integrate knowledge of electrophysiology to perform and interpret electromyography and nerve conduction studies.

C7 - Use of electrophysiological studies in biofeedback mechanisms in rehabilitation of certain patients.

D- Communication & Transferable skills

D 3- Retrieve, manage, and manipulate information by all means.

D 6- Communicate ideas and arguments effectively.

D10-Communicate effectively in its different forms with other specialties and generate the ethos of a multidisciplinary approach in the clinical setting.

D15- Continue to self-learning and self-evaluation and demonstrate personal learning needs.

D16- Demonstrate an educational role in the course by communicating their understanding to their peer groups, by means of presentations and lectures.

(3) Course content:

Subjects		Lectures 2hrs/week For 5 weeks	Clinical	Laboratory	Field	Total Teaching Hours (10 hrs/ 5 weeks)
Blood	Anaemias	1 hr/wk for one week				1 hr/wk for one week
Endocrine	Ca++	1 hr/wk for one week				1 hr/wk for one week
	Suprarenal cortex					
	Thyroid hormones					
Kidney	RBF	1 hr/wk for one week				1 hr/wk for one week
	GFR					
Respiration	Work of breathing	1 hr/wk for one week				1 hr/wk for one week
	Pulmonary ventilation					
	Hypoxia					
	Pulmonary function test					
CVS	Regulation of HR	1 hr/wk for one week				1 hr/wk for one week
	Regulation of Blood Pressure					
	Cardiac reserve					
	Effect of exercise on CVS					
Autonomic Nervous System (chemical transmitters)		1 hr/wk for one week				1 hr/wk for one week
Metabolism	Energy balance	1 hr/wk for one week				1 hr/wk for one week
	Obesity					
	Sports physiology					
Digestion	Gastric secretion	1 hr/wk for one week				1 hr/wk for one week
CNS	Receptors	1 hr/wk for one week				1 hr/wk for one week
	Ascending & descending tracts					
	Control of motor activity					
	Postural reflexes					
Muscle & Nerve	(all topics except smooth muscle)	1 hr/wk for one week				1 hr/wk for one week

(4) Teaching methods:

4.1: ….Lectures. ……

(5) Assessment methods:

5.1: Final written exam for assessment of..(A 3,9,17)

5.2: Final oral exam … for assessment of…….(A 3,9,17 , B 3, C1,7)

5.3: Log book… … for assessment of…….(B 3, C1,7, D3,6,10,15,16)

Assessment schedule:

Assessment 1:……at the end of 6th month (first semester)…… ……

Assessment 2:…… at the end of 6th month (first semester)……

Percentage of each Assessment to the total mark:

Written exam: ……60 %……

Oral exam: ……40 %……

Other assessment without marks:

(6) References of the course:

6.1: Hand books:……hand book of the department……..

6.2: Text books:… Human physiology: from cells to systems, by Lauralee Sherwood ……

6.3: Journals:…… Physiological Reviews……&…Physiology……

6.4: Websites:…… http://www.the-aps.org/……

(7) Facilities and resources mandatory for course completion:

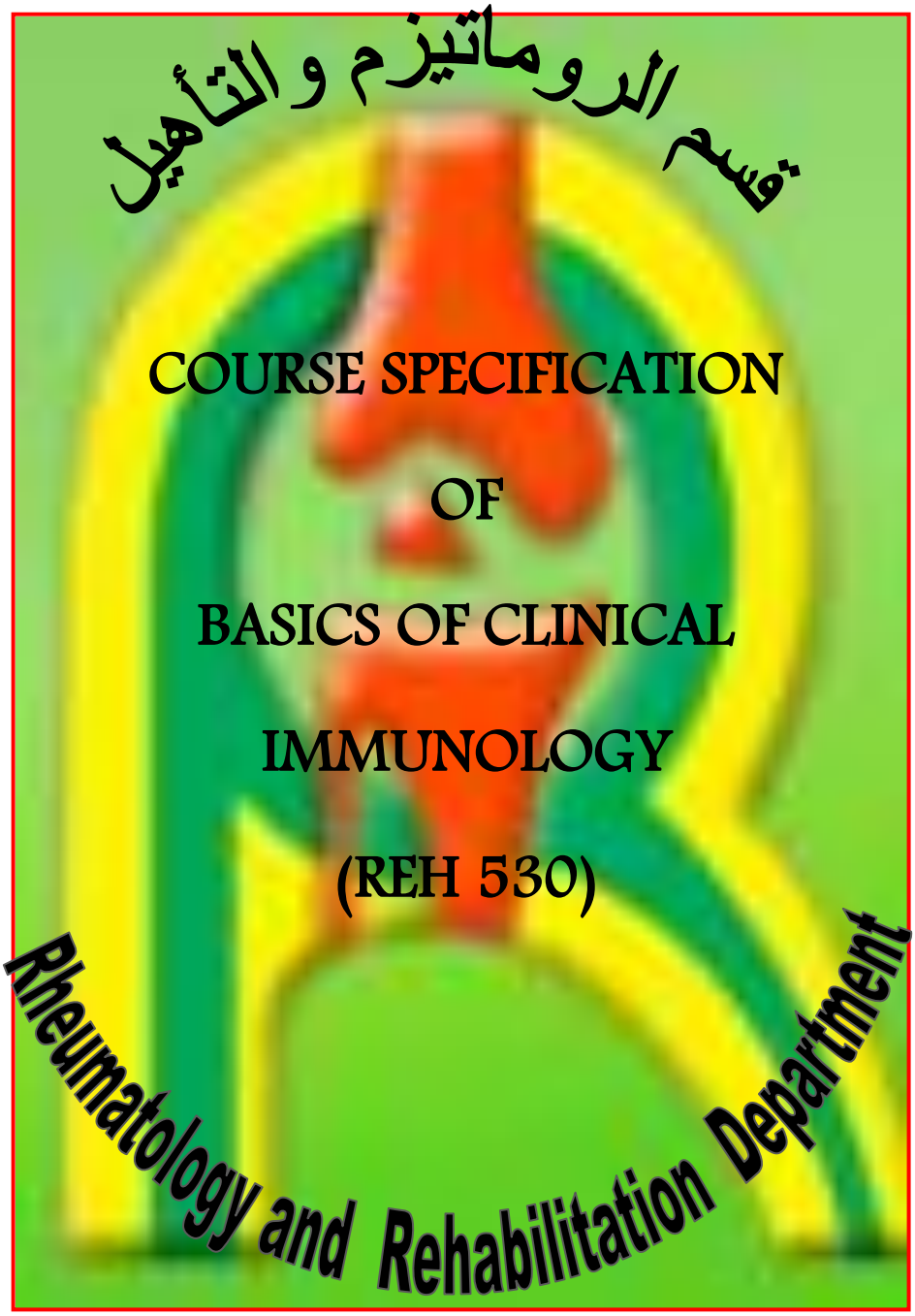
-Laptop and data show projector

-Laser pointer and white board

-Comfortable and well prepared classroom

Course coordinator: Dr Shereen Aly Machaly

Head of the department: Prof Dr Salah Hawas Date: 9/8/2010


قسم الروماتيزم والتأهيل
COURSE SPECIFICATION
OF
BASICS OF CLINICAL
IMMUNOLOGY
(REH 530)
Rheumatology and Rehabilitation Department

COURSE SPECIFICATION
OF BASICS OF CLINICAL IMMUNOLOGY
Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate Master degree of Rheumatology, Physical medicine and Rehabilitation /REH 500
(2) Department offering the programme:	Rheumatology, Physical medicine and Rehabilitation Department
(3) Department responsible for teaching the course:	Clinical pathology and Immunology Department
(4) Part of the programme:	First part
(5) Date of approval by the Department`s council	15-8-2010
(6) Date of last approval of programme specification by Faculty council	17-8-2010
(7) Course title:	Basics of clinical immunology
(8) Course code:	REH 530
(9) Total teaching hours:	10 hrs/5 weeks

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows: This course provides fellows with the ability to:

1-Apply specialized knowledge in immunology and integrate with the knowledge of the relationship in professional practice of rheumatology

2-Master the appropriate scale of the professional skills, and use appropriate technological means to serve the professional practice

3-Use the resources available to achieve the highest benefit

4- Behave in a manner reflecting the commitment to integrity, credibility and commitment to the rules of the profession

5-Develop performance academically and professionally and be able to continuous learning

(2) Intended Learning Outcomes (ILOs):

Intended learning outcomes (ILOs); Are four main categories: knowledge & understanding to be gained, intellectual qualities, professional/practical and transferable skills.

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A3-Identify theories and fundamentals related to the physiology of musculoskeletal system and the immune system of human and its response.

A 5 -Identify clinical and molecular genetics, aetiology, pathogenesis, and basic mechanisms of rheumatic diseases and related disorders.

A8- Explain the scientific basis of the methodology, and list indications of laboratory tests, physical tests and imaging procedures used in diagnosis and monitoring of different rheumatic, orthopedic, neurologic disorders and others in need for rehabilitation.

B- Intellectual skills

B3- Analyze and evaluate the information of the body physiology and immunology and analogies to solve rheumatological and musculoskeletal problems.

B4- Integrate basic science of pathology, genetics, immunology, and biochemistry of connective tissue, bone, joint, and muscle with clinical care of patients with rheumatic disorders and/or patients in rehabilitation setting.

B 9- Select from different diagnostic alternatives and interpret various diagnostic procedures to reach a final diagnosis.

C- Professional/practical skills

C6- Investigate immune system by proper laboratory and immunological tests for accurate diagnosis and management of autoimmune rheumatic diseases and use professionally the immune therapy for some rheumatological diseases.

D- Communication & Transferable skills

D 3- Retrieve, manage, and manipulate information by all means.
D 6- Communicate ideas and arguments effectively.
D 8- Work effectively within a team and leadership teams in health care team or other various professional contexts.
D10-Communicate effectively in its different forms with other specialties and generate the ethos of a multidisciplinary approach in the clinical setting.
D15- Continue to self-learning and self-evaluation and demonstrate personal learning needs.
D16- Demonstrate an educational role in the course by communicating their understanding to their peer groups, by means of presentations and lectures.

(3) Course content:

Subjects	Lectures 2 hrs/wk for 5 wks	Clinical	Laboratory	Field	Total Teaching Hours (10 hrs/ 5 weeks)
▪ Innate immunity	1 hr/ wk For one week				1 hr/ one week
▪ Lymphocytes & lymphoid ▪ tissues	1 hr/ wk For one week				1 hr/ one week
▪ Immune response	1 hr/ wk For one week				1 hr/ one week
▪ Antigen presentation & ▪ Major histocomptability complex	1 hr/ wk For one week				1 hr/ one week
▪ Immunoglobulins & Immunoglobulin genes	1 hr/ wk For one week				1 hr/ one week
▪ Cytokines	1 hr/ wk For				1 hr/ one week

	one week				
▪ Chemokines	1 hr/ wk For one week				1 hr/ one week
▪ Complement & Kinin	1 hr/ wk For one week				1 hr/ one week
▪ Inflammation	1 hr/ wk For one week				1 hr/ one week
▪ Apoptosis	1 hr/ wk For one week				1 hr/ one week

(4) Teaching methods:

4.1: ……Lectures……..

4.2: ……

(5) Assessment methods:

5.1: Final written exam ….. for assessment of…….(A 3,5,8, B 9, C 2,7,8).

5.2: Final oral exam…….. for assessment of……(A 3,5,8, B 3,4,9, C 6)

5.3: Log book…….. for assessment of……(C 6, D 3,6,8,10,15,16)

Assessment schedule:

Assessment 1:…at the end of ……6th month (first semester)……

Assessment 2:…at the end of ……6th…month (first semester)……

Percentage of each Assessment to the total mark:

Written exam: ……60 %……

Oral exam: ……40 %……

Other types of assessment:…… .%::……

Other assessment without marks:

(6) References of the course:

6.1: Hand books: ……Basic immunology handbook. ……

6.2: Text books: ……Cellular and Molecular Immunology Text book. ……

6.3: Journals: …… Journal of clinical Immunology…….. …
……Journal of Immunology…
6.4: Websites:……http://immunology.org/……..
……..http://www.aai.org/……
6.5: Others:……

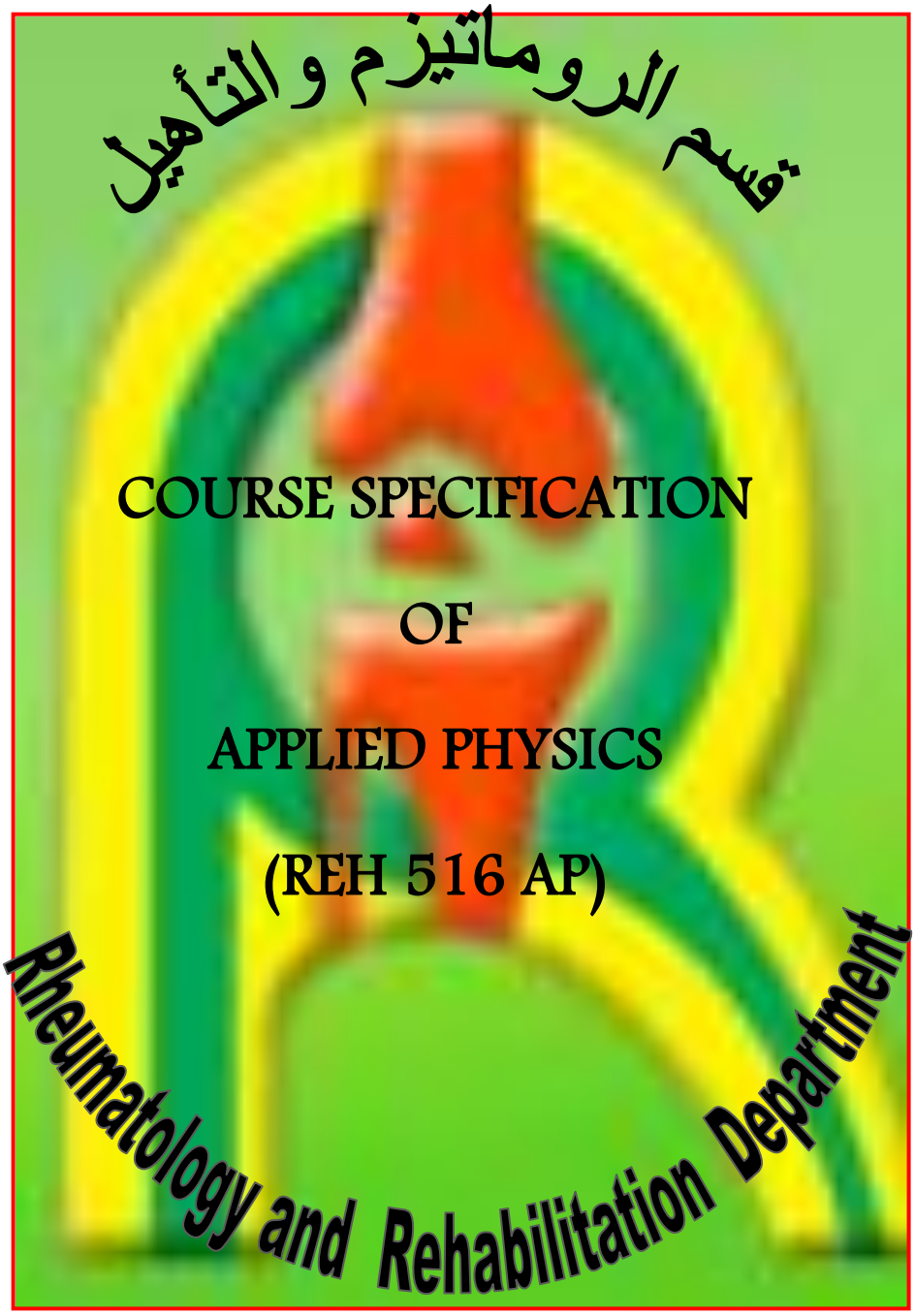
(7) Facilities and resources mandatory for course completion:

-Laptop for lectures presentation
-Data show projector
- Laser pointer and white board
-Comfortable well prepared classroom

Course coordinator: Dr Shereen Aly Machaly

Head of the department: Prof Dr Salah Hawas

Date: 10/8/2010


قسم الروماتيزم و التأهيل
COURSE SPECIFICATION
OF
APPLIED PHYSICS
(REH 516 AP)
Rheumatology and Rehabilitation Department

COURSE SPECIFICATION
OF APPLIED PHYSICS
Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Program offering the course:	Postgraduate master degree of Physical medicine, Rehabilitation and Rheumatology
(2) Department offering the programme:	Physical medicine, Rehabilitation and Rheumatology Department
(3) Department responsible for teaching the course:	Physical medicine, Rehabilitation and Rheumatology Department
(4) Part of the programme:	First Part
(5) Date of approval by the Department`s council	15-8-2010
(6) Date of last approval of programme specification by Faculty council	17-8-2010
(7) Course title:	Applied Physics
(8) Course code:	REH 516 AP
(9) Total teaching hours:	15 hours

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

1-To provide the basics and methodologies of scientific research and apply analytical and critical approach to the knowledge in the field of physical medicine and rehabilitation

2-To give deep awareness of ongoing problems and theories in the field of physical medicine and rehabilitation (PM &R) and identify problems and find solutions to it

3-To master a wide range of professional skills in the field of rheumatology, physical medicine and rehabilitation

4-To develop methods and tools and new ways of professional practice and use appropriate technological means to serve the professional practice

5-The course provides fellows with the ability to:

a) Communicate effectively and lead a team to work in different professional contexts and take the decision in light of available information

b) Recruit available resources efficiently, develop and work to find new resources

c) Behave in a manner reflecting the commitment to integrity and credibility, and rules of the profession

d) Continuing self-development and transfer of knowledge and experience of others

(2) Intended Learning Outcomes (ILOs):

Intended learning outcomes (ILOs); Are four main categories: knowledge & understanding to be gained, intellectual qualities, professional/practical and transferable skills.

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A 8- Explain the scientific basis of the methodology, and list indications of laboratory tests, physical tests and imaging procedures used in diagnosis and monitoring of different rheumatic, orthopedic, neurologic disorders and others in need for rehabilitation.

A15- Identify different categories of physiotherapy modalities and understand their physiologic effects on soft tissues and describe their various mechanisms related to the management of rheumatic, orthopedic, neurological and other disorders.

A16- Identify benefits and hazards of uses of physical agents in the field of rheumatology and rehabilitation medicine

B- Intellectual skills

B8- Integrate knowledge of physical science in the context of managing different musculoskeletal disorders according to the type of lesion.

B13- Apply physical medicine and design rehabilitation program in patients with rheumatologic, neurological, orthopedics and other medical disorders.

B17- Compare use of various treatment methods including alternative and complementary medicine in the context of patient satisfaction, efficacy, and cost-benefit.

C- Professional/practical skills

C10- Write and evaluate medical reports, clinical sheets including all collected data relevant to the patient's condition and physiotherapy treatment regimen sheets.

C11- Deal efficiently with physiotherapy modalities and professional prescribing for appropriate conditions with proper positioning of the patient.

C14- Work effectively in various health care delivery settings and systems relevant to their clinical specialty.

D- Communication & Transferable skills

D 3- Retrieve, manage, and manipulate information by all means.

D 4- Use different resources to gain knowledge and information related to rheumatology and rehabilitation fields.

D 5- Present clearly, and effectively a scientific topic in front of audience using computer and power point skills.

D 6- Communicate ideas and arguments effectively.

D 8- Work effectively within a team and leadership teams in health care team or other various professional contexts.

D 9- Develop rules and indicators for assessing the performance of other stuff of the medical team within the field of rheumatology and rehabilitation medicine.

D10-Communicate effectively in its different forms with other specialties and generate the ethos of a multidisciplinary approach in the clinical setting.

D14- Demonstrate ability to articulate the risks and benefits of different treatment options to patients, present information to patients, family members, caregivers & other health care providers in an effective manner and establish trust and maintain positive rapport with patients.

D 17- Accept personal responsibility for own actions & decisions.

D18- Demonstrate compassion, integrity, and respect for all patient's rights and treat all patients equally regardless to their believes, culture and behavior.

D20- Maintain comprehensive, timely, and legible medical records, if applicable.

(3) Course content:

Subjects	Lectures (1 hr/week For 15 weeks)	Clinical	Laboratory	Field	Total Teaching Hours (15 hours/ 15 weeks)
Electromagnetic spectrum.					
1-Ultra-violet rays	1 hr/ week for one week				1 hr/ one week
2-Infra red rays	1 hr/ week for one week				1 hr/ one week
3-LASER waves	1 hr/ week for one week				1 hr/ one week
4-High frequency currents (SW, MW)	1 hr/ week for one week				1 hr/ one week
Electric currents					1 hr/ one week
1-Resistence	1 hr/ week for one week				1 hr/ one week
2-Capacitance	1 hr/ week for one week				1 hr/ one week
3-Types: • Direct current • Sinusoidal current • Faradic current • TENS • Didynamic current • Interferential current	1 hr/ week for 5 weeks				5 hr/ 5 weeks
Ultrasonic waves	1 hr/ week				1 hr/ one week

	for one week				
Latent heat	1 hr/ week for one week				1 hr/ one week
Viscosity, surface tension, hydrotherapy	1 hr/ week for one week				1 hr/ one week
Magnetism	1 hr/ week for one week				1 hr/ one week

(4) Teaching methods:

4.1: Lectures

(5) Assessment methods:

5.1: Final written exam for assessment of .....A 8,15,16 & B 8,17

5.3: Final oral exam for assessment of ..... A 8,15,16 , B 8,13,17, C 11

5.2: Log book for assessment of..... B 8,13,17 , C 10,11,14 , D 3-6, 8-10,14,17,18,20

Assessment schedule:

Assessment 1:.....at the end of 6th month (first semester)..... .....

Assessment 2:..... at the end of 6th month (first semester).....

Percentage of each Assessment to the total mark:

Written exam.: 180 marks (60%)

Oral exam.: 120 marks (40%)

(6) References of the course:

6.1: Text books: Clayton's Electrotherapy: Theory & practice, by Forster A and Palastanga N

6.2: Journals: .....Journal of Applied Physics,

.....Journal of physical medicine and rehabilitation,

.....Archives of physical medicine and rehabilitation

6.3: Websites: Physical medicine encyclopedia (http://en.wikipedia.org/wiki/Physical_medicine_and_rehabilitation).

(7) Facilities and resources mandatory for course completion:

-Laptop and data show projector

-Laser pointer and white board

-Comfortable and well prepared classroom

- Physiotherapy tools and apparatuses

Course coordinator: Dr. Shereen Aly Machaly

Head of the department: Prof. Dr Salah Hawas

Date: 15/8/2010


قسم الروماتيزم والتأهيل
COURSE SPECIFICATION
OF
REGIONAL MUSCULOSKELETAL
DISORDERS
(REH 516 MD)
Rheumatology and Rehabilitation Department

COURSE SPECIFICATION

OF REGIONAL MUSCULOSKELETAL DISORDERS

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	M.Sc in Rheumatology, Physical Medicine and Rehabilitation /REH 500
(2) Department offering the programme:	Department of Physical Medicine , Rehabilitation & Rheumatology
(3) Department responsible for teaching the course:	Department of Physical Medicine , Rehabilitation & Rheumatology
(4) Part of the programme:	First part
(5) Date of approval by the Department`s council	15 /8 /2010
(6) Date of last approval of programme specification by Faculty council	17 /8 /2010
(7) Course title:	Regional Musculoskeletal Disorders
(8) Course code:	REH 516 MD
(9) Total teaching hours:	15 hrs /15 weeks

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows: (either to be written in items or as a paragraph)

1- To give the Msc candidates a sound understanding of concepts and research in regional musculoskeletal disorders.

2- To provide them with appropriate theoretical & clinical knowledge base and comprehensive training in the scientific basis of different aspects of regional rheumatic disorders.

3- To provide ability to apply sound judgment to diagnose and manage various regional musculoskeletal disorders

(2) Intended Learning Outcomes (ILOs):

Intended learning outcomes (ILOs); Are four main categories: knowledge & understanding to be gained, intellectual qualities, professional/practical and transferable skills.

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A 4 -Outline epidemiology, frequency and risk factors of the spectrum of diseases affecting the musculoskeletal system, and their impact on global health.

A6- 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.

A 8- Explain the scientific basis of the methodology, and list indications of laboratory tests, physical tests and imaging procedures used in diagnosis and monitoring of different rheumatic, orthopedic, neurologic disorders and others in need for rehabilitation.

A 11- List the pharmacological therapeutic and other treatment options for rheumatic diseases, including complementary and alternative therapies.

A 19- Identify basics of health and patient's safety and safety procedures during practice.

A 20- Identify proper patient care and patient's rights to obtain the optimum health care and effective treatment of rheumatic diseases.

A 21 -Identify basics of ethics, medicolegal aspects, malpractice and common medical errors in rheumatology & rehabilitation medicine.

A22- Recognize principles and basics of quality assurance during practice and professionalism.

A23- Demonstrate knowledge of effects and hazards of professional practice in rheumatology field and rehabilitation medicine on environment and identify mutual influence between professional practice and its impacts on the environment.

B- Intellectual skills

B2- 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.

B5- Integrate patient's symptomatology, historic data, abnormal physical signs and investigations into a comprehensive differential diagnosis of various musculoskeletal disorders.

B 9- Select from different diagnostic alternatives and interpret various diagnostic procedures to reach a final diagnosis.

B12 -Formulate appropriate management plans for individual patients presenting with musculoskeletal diseases, autoimmune rheumatological disorders and related internal medical disorders.

B13- Apply physical medicine and design rehabilitation program in patients with rheumatologic, neurological, orthopedics and other medical disorders.

B17- Compare use of various treatment methods including alternative and complementary medicine in the context of patient satisfaction, efficacy, and cost-benefit.

B19- Apply appropriate assessment & measurement tools to evaluate functional status or outcomes of type of treatment used.

B22- Consider effects of personal, social and cultural factors in the disease process and patient management.

B23- Apply ethical issues and resolve ethical dilemmas in relation to clinical practice

C- Professional/practical skills

C 2- Examine patients, to include a specific examination of structure and function of all joints, both axial and peripheral, as well as periarticular structure and muscle units, to evaluate the musculoskeletal system and nervous system in an accurate manner

C 3 - Apply the anatomical facts during musculoskeletal examination in order to reach a proper diagnosis.

C 8- Interpret bone and joint imaging techniques applying the facts of anatomical structures and interpret bone density measurement.

C 9- Perform therapeutic injection of synovial joints, bursae, tenosynovial structures and enthuses.

C10- Write and evaluate medical reports, clinical sheets including all collected data relevant to the patient's condition and physiotherapy treatment regimen sheets.

C11- Deal efficiently with physiotherapy modalities and professional prescribing for appropriate conditions with proper positioning of the patient.

C12- Apply sound ethical principles in practice (e.g., informed consent, confidentiality, veracity, provision or withholding of care).

D- Communication & Transferable skills

D 1- Be prepared for the lifelong learning needs of the profession in rheumatology & rehabilitation medicine.

D 2- Use information and communication technology effectively in the field of rheumatology and rehabilitation medicine.

D 3- Retrieve, manage, and manipulate information by all means.

D 4- Use different resources to gain knowledge and information related to rheumatology and rehabilitation fields.

D 5- Present clearly, and effectively a scientific topic in front of audience using computer and power point skills.

D 6- Communicate ideas and arguments effectively.

D 7- Demonstrate caring/respectful behaviors with patients and staff.

D 8- Work effectively within a team and leadership teams in health care team or other various professional contexts.

D14- Demonstrate ability to articulate the risks and benefits of different treatment options to patients, present information to patients, family members, caregivers & other health care providers in an effective manner and establish trust and maintain positive rapport with patients.

D 17- Accept personal responsibility for own actions & decisions.

D18- Demonstrate compassion, integrity, and respect for all patient's rights and treat all patients equally regardless to their believes, culture and behavior.

D19- Recognize one's own limitation of knowledge and skills and refer patients to appropriate specialized health facility at appropriate stage.

(3) Course content:

Subjects	Lectures (1 hr/week for 15 weeks)	Clinical	Laboratory	Field	Total Teaching Hours (15 hrs/ 15 weeks)
Introduction to regional Musculoskeletal Disorders	1hr/wk for one week				one hr for one week
Joints & Tendons ➡ Bursitis ➡ Tendonitis ➡ Tenosynovitis (trigger finger) ➡ Ligament strain & sprain	1hr/wk for one week				1 hr for one week
Wrist & Hand ➡ Carpel tunnel Syndrome ➡ Trigger finger ➡ Reynard's syndrome ➡ Ganglion ➡ Dupuytren's contracture	1hr/wk for 2 weeks				2 hrs for 2 weeks
Elbow ➡ Epicondylitis : ➡ Tennis Elbow ➡ Golfers elbow	1hr/wk for 2 week				2 hrs for 2 weeks
Neck & Shoulder ➡ Rotator cuff tendonitis (Supraspinatus tendonitis) ➡ Capsulitis (Frozen shoulder) ➡ Thoracic outlet syndrome	1hr/wk for 2 weeks				2 hrs for 2 weeks
Back ➡ Degenerative disk disease ➡ Herniated disc ➡ Chronic back pain	1hr/wk for 2 weeks				2 hrs for 2 weeks
Legs & Feet ➡ Hallux valgus ➡ Hammer toe ➡ Morton's neuroma	1hr/wk for 2 weeks				2 hrs for 2 weeks

➡ Tarsal tunnel syndrome ➡ Plantar fasciitis					
➡ Osteoarthritis ➡ Complex regional pain syndromes	1hrs/wk for 2 weeks				2 hrs for 2 weeks
➡ Fibromyalgia ➡ Myofascial pain syndromes	1hr/wk for one week				1 hr for one week

(4) Teaching methods:

4.1: …Lecture with discussion using power point presentations

4.2: … Class discussion

4.3: … Clinical presentations & case studies

(5) Assessment methods:

5.1: Written examination to assess **A** 4,6,8,11 & **B** 9,12,17

5.2: Oral examination to assess **A** 4,6,8,11,21-23 & **B** 2,5,9,12,13,17 and **C** 8,11

5.3: Log book to assess **A** 19-23, **B** 2,5,9,12,13,17,19,22,23, **C** 2,3,8-12 , **D** 1-8,14,17,18,19

Assessment schedule:

Assessment 1: at the end of 6th month:

Assessment 2: at the end of 6th month:

Percentage of each Assessment to the total mark:

Written exam:… 90 marks……..(60 %)……

Oral exam:……..60 marks ……(40 %)……

Other assessment without marks: ……..Log book

(6) References of the course:

6.1: Hand books:…Primer on the Rheumatic Diseases Published by the arthritis foundation USA

6.2: Text books: Kelley's Text Book of Rheumatology Published by ELSEVIER SAUNDERS USA

6.3: Journals: journal of Rheumatology

Arthritis and Rheumatism

6.4: Websites WWW. EULAR .COM

WWW. ARTHRITIS. ORG

WWW. JOINT & BONE. COM

WWW.RHEUMATOLOGY.ORG

6.5: Others ……Attending meetings & Conferences…… ……

(7) Facilities and resources mandatory for course completion:

1- **ADEQUATE INFRASTRUCTURE**: including teaching places (Teaching class, teaching halls, imaging facilities), comfortable desks, good source of aeration, bathrooms, and good illumination.

2- **TEACHING TOOLS**: including screens, computers including data shows, projectors, flip charts, white boards, video player, scanner, copier, and laser pointer.

3- Out patient clinic for collection of clinical cases

4- Pharmacy for pharmacological treatment of patients

5- Rehabilitation measures & physiotherapy equipments for rehabilitating patients

Course coordinator: Prof. Amir Youssef

Dr Shereen Machaly

Head of the department: Prof. Salah Hawas

Date: 1/8/ 2010


قسم الروماتيزم و التأهيل
COURSE SPECIFICATION
OF
INTERNAL MEDICINE
(REH 510)
Rheumatology and Rehabilitation Department

COURSE SPECIFICATION
OF INTERNAL MEDICINE
Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	M.Sc in Rheumatology, Physical Medicine and Rehabilitation /REH 500
(2) Department offering the programme:	Department of Physical Medicine , Rehabilitation & Rheumatology
(3) Department responsible for teaching the course:	Department of internal Medicine
(4) Part of the programme:	First part
(5) Date of approval by the Department`s council	15 /8 /2010
(6) Date of last approval of programme specification by Faculty council	17 /8 /2010
(7) Course title:	Internal Medicine
(8) Course code:	REH 510
(9) Total teaching hours:	15 hrs/ 15 weeks

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

1- Provide the postgraduate M.Sc student with internal medicine knowledge and skills essential for the practice of Rheumatology and necessary to gain further training and practice in the field of rheumatology.
2- Provide scientific knowledge essential for the practice of internal medicine topics relevant to rheumatology practice.
3- Provide skills necessary for proper diagnosis and management of patients in the field of internal medicine related to rheumatology including diagnostic, problem solving and decision making.
4- Teach ethical principles related to the practice in this specialty.
5 -Allow active participation in community needs assessment and problem solving.
6- Maintenance of abilities necessary for continuous medical education.

(2) Intended Learning Outcomes (ILOs):

Intended learning outcomes (ILOs); Are four main categories: knowledge & understanding to be gained, intellectual qualities, professional/practical and transferable skills.

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A 5 -Identify clinical and molecular genetics, aetiology, pathogenesis, and basic mechanisms of rheumatic diseases and related disorders.

A6- 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.

A7- Identify the spectrum of clinical symptoms and signs of musculoskeletal disorders and common medical conditions with multisystem affection.

B- Intellectual skills

B5- Integrate patient's symptomatology, historic data, abnormal physical signs and investigations into a comprehensive differential diagnosis of various musculoskeletal disorders.

B11- 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.

B23- Apply ethical issues and resolve ethical dilemmas in relation to clinical practice

B26- Incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care as appropriate

B27-Advocate for quality patient care and optimal patient care systems

C- Professional/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.

C10- Write and evaluate medical reports, clinical sheets including all collected data relevant to the patient's condition and physiotherapy treatment regimen sheets.

C12- Apply sound ethical principles in practice (e.g., informed consent, confidentiality, veracity, provision or withholding of care).

C 13- 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- Communication & Transferable skills

D 3- Retrieve, manage, and manipulate information by all means.

D 6- Communicate ideas and arguments effectively.

D 7- Demonstrate caring/respectful behaviors with patients and staff.

D 8- Work effectively within a team and leadership teams in health care team or other various professional contexts.

D10-Communicate effectively in its different forms with other specialties and generate the ethos of a multidisciplinary approach in the clinical setting.

D18- Demonstrate compassion, integrity, and respect for all patient's rights and treat all patients equally regardless to their believes, culture and behavior.

D19- Recognize one's own limitation of knowledge and skills and refer patients to appropriate specialized health facility at appropriate stage.

D20- Maintain comprehensive, timely, and legible medical records, if applicable.

(3) Course content:

Subjects	Lectures (1 hr/ week for 15 wks)	Clinical	Laboratory	Field	Total Teaching Hours (15 hours/ 15 weeks)
Cardiovascular system ▪ Heart failure ▪ Rheumatic fever ▪ Coronary heart disease ▪ Hypertension ▪ Infective endocarditis ▪ Pulmonary embolism ▪ Pulmonary hypertension	1 hr/ week for 3weeks				3 hrs/ 3 weeks
Blood : ▪ Anemia ▪ Bleeding diathesis	1 hr/ week for one week				1 hr/ one week
GIT & liver : ▪ GIT hemorrhage ▪ Dyspepsia ▪ Chronic diarrhea ▪ Hepatitis, acute & chronic ▪ Jaundice ▪ Inflammatory bowel disease	1 hr/ week for 3weeks				3 hrs/ 3 weeks
Kidney : ▪ Renal failure ▪ Glomerulonephritis ▪ Nephrotic syndrome	1 hr/ week for 2weeks				2hrs/ 2 weeks
Endocrine System : ▪ Pituitary gland ▪ Thyroid gland ▪ Suprarenal gland ▪ Parathyroid gland	1 hr/ week for 2weeks				2hrs/ 2 weeks
Infection in the immuno-Compromised host	1 hr/ week for one week				1 hr/ one week

Chest Diseases : ▪ Asthma ▪ Pneumonia ▪ COPD ▪ Pleural effusion	1 hr/ week for 2weeks				2hrs/ 2 weeks
Pyrexia of unknown Etiology	1 hr/ week for one week				1 hr/ one week

(4) Teaching methods:

4.1: Illustrated lectures and case studies

4.2: Clinical rounds on patients.

4.3: Interactive presentations (lectures with discussion)

(5) Assessment methods:

5.1: Written examination to assess .....A $_{5,6,7}$, B $_{5,11}$

5.2 Clinical examination to assess .....A $_{7}$, B $_{5,11,21,23,26}$, C$_{1,10}$

5.3 Objective structured oral exam to assess A $_{5,6,7}$, B $_{5,11}$, and D $_{6}$

5.4 Log book to assess..... B $_{11,21,23,26,27}$, C$_{1,10,12,13}$, D $_{3,6.7,8,10,18,19,20}$

Assessment schedule:

Assessment 1:.....at the end of 6th month (first semester)..... .....

Assessment 2:..... at the end of 6th month (first semester).....

Assessment 3:.....at the end of 6th month (first semester)..... .....

Percentage of each Assessment to the total mark:

Written exam:...90/150 marks..... (60%)

Clinical exam:...30/150 marks.....(20 %)

Oral exam:..... 30/150 marks.....(20 %).

(6) References of the course:

6.1- Essential Books (Text Books)

- Kumar and Clarke Textbook of Medicine; Parveen Kumar and Richard Clark; Blackwell Science;
- Hutchison's Clinical Methods; Robert Hutchison; Harry Rainy; last edition

6.2- Recommended Books

- Cecil Textbook of Medicine; McGraw Hill; last edition
- Harrison's Textbook of Medicine, McGraw Hill, last edition

6.3- Periodicals:
- American Journal of Medicine
- Annals of Internal Medicine
- Archives of Internal Medicine

6.4 Web Sites:
- WWW.American Heart Association. Com
- WWW. American gastroenterology Association.com
- WWW. Circulation.com
- WWW. American Rheumatology Association.com

(7) Facilities and resources mandatory for course completion:

1. **ADEQUATE INFRASTRUCTURE including :**

Teaching places, (teaching class, teaching halls, teaching laboratory), comfortable desks, good source of aeration, bathrooms, good illumination, and safety & security tools.

2. **TEACHING TOOLS including :**

Screens, computers including: CD data shows and overhead projectors, flip charts, white boards, video player, scanner, copier and laser pointer.

Course coordinator: Prof Dr Amir Youssef
Dr Shereen Machaly

Head of the department: Prof, Salah Hawas

Date: 5/ 8 / 2010


قسم الروماتيزم والتأهيل
COURSE SPECIFICATION
OF
RHEUMATOLOGY
AND
IMMUNOLOGY
(REH 516 RH)
Rheumatology and Rehabilitation Department

COURSE SPECIFICATION
OF RHEUMATOLOGY AND IMMUNOLOGY
Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate Master degree of Rheumatology & Rehabilitation and Physical Medicine/ REH 500
(2) Department offering the programme:	Rheumatology & Rehabilitation and Physical Medicine department
(3) Department responsible for teaching the course:	Rheumatology & Rehabilitation and Physical Medicine department
(4) Part of the programme:	Second part
(5) Date of approval by the Department`s council	15/8/2010
(6) Date of last approval of programme specification by Faculty council	17/8/2010
(7) Course title:	Rheumatology & Immunology
(8) Course code:	**REH 516 RH**
(9) Total teaching hours:	122 lectures or tutorials hours and 26 clinical hours /45 weeks (9 credit hours in 3 semesters)

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows: (either to be written in items or as a paragraph)

1- The course is designed to prepare the candidate for Systems-based Practice where they must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care (www.acgme.org) / (acgme competencies).

2- To provide fellows with the skills required to perform as well-trained, productive independent clinical investigators and independent consultants and primary care providers for patients with inflammatory and/or musculoskeletal disorders. These goals are optimally met in a three-year program

3- To provide a rigorous, exciting, and productive training experience for those individuals interested in developing careers as independent physician-scientists. This requires at least a three year commitment to the study of molecular and cellular mechanisms of arthritis, autoimmune, and musculoskeletal diseases

4- The clinical training component of our course is designed to provide a strong foundation for those individuals interested in the practice of rheumatology and for those interested in a research career. There is a heavy emphasis on outpatient clinical experience with exposure to a broad spectrum of rheumatic diseases. The fellow is an active member of a health care team and is responsible for longitudinal patient management with primary decision-making responsibilities under faculty supervision.

5- To allow the fellows to develop an educational role in the course by communicating their understanding to their peer groups, by means of presentations, lectures. The emphasis will be on self-learning.

(2) Intended Learning Outcomes (ILOs):

Intended learning outcomes (ILOs); Are four main categories: knowledge & understanding to be gained, intellectual qualities, professional/practical and transferable skills.

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A 2 - Recognize 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.

A 4 -Outline epidemiology, frequency and risk factors of the spectrum of diseases affecting the musculoskeletal system, and their impact on global health.

A 5 -Identify clinical and molecular genetics, aetiology, pathogenesis, and basic mechanisms of rheumatic diseases and related disorders.

A6- 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.

A7- Identify the spectrum of clinical symptoms and signs of musculoskeletal disorders and common medical conditions with multisystem affection.

A 8- Explain the scientific basis of the methodology, and list indications of laboratory tests, physical tests and imaging procedures used in diagnosis and monitoring of different rheumatic, orthopedic, neurologic disorders and others in need for rehabilitation.

A 10- Recognize pharmacology and pharmacokinetics - including drug metabolism, adverse effects, indications and interactions- of commonly used drugs in treatment of rheumatic diseases.

A 11- List the pharmacological therapeutic and other treatment options for rheumatic diseases, including complementary and alternative therapies.

A 19- Identify basics of health and patient's safety and safety procedures during practice.

A 20- Identify proper patient care and patient's rights to obtain the optimum health care and effective treatment of rheumatic diseases.

A 21 -Identify basics of ethics, medicolegal aspects, malpractice and common medical errors in rheumatology & rehabilitation medicine.

A22- Recognize principles and basics of quality assurance during practice and professionalism.

A23- Demonstrate knowledge of effects and hazards of professional practice in rheumatology field and rehabilitation medicine on environment and identify mutual influence between professional practice and its impacts on the environment.

A24- Identify principles, methodology, tools and ethics of scientific research in rheumatology and rehabilitation medicine fields.

B- Intellectual skills

B1 - 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.

B2- 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.

B3- Analyze and evaluate the information of the body physiology and immunology and analogies to solve rheumatological and musculoskeletal problems.

B4- Integrate basic science of pathology, genetics, immunology, and biochemistry of connective tissue, bone, joint, and muscle with clinical care of patients with rheumatic disorders and/or patients in rehabilitation setting.

B5- Integrate patient's symptomatology, historic data, abnormal physical signs and investigations into a comprehensive differential diagnosis of various musculoskeletal disorders.

B 7- Differentiate between types of arthritis and other musculoskeletal disorders and predict prognoses

B 9- Select from different diagnostic alternatives and interpret various diagnostic procedures to reach a final diagnosis.

B 10- Combine the use of nonsteroidal anti-inflammatory drugs, disease modifying drugs, biological response modifiers, glucocorticoids, cytotoxic drugs, antihyperuricemic drugs, and antibiotic therapy (for septic arthritis) into the medical care of patients and monitor their effects.

B11- Solve patients problems according to the available data collected from patient's evaluation and suggest investigations related to the patient's condition.

B12 -Formulate appropriate management plans for individual patients presenting with musculoskeletal diseases, autoimmune rheumatological disorders and related internal medical disorders.

B17- Compare use of various treatment methods including alternative and complementary medicine in the context of patient satisfaction, efficacy, and cost-benefit.

B 18- Make decisions needed in different situations of clinical practice based on evidence-based medicine in rheumatology and rehabilitation medicine, using appropriate problem solving skills.

B19- Apply appropriate assessment & measurement tools to evaluate functional status or outcomes of type of treatment used.

B20- Assess risks in the clinical emergencies in the field of rheumatology and rehabilitation

B 21- Resolve specialized problems with non-availability of some data.

B22- Consider effects of personal, social and cultural factors in the disease process and patient management.

B23- Apply ethical issues and resolve ethical dilemmas in relation to clinical practice

B24- Participate in identifying system errors and implementing potential systems solutions.

B25- Coordinate patient care within the health care system relevant to their clinical specialty

B26- Incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care as appropriate

B27-Advocate for quality patient care and optimal patient care systems

B28- Critically evaluate research; design and conduct of a research project

B29- Analyze literature, generate hypothesis, design and criticize protocol, organize and present data.

B30- Investigate and evaluate care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning.

B30.a: Discover strengths, deficiencies, and limits in one's knowledge and expertise.

B30.b: Set learning and improvement goals.

B30.c: Identify and perform appropriate learning activities.

B30.d: Systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement.

B30.e: Incorporate formative evaluation feedback into daily practice.

B30.f: Locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems.

B30.g: Use information technology to optimize learning.

B30.h: participate in the education of patients, families, students, residents and other health professionals.

C- Professional/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.

C 2- Examine patients, to include a specific examination of structure and function of all joints, both axial and peripheral, as well as periarticular structure and muscle units, to evaluate the musculoskeletal system and nervous system in an accurate manner

C4- Demonstrate appropriate positioning in relation to the patient in the exam room to facilitate good rapport with patients.

C 5 - Perform diagnostic aspiration and analysis of synovial fluid.

C6- Investigate immune system by proper laboratory and immunological tests for accurate diagnosis and management of autoimmune rheumatic diseases and use professionally the immune therapy for some rheumatological diseases.

C 8- Interpret bone and joint imaging techniques applying the facts of anatomical structures and interpret bone density measurement.

C 9- Perform therapeutic injection of synovial joints, bursae, tenosynovial structures and enthuses.

C10- Write and evaluate medical reports, clinical sheets including all collected data relevant to the patient's condition and physiotherapy treatment regimen sheets.

C12- Apply sound ethical principles in practice (e.g., informed consent, confidentiality, veracity, provision or withholding of care).

C 13- 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.

C14- Work effectively in various health care delivery settings and systems relevant to their clinical specialty.

D- Communication & Transferable skills

D 1- Be prepared for the lifelong learning needs of the profession in rheumatology & rehabilitation medicine.

D 2- Use information and communication technology effectively in the field of rheumatology and rehabilitation medicine.

D 3- Retrieve, manage, and manipulate information by all means.

D 4- Use different resources to gain knowledge and information related to rheumatology and rehabilitation fields.

D 5- Present clearly, and effectively a scientific topic in front of audience using computer and power point skills.

D 6- Communicate ideas and arguments effectively.

D 7- Demonstrate caring/respectful behaviors with patients and staff.

D 8- Work effectively within a team and leadership teams in health care team or other various professional contexts.

D 9- Develop rules and indicators for assessing the performance of other stuff of the medical team within the field of rheumatology and rehabilitation medicine.

D10-Communicate effectively in its different forms with other specialties and generate the ethos of a multidisciplinary approach in the clinical setting.

D 11- Manage and lead scientific meetings

D 12- Analyze and use numerical data including the use of simple statistical methods.

D13- Organize workload in order to meet deadlines.

D14- Demonstrate ability to articulate the risks and benefits of different treatment options to patients, present information to patients, family members, caregivers & other health care providers in an effective manner and establish trust and maintain positive rapport with patients.

D15- Continue to self-learning and self-evaluation and demonstrate personal learning needs.

D16- Demonstrate an educational role in the course by communicating their understanding to their peer groups, by means of presentations and lectures.

D 17- Accept personal responsibility for own actions & decisions.

D18- Demonstrate compassion, integrity, and respect for all patient's rights and treat all patients equally regardless to their believes, culture and behavior.

D19- Recognize one's own limitation of knowledge and skills and refer patients to appropriate specialized health facility at appropriate stage.

D20- Maintain comprehensive, timely, and legible medical records, if applicable.

(3) Course content:

Subjects	Lectures/or tutorials	Clinical	Laboratory	Field	Total Teaching Hours
1- General concepts & scientific basis of rheumatic diseases :-	**4hrs/week For 5 weeks**				**20 hrs/5 weeks**
▪ *Structure, function of joints, C.T. and muscles.*	4 hrs/week For one wk				4 hrs/one week
▪ *Immune &inflammatory response.*	4 hrs/week For one wk				4 hrs/one week
▪ *Genetics & gene therapy of rheumatic diseases.*	4 hrs/week For one wk				4 hrs/one week
▪ *Neuro-endocrinal aspects of the immune system & inflammation.*	4 hrs/week For one wk				4 hrs/one week
▪ *The role of; free radicals, endothelium, adhesion molecules, cytokines and apoptosis in the etiopathogenesis of rheumatic diseases.*	4 hrs/week For one wk				4 hrs/one week
2- Mechanisms and clinical aspects of rheumatic diseases.	**4 hrs/week For 10 wks**				**40 hrs/10 weeks**
▪ *Rheumatoid arthritis*	2hrs/week For one wk				2 hrs/week for one week
▪ *Sjogren's syndrome.* ▪ *Palindromic rheumatism.*	1hr/week For one wk				1hr/week for one week
▪ *Systemic lupus& related syndromes*	2hrs/week For one wk				2 hrs/week for one week
▪ *Systemic sclerosis*	2 hrs/week For one wk				2 hrs/week for one week
▪ *Dermatopolymyositis.*	2 hrs/week For one wk				2 hrs/week for one week
▪ *Vasculitic syndromes & Behcet disease.*	2 hrs/week For one wk				2 hrs/week for one week
▪ *Spondyloarthropathies.*	2 hrs/week For one wk				2 hrs/week for one week
▪ *Inflammatory diseases of muscles and other myopathies.*	1hr/week For one wk				1hr/week for one week
▪ *Rheumatic diseases of childhood.*	2 hrs/week For one wk				2 hrs/week for one week

▪ *Syndromes of impaired immune function; HIV, complement deficiency*	1hr/week For one wk				1hr/week for one week
▪ *Crystal deposition arthropathies; gout & pseudogout.*	2 hrs/week For one wk				2 hrs/week for one week
▪ *Osteoarthritis.*	1hr/week For one wk				1hr/week for one week
▪ *Infection & arthritis.*	2 hrs/week For one wk				2 hrs/week for one week
▪ *Disorders of bone, cartilage & structural proteins.* ▪ *Polychondritis, bone and joint dysplasia.*	2 hrs/week For one wk				2 hrs/week for one week
▪ *Metabolic bone diseases.*	1hr/week For one wk				1hr/week for one week
▪ *Osteoprosis, osteomalacia.*	2 hrs/week For one wk				2 hrs/week for one week
▪ *Osteonecrosis, amylodosis, sarcoidosis.* ▪ *Infiltrative disorder associated with rheumaric diseases.*	1hr/week For one wk				1hr/week for one week
▪ *Arthritis as a manifestation of other systemic diseases; haematological, endocrine and malignant disorders associated arthropathies.*	2 hrs/week For one wk				2 hrs/week for one week
▪ *Tumours involving joints, muscles & related structures.*	1hr/week For one wk				1hr/week for one week
▪ *Fibromyalgia syndrome & psychogenic rheumatism.*	1hr/week For one wk				1hr/week for one week
▪ *Systemic manifestations of rheumatic diseases.*	1hr/week For one wk				1hr/week for one week
▪ *Renal bone diseases (osteodystrophy), hypertrophic osteoarthropathy.* ▪ *Reflex sympathetic dystrophy.*	1hr/week For one wk				1hr/week for one week
▪ *Low back pain.*	2hrs/week For one wk				2 hrs/week for one week
▪ *Regional joint and soft tissue pain.* ▪ *Entrapment neuropathy and related disorders.*	1hr/week For one wk				1hr/week for one week

▪ *Epidemiology, incidence, mortality & morbidity in rheumatic diseases*	1hr/week For one wk				1hr/week for one week
▪ *Special issues in rheumatology;* - *Nutrition and rheumatic diseases.* -*Some aspects of rheumatic disease in elderly.*	1hr/week For one wk				1hr/week for one week
▪ *-Pregnancy & lactation with rheumatic diseases.*	1hr/week For one wk				1hr/week for one week
3- Investigations, assessment and evaluation of the patient with rheumatic disorders :-	**1hr/week For 13 wks & 2hrs/wk for 2 wks**	**2hrs/week For 13 weeks**			**17 hrs lectures or tutorials and 26hrs clinical/15 weeks**
▪ *History, examination, differential diagnosis of different types of arthritis & extra-articular manifestations of rheumatic diseases.*	1hr/week For 5 wks	2hrs/week For 5 wks			5 hrs lectures or tutorials and 10 hrs clinical /5 weeks
▪ *Diagnostic tests, procedures and laboratory markers (hematological, biochemical and immunological) in rheumatic diseases.*	2hrs/week For 2 wks				4 hrs lectures or tutorials /2 weeks
▪ *Aspiration analysis and injection of joints & soft tissues.*	1hr/week For 4 wks	2hrs/week For 4 wks			4 hrs lectures or tutorials and 8 hrs clinical /5 weeks
▪ *Imaging of musculoskeletal system.*	1hr/week For 4 wks	2hrs/week For 4 wks			4 hrs lectures or tutorials and 8 hrs clinical /5 weeks
4- Management of rheumatic diseases:-	**3 hrs/week For 15 wks**				**45 hrs/15 weeks**
▪ *Non steroidal anti-inflammatory drugs.*	3 hrs/week For 2 wks				6 hrs/2 weeks
▪ *Glucocorticoids.*	3 hrs/week For one week				3 hrs/one week
▪ *Disease modifying anti-rheumatic drugs.*	3 hrs/week For 2 wks				6 hrs/2 weeks
▪ *Immunoregulatory agents.*	3 hrs/week For 2 wks				6 hrs/2 weeks
▪ *Anti-hyperuricemic drugs.*	3 hrs/week				3 hrs/ one week

	For one week				
▪ *Biologic agents in treatment of rheumatic diseases.*	3 hrs/week For 2 wks				6 hrs/2 weeks
▪ *Bone-strengthening agents.*	3 hrs/week For 2 wks				6 hrs/2 weeks
▪ *Rehabilitation of patients with rheumatic diseases*	3 hrs/week For one week				3 hrs/ one week
▪ *Intra-articular therapy.*	3 hrs/week For one week				3 hrs/ one week
▪ *Indications of surgery in rheumatic diseases.*	3 hrs/week For one week				3 hrs/ one week

(4) Teaching methods:

4.1:……Lectures……

4.2:……Tutorials……

4.3: ……problem-based learning scenarios (case presentations)……

4.4: ……Clinical training……

(5) Assessment methods:

5.1: Written exam..…. for assessment of…. (A4-8,10,11, B 3-5,7,9,10,12,17,19,20, D4,13)

5.2: Oral exam. for assessment of….(A2,4-8,10,11,19-23, B3,4,5,7,9-12, 17-21, C6,8, D1,4,6)

5.3: Clinical exam. for assessment of (A 2,4,7,8,10,11,19,21, B1-5,7,9-12,18-23, C1,2,4,5,6,8,10, D1,3,6,7,13,19)

5.4: Dissertation that clearly sets out the need for their research, justifies the research methods, presents results, and discusses the findings (optional to select research topic in rheumatology or physical medicine and rehabilitation fields)…. for assessment of……(A 24, B 28,29, C10,11, D1-8,11,12,13,15,20)

5.5: Log book…. for assessment of ……(A19- 23, all B, C & D as mentioned in this course)

Assessment schedule:

Assessment 1:…at the end of…….36th month:……

Assessment 2:… at the end of ……36th month ……

Assessment 3: …at the end of…….36th month:……

Assessment 4: …after 12 month from the day of thesis registration according to the faculty bylaws.

Percentage of each Assessment to the total mark :

Written exam:……250/450……%: (55.56) ……

Clinical exam:……100/450…… ……%:: (22.22)……

Oral exam:……100/450…… ….%:: (22.22)……

Other types of assessment:…… .%::……

Other assessment without marks: ……dissertation, log book

(6) References of the course:

6.1: Hand books:… A synopsis of Rheumatic Diseases by Douglas Golding …

6.2: Text books:……- Kelly's Textbook of Rheumatology 8th edition (2009)

……- Primer on The Rheumatic Diseases by Klipple ……

6.3: Journals:…… - Arthritis and Rheumatism……

……- Annals of Rheumatic Diseases ……

6.4:Websites:……http://www.rheumatology.org/……

……http://www.eular.org/……

6.5: Others:……attending meetings, workshops and conferences……

(7) Facilities and resources mandatory for course completion:

1- Teaching tools: -Computers and laptop for lectures presentation

-Data show projector and screen

- Laser pointer and white board

-Comfortable well prepared classroom with comfortable desks, good source of aeration and good illumination.

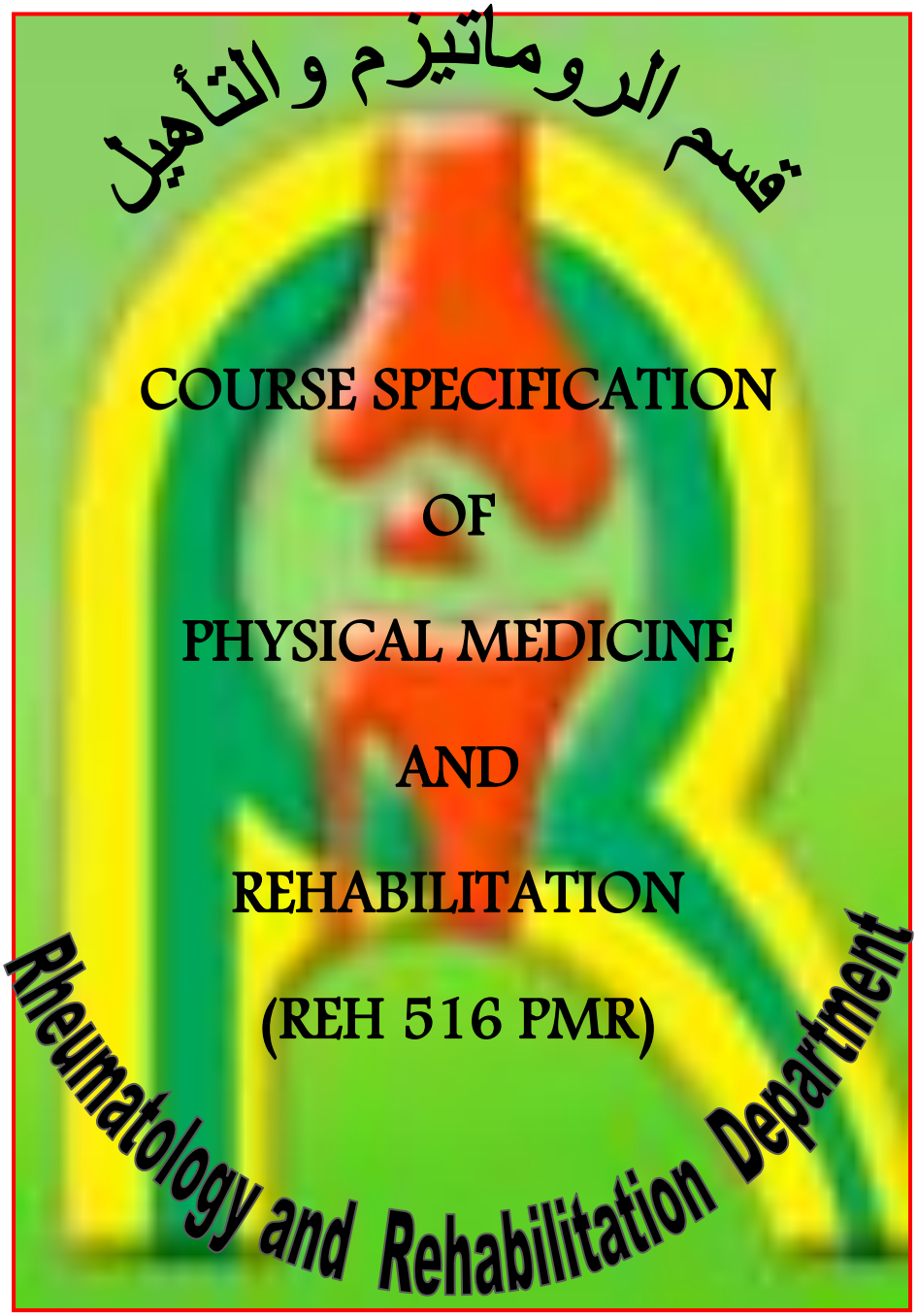
2- **Outpatient clinic** for collection of clinical cases

3- **Pharmacy** for pharmacological treatment of patients

Course coordinator: Dr Shereen Aly Machaly

Head of the department: Prof Dr. Salah Hawas

Date: 10/8/2010


قسم الروماتيزم و التأهيل
COURSE SPECIFICATION
OF
PHYSICAL MEDICINE
AND
REHABILITATION
(REH 516 PMR)
Rheumatology and Rehabilitation Department

COURSE SPECIFICATION
OF PHYSICAL MEDICINE AND REHABILITATION
Faculty of Medicine– Mansoura University

(A) Administrative information

(8) Programme offering the course:	Postgraduate Master degree of Rheumatology & Rehabilitation and Physical Medicine/ REH 500
(9) Department offering the programme:	Rheumatology & Rehabilitation and Physical Medicine department
(10) Department responsible for teaching the course:	Rheumatology & Rehabilitation and Physical Medicine department
(11) Part of the programme:	Second part
(12) Date of approval by the Department`s council	15/8/2010
(13) Date of last approval of programme specification by Faculty council	17/8/2010
(14) Course title:	Physical Medicine & Rehabilitation
(15) Course code:	**REH 516 PMR**
(16) Total teaching hours:	119 lectures or tutorials hours and 32 clinical hours /45 weeks (9 credit hours in 3 semesters)

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows: (either to be written in items or as a paragraph)

1- The course is designed to prepare the candidate for Systems-based Practice where they must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care (www.acgme.org) / (acgme competencies).

2- To provide fellows with the skills required to perform as well-trained, productive independent clinical investigators and independent consultants and primary care providers for patients needing medical rehabilitation or physical therapy. These goals are optimally met in a three-year program

3- To provide a rigorous, exciting, and productive training experience for those individuals interested in developing careers as independent physician-scientists. This requires at least a three year commitment to the study of basis and principles as well as up to-date science of physical medicine and rehabilitation.

4- The clinical training component of our course is designed to provide a strong foundation for those individuals interested in the practice of rheumatology and rehabilitation and for those interested in a research career. The fellow is an active member of a health care team and is responsible for longitudinal patient management with primary decision-making responsibilities under faculty supervision.

5- To allow the fellows to develop an educational role in the course by communicating their understanding to their peer groups, by means of presentations, lectures. The emphasis will be on self-learning.

Intended learning outcomes (ILOs); Are four main categories: knowledge & understanding to be gained, intellectual qualities, professional/practical and transferable skills.

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A 8- Explain the scientific basis of the methodology, and list indications of laboratory tests, physical tests and imaging procedures used in diagnosis and monitoring of different rheumatic, orthopedic, neurologic disorders and others in need for rehabilitation.

A9- Identify indications, advantages, and limitations for electrodiagnostic studies, electromyography and nerve conduction studies.

A 11- List the pharmacological therapeutic and other treatment options for rheumatic diseases, including complementary and alternative therapies.

A 12- Describe basic principles of rehabilitation medicine, impairments, disability and handicapping.

A13- Recognize principles of assessment, evaluation and management of patients in a Rehabilitation setting.

A14- Understand mechanical, manual and functional rehabilitation approaches.

A15- Identify different categories of physiotherapy modalities and understand their physiologic effects on soft tissues and describe their various mechanisms related to the management of rheumatic, orthopedic, neurological and other disorders.

A16- Identify benefits and hazards of uses of physical agents in the field of rheumatology and rehabilitation medicine

A17- Understand exercise guidelines, benefits and hazards and understand physiologic effect of exercise on soft tissues.

A18- Recognize the benefits of rehabilitation on the patient's quality of life, and its role on improving the patient's illness impact on global health.

A 19- Identify basics of health and patient's safety and safety procedures during practice.

A 20- Identify proper patient care and patient's rights to obtain the optimum health care and effective treatment of rheumatic diseases.

A 21 -Identify basics of ethics, medicolegal aspects, malpractice and common medical errors in rheumatology & rehabilitation medicine.

A22- Recognize principles and basics of quality assurance during practice and professionalism.

B- Intellectual skills

B4- Integrate basic science of pathology, genetics, immunology, and biochemistry of connective tissue, bone, joint, and muscle with clinical care of patients with rheumatic disorders and/or patients in rehabilitation setting.

B6- Analyze and evaluate data of different patients attending physical medicine and rehabilitation units, compare data and conclude results adding to the available literature.

B8- Integrate knowledge of physical science in the context of managing different musculoskeletal disorders according to the type of lesion.

B12 -Formulate appropriate management plans for individual patients presenting with musculoskeletal diseases, autoimmune rheumatological disorders and related internal medical disorders.

B13- Apply physical medicine and design rehabilitation program in patients with rheumatologic, neurological, orthopedics and other medical disorders.

B14- Compose exercise/therapy prescription with specific diagnosis and recommended emphasis of treatment.

B 15- Evaluate, manage, and construct rehabilitation of exercise-related (sports) illnesses.

B 16- Describe, prescribe and evaluate orthosis and prostheses of different parts of the body.

B17- Compare use of various treatment methods including alternative and complementary medicine in the context of patient satisfaction, efficacy, and cost-benefit.

B 18- Make decisions needed in different situations of clinical practice based on evidence-based medicine in rheumatology and rehabilitation medicine, using appropriate problem solving skills.

B19- Apply appropriate assessment & measurement tools to evaluate functional status or outcomes of type of treatment used.

B20- Assess risks in the clinical emergencies in the field of rheumatology and rehabilitation

B 21- Resolve specialized problems with non-availability of some data.

B22- Consider effects of personal, social and cultural factors in the disease process and patient management.

B23- Apply ethical issues and resolve ethical dilemmas in relation to clinical practice

B24- Participate in identifying system errors and implementing potential systems solutions.

B25- Coordinate patient care within the health care system relevant to their clinical specialty

B26- Incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care as appropriate

B27-Advocate for quality patient care and optimal patient care systems

B28- Critically evaluate research; design and conduct of a research project

B29- Analyze literature, generate hypothesis, design and criticize protocol, organize and present data.

B30- Investigate and evaluate care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning.

B30.a: Discover strengths, deficiencies, and limits in one's knowledge and expertise.

B30.b: Set learning and improvement goals.

B30.c: Identify and perform appropriate learning activities.

B30.d: Systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement.

B30.e: Incorporate formative evaluation feedback into daily practice.

B30.f: Locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems.

B30.g: Use information technology to optimize learning.

B30.h: participate in the education of patients, families, students, residents and other health professionals.

C- Professional/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.

C 2- Examine patients, to include a specific examination of structure and function of all joints, both axial and peripheral, as well as periarticular structure and muscle units, to evaluate the musculoskeletal system and nervous system in an accurate manner

C4- Demonstrate appropriate positioning in relation to the patient in the exam room to facilitate good rapport with patients.

C7- Apply and integrate knowledge of electrophysiology to perform and interpret electromyography and nerve conduction studies. Use of electrophysiological studies in biofeedback mechanisms in rehabilitation of certain patients.

C 8- Interpret bone and joint imaging techniques applying the facts of anatomical structures and interpret bone density measurement.

C10- Write and evaluate medical reports, clinical sheets including all collected data relevant to the patient's condition and physiotherapy treatment regimen sheets.

C11- Deal efficiently with physiotherapy modalities and professional prescribing for appropriate conditions with proper positioning of the patient.

C12- Apply sound ethical principles in practice (e.g., informed consent, confidentiality, veracity, provision or withholding of care).

C 13- 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.

C14- Work effectively in various health care delivery settings and systems relevant to their clinical specialty.

D- Communication & Transferable skills

D 1- Be prepared for the lifelong learning needs of the profession in rheumatology & rehabilitation medicine.

D 2- Use information and communication technology effectively in the field of rheumatology and rehabilitation medicine.

D 3- Retrieve, manage, and manipulate information by all means.

D 4- Use different resources to gain knowledge and information related to rheumatology and rehabilitation fields.

D 5- Present clearly, and effectively a scientific topic in front of audience using computer and power point skills.

D 6- Communicate ideas and arguments effectively.

D 7- Demonstrate caring/respectful behaviors with patients and staff.

D 8- Work effectively within a team and leadership teams in health care team or other various professional contexts.

D 9- Develop rules and indicators for assessing the performance of other stuff of the medical team within the field of rheumatology and rehabilitation medicine.

D10-Communicate effectively in its different forms with other specialties and generate the ethos of a multidisciplinary approach in the clinical setting.

D 11- Manage and lead scientific meetings

D 12- Analyze and use numerical data including the use of simple statistical methods.

D13- Organize workload in order to meet deadlines.

D14- Demonstrate ability to articulate the risks and benefits of different treatment options to patients, present information to patients, family members, caregivers & other health care providers in an effective manner and establish trust and maintain positive rapport with patients.

D15- Continue to self-learning and self-evaluation and demonstrate personal learning needs.

D16- Demonstrate an educational role in the course by communicating their understanding to their peer groups, by means of presentations and lectures.

D 17- Accept personal responsibility for own actions & decisions.

D18- Demonstrate compassion, integrity, and respect for all patient's rights and treat all patients equally regardless to their believes, culture and behavior.

D19- Recognize one's own limitation of knowledge and skills and refer patients to appropriate specialized health facility at appropriate stage.

D20- Maintain comprehensive, timely, and legible medical records, if applicable.

(3) Course content:

Subjects	Lectures/ or tutorial	Clinical	Laboratory	Field	Total Teaching Hours
1-(a) Principles of evaluation in rehabilitation medicine :-	**1hr/wk for one week & 2hrs/week For 4 weeks**	**2hrs/week For one week**			**9 hrs lectures or tutorials and 2 hrs clinical/ 5 weeks**
▪ *Clinical evaluation.*	1hr/week For one week	2hrs/week For one wk			1 hr lecture and 2 hrs clinical/ one week
▪ *Vocational evaluation and rehabilitation.*	2hrs/week For one week				2 hrs/ one week
▪ *Psychological aspects of rehabilitation.*	2hrs/week For one week				2 hrs/ one week
▪ *Disability, functional independence & handicapping evaluation.* ▪ *Functional outcome assessment, self care evaluation and management.*	2hrs/week For one week				2 hrs/ one week
Speech, language, swallowing, auditory and communication disorders assessment.	2hrs/week For one week				2 hrs/ one week
(b) -Diagnostic procedures including electrodiagnosis & electrophysiological studies :-	**2hr/week For 10 weeks**	**3hrs/week For 10 weeks**			**20 hrs lectures or tutorials and 30 hours clinical /10 weeks**
▪ *Electrodiagnosis.* ▪ *Electrophysiological studies of muscles in normal and pathological conditions.* ▪ *Nerve conduction studies.* ▪ *Neuromuscular junction studies.*	2 hrs/week For 10 wks	3 hrs/week For 10 wks			20 hrs lectures or tutorials and 30 hours clinical /10 weeks
2-(a) Management methods including the use of physical modalities in rehabilitation medicine :-	**2hrs/week For 15 weeks**				**30 hrs/15 weeks**
▪ *Different physical modalities used in rehabilitation:* *-Heat therapy* *-Cold therapy* *- Hydrotherapy*	2 hrs/week For 15 wks				30 hrs/15 weeks

-Laser & electromagnetic therapy *- Electro-stimulation* *- Traction, manipulations, therapeutic exercise and massage*					
(b)- Indications, prescription and evaluation of orthosis and prosthesis:-	**1hr/week For 15 wks**				**15 hrs/ 15 weeks**
▪ *Adaptive systems and devices for the disabled*	1hr/week For 3 wks				3 hrs/ 3 weeks
▪ *Upper limb orthosis & prosthesis.*	1hr/week For 3 wks				3 hrs/ 3 weeks
▪ *Lower limb orthosis & prosthesis.*	1hr/week For 3 wks				3 hrs/ 3 weeks
▪ *Spinal orthosis (cervical, lumbar, thoraco-lumbar)*	1hr/week For 3 wks				3 hrs/ 3 weeks
▪ *Transfers and wheelchairs* ▪ *Walking aids.*	1hr/week for 3 weeks				3 hrs/ 3 weeks
3- Major rehabilitation problems and rehabilitation of specific disorders:-	**3hrs/week For 15 wks**				**45 hrs/ 15 weeks**
▪ *Rehabilitation of patients with arthritis and connective tissue diseases.*	2 hrs/week For one wk				2 hrs/week for one week
▪ *Treatment of patients with pain.*	2 hrs/week For one wk				2 hrs/week for one week
▪ *Rehabilitation of patients with stroke, spinal cord injuries, multiple sclerosis.*	2hrs/week For one wk				2 hrs/week for one week
▪ *Neurogenic bladder and bowel.*	1hr/week For one wk				1 hr/week for one week
▪ *Spasticity and associated abnormalities of muscle tone.*	2 hrs/week For one wk				2 hrs/week for one week
▪ *Rehabilitation of neurological and musculoskeletal conditions.*	2 hrs/week For one wk				2 hrs/week for one week
▪ *Movement disorders.*	2 hrs/week For one wk				2 hrs/week for one week
▪ *Rehabilitation of degenerative diseases of the spine and peripheral joints.*	2 hrs/week For one wk				2 hrs/week for one week
▪ *Rehabilitation of orthopedic and*	2 hrs/week				2 hrs/week for one week

traumatic conditions.	For one wk				
▪ *Rehabilitation of sport injuries.*	2 hrs/week For one wk				2 hrs/week for one week
▪ *Rehabilitation of scoliosis.*	2 hrs/week For one wk				2 hrs/week for one week
▪ *Pediatric rehabilitation*	2 hrs/week For one wk				2 hrs/week for one week
▪ *Geriatric rehabilitation.*	2 hrs/week For one wk				2 hrs/week for one week
▪ *Rehabilitation of amputee.*	1hr/week For one wk				1 hr/week for one week
▪ *Rehabilitation after joint replacement therapy*	2 hrs/week For one wk				2 hrs/week for one week
▪ *Training of functional independence.*	1hr/week For one wk				1 hr/week for one week
▪ *Gait training.*	2 hrs/week For one wk				2 hrs/week for one week
▪*Rehabilitation of cancer patients.*	1hr/week For one wk				1 hr/week for one week
▪ *Rehabilitation of osteoporosis.*	1hr/week For one wk				1 hr/week for one week
▪ *Rehabilitation of cardiac patients*	1hr/week For one wk				1 hr/week for one week
▪ *Rehabilitation of patients with pulmonary diseases.*	2 hrs/week For one wk				2 hrs/week for one week
▪ *Rehabilitation of patients with vascular diseases and diabetic foot.*	1hr/week For one wk				1 hr/week for one week
▪ *Immobilization syndrome & bed ulcers.*	1hr/week For one wk				1 hr/week for one week
▪ *Rehabilitation of patients with burn.*	1hr/week For one wk				1 hr/week for one week
▪ *Rehabilitation of communication disorders*	1hr/week For one wk				1 hr/week for one week
▪ *Rehabilitation of the blind.* ▪ *Vestibular rehabilitation.*	1hr/week For one wk				1 hr/week for one week
▪ *Rehabilitation of gynecological & obstetric disorders.*	1hr/week For one wk				1 hr/week for one week
▪ *Sexual dysfunction*	1hr/week For one wk				1 hr/week for one week

▪ *Nutrition*	1hr/week For one wk				1 hr/week for one week
▪ *Vocational rehabilitation* ▪ *Industrial rehabilitation.* *Occupational rehabilitation.*	1hr/week For one wk				1 hr/week for one week

(4) Teaching methods:

4.1:……Lectures……

4.2:……Tutorials……

4.3: ……problem-based learning scenarios (case presentations)……

4.4: ……Clinical training in outpatients' clinics ……..

(5) Assessment methods:

5.1: Written exam.. …….. for assessment of…….. (A8,9,11-18, B 4,8,12-17,20, D1,2,3)

5.2: Oral exam……. for assessment of….(A 8,9,11-19, B4,8,12-17,19,20 C7,8,11, D1,2,3,6)

5.3: Clinical exam… for assessment of..(A 8,12-22, B 4,6,8,12-23, C1,2,4,8,10,11, D1,2,3,6,7)

5.4: Dissertation that clearly sets out the need for their research, justifies the research methods, presents results, and discusses the findings (optional to select research topic in rheumatology or physical medicine and rehabilitation fields)….. for assessment of…(A 24, B 6,18,28-30, C10,12,14, D1-8, 12,13,15,20)

5.5: Log book…. for assessment of …(A 18-23, B 6,8,12-16,18,19,21-27,29,30, all C & D mentioned in this course)

Assessment schedule:

Assessment 1:…at the end of…….36th month:……

Assessment 2:… at the end of ……36th month ……

Assessment 3: …at the end of…….36th month:……

Assessment 4: …after 12 month from the day of thesis registration according to the faculty bylaws.

Percentage of each Assessment to the total mark :

Written exam:……250/550……..%: (45.46) ……

Clinical exam:……100/550…… ……%: (18.18)……

Oral exam:……100/550…… ….%: (18.18)……

Practical exam in orthosis & prosthesis and electromyography:…100/550

%:(18.18) ……

Other assessment without marks: ……dissertation, log book

(6) References of the course:

6.1: Hand books:… …… Tidy's Physiotherapy by Stuart Porter ……

……Rehabilitation Medicine; principles and practice by Delisa and Gans…

6.2: Text books:- Krusen's Textbook of Physical Medicine and Rehabilitation…

……Physical Medicine and Rehabilitation by Braddom……

6.3: Journals:…… -Archives of Physical Medicine and Rehabilitation …

……- Journal of Rehabilitation Medicine……

6.4:Websites:…… http://www.isprm.org/…… ……

6.5: Others: …….attending meetings, conferences and workshops……

(7) Facilities and resources mandatory for course completion:

1- Teaching tools: -Computers and laptop for lectures presentation

-Data show projector and screen

- Laser pointer and white board

-Comfortable well prepared classroom with comfortable desks, good source of aeration and good illumination.

2- Outpatient clinic for collection of clinical cases

3- Pharmacy for pharmacological treatment of patients

4-Rehabilitation measures & physiotherapy equipments for rehabilitating patients

Course coordinator: Dr Shereen Aly Machaly

Head of the department: Prof Dr. Salah Hawas

Date: 8/8/2010

مقارنة ما يقدمه البرنامج من نتائج تعليمية مستهدفة مع المعايير المرجعية لبرنامج الماجستير في الطب الطبيعي والروماتيزم والتاهيل.

أ ـ المعرفة والفهم:

المقررات التى تحقق المعايير الأكاديمية للبرامج	مخرجات التعلم المستهدفة ILOs	(ARS) Benchmark المعايير الأكاديمية لجامعة 1) University of Oxford, Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences 2) King's College London, School of medicine	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجة الماجستير في الطب الطبيعي والروماتيزم والتأهيل)
1.Applied physiology 2.Applied anatomy 3.Basics of clinical immunology 4.Internal medicine 5.Physical medicine and rehabilitation 6.Rheumatology and immunology	$A_{1,2,3,5,12}$	-Understand the principles of the scientific basis of rheumatology and rheumatic diseases. **(University of Oxford)** At the end of the module each student will be able to have a sound understanding of the scientific basis of rheumatology and critically appraise the scientific knowledge base underpinning the discipline. **(King's College London)**	1- Principles and basic concepts in the field of Physical medicine, Rheumatology and Rehabilitation.
1.Rheumatology and immunology 2. Physical medicine and rehabilitation 3. Internal medicine 4. Applied physics	B_{24-27} C_{14}	- Identify, critically appraise and incorporate the results of basic and clinical research in rheumatic diseases into the day-to-day decision making of clinical, scientific and administrative practice. - Plan how to implement the findings of research to improve health care. **(University of Oxford)**	2- Systems-based Practice Candidates must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to: (1) work effectively in various health care delivery settings & systems relevant to their clinical specialty; (2) coordinate patient care within the health care system relevant to their clinical specialty; (3) incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care as appropriate; (4) advocate for quality patient care and optimal patient care systems; (5) work in inter-professional teams to enhance patient safety and improve patient care quality; and, (6) participate in identifying system errors and implementing potential systems solutions.
1.Rheumatology and immunology 2.Physical medicine and rehabilitation 3.Applied physiology 4.Basics of clinical immunology 5.Regional musculoskeletal disorders 6.Internal medicine 7.Applied physics	$B_{29,30}$ $D_{1,3,4}$	-Identify sources of up-to-date, specialist knowledge in their field of interest. -Guided reading to present new information on developments in the field of rheumatology. -Encourage trainees to undertake research that will establish evidence about	3- Recent advances in the field of Physical medicine, Rheumatology and Rehabilitation.

		rheumatic diseases where it is not otherwise available. **(University of Oxford)**	
1. Rheumatology and immunology 2. Physical medicine and rehab. 3. Regional musculoskeletal disorders 4. Internal medicine 5. Applied physics	**A** 21 **B** 23 **C**12, 13 **D**7,14, 18	-Understand ethical issues and manage and resolve ethical dilemmas in relation to clinical practice. **(King's College London)**	4- Legal and medicolegal aspects in practice of Physical medicine, Rheumatology and Rehabilitation medicine as well as medical ethics.
1.Rheumatology and immunology 2.Physical medicine and rehab. 3.Regional musculoskeletal disorders 4.Internal medicine	**A** 22 **B** 27, 30	-Discuss and apply best clinical practice in a clinical environment. **(King's College London)**	5- Principles and basic concepts of quality in professional practise including planning, improvement of performance and control of practising outcomes.
1.Rheumatology and immunology 2.Physical medicine and rehab. 3.Regional musculoskeletal disorders 4.Internal medicine	**A** 24 **C**12	-Demonstrate awareness of the ethical issues. **(University of Oxford)**	6- Ethics in research.

ب ـ القدرات الذهنية :

المقررات التى تحقق المعايير الأكاديمية للبرامج	مخرجات التعلم المستهدفة ILOs	(ARS) Benchmark المعايير الأكاديمية لجامعة	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجة الماجستير في الطب الطبيعي والروماتيزم والتاهيل)
1.Applied anatomy 2.Applied physiology 3.Basics of clinical immunology 4.Regional musculoskeletal disorders 5.Internal medicine 6.Applied physics 7.Physical medicine and rehabilitation 8.Rheumatology and immunology	**B**1- 6 , 8, 9 **C**1-8	-Identify, critically appraise and incorporate the results of basic and clinical research in rheumatic diseases into the day-to-day decision making of clinical, scientific and administrative practice. -Deal with complex issues both systematically and creatively, make sound judgments in the presence of limited evidence, and communicate their conclusions clearly to a range of audiences. **(University of Oxford)** -Be able to perform advanced clinical skills in rheumatology in a local NHS setting - Demonstrate the ability to apply intellectual skills towards clinical problems -Have an advanced knowledge and understanding of the clinical treatment of rheumatology. **(King's College London)**	1- Data interpretation and proper diagnosis (clinical examination, laboratory results, radiological findings, electromyography and nerve conduction studies results in the field of rheumatology and rehabilitation medicine). In this domain residents must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social behavioral sciences, as well as the application of this knowledge to patient care.
1.Rheumatology and immunology 2.Physical medicine and rehabilitation	**B**11,12, 21	-Be adaptable, and show originality, insight, and critical and reflective abilities	2- Medical problem solving.

3.Regional musculoskeletal disorders 4.Internal medicine		which can all be brought to bear upon problem situations. - Evaluate and integrate research evidence and practice in a wide range of situations. - Deal with complex issues both systematically and creatively, make sound judgments in the presence of limited evidence, and communicate their conclusions clearly to a range of audiences. **(University of Oxford)** - Discuss and appraise the various clinical approaches to treatment. **(King's College London)**	
1.Rheumatology and immunology 2.Physical medicine and rehabilitation	**B** 18, 29, 30	-Teach others how to find, critically appraise and implement evidence-based research. -Plan how to implement the findings of research to improve health care. -Identify gaps in evidence where further research is needed to establish the best health care practice in rheumatic diseases. - Encourage trainees to undertake research that will establish evidence about rheumatic diseases where it is not otherwise available - Evaluate and integrate research evidence and practice in a wide range of situations. **(University of Oxford)**	3- Evidence-based medicine.
Msc. Thesis Log book	**A** 24 **B** 28, 29 **D** 1,2,3,4,5,6,12, 15, 20	-Conduct a comprehensive search for research related to their subject area. -Select an appropriate research question from their chosen modules, which will form the basis of their dissertation, and a 'mock' grant research application. -Be aware of the range of research approaches that are applicable to a research question. - Produce a dissertation that clearly sets out the need for their research, justifies the research methods, presents results, and discusses the findings in terms of improving health care practice. -Criticise the strengths and weaknesses of their research study. - List some of the challenges for their research project, and develop strategies	4- Principles of conducting scientific research, writing research design and formulation of research hypothesis.

		for addressing them. - Understand the types of approaches that can be used for statistical analysis for their type of study design, and studies in general. -Have knowledge of appropriate data collection tools and methods. **(University of Oxford)** - Students will undertake supervised research in rheumatology. At the end of the module, each student will be able to: Enhance the capacity to engage in personal learning; Have an understanding of the principles and theories of research in rheumatology; Evaluate different research methodologies; Design and undertake a research project using appropriate methodology; Have a knowledge of different statistical tests and their uses; Analyse qualitative or quantitative data; Organise workload in order to meet deadlines; Plan, conduct and write an individual research programme with supervision; Understand ethical issues and manage and resolve ethical dilemmas in relation to research; Be able to present research findings orally and in writing; Be aware of how to get research published and to submit papers for publication. **(King's College London)**	
1.Rheumatology and immunology 2.Physical medicine and rehabilitation 3.Internal medicine 4.Regional musculoskeletal disorders 5.Applied physics	**B** 20, 26, **D** 14	_____	5- Risk assessment in medical practise.
1. Rheumatology and immunology 2.Physical medicine and rehabilitation	**B** 30	- Identify sources of up-to-date, specialist knowledge in their field of interest. - Be adaptable, and show originality, insight, and critical and reflective abilities which can all be brought to bear upon problem situations. - Evaluate and integrate research evidence and practice in a wide range of situations. - Be self-directed and able to act autonomously in planning and implementing projects at a professional	6- Planning for improvement of professional performance in the field of Physical medicine, Rheumatology and Rehabilitation. Residents are expected to develop skills and habits to be able to meet the following goals: (1) identify strengths, deficiencies, and limits in one's knowledge and expertise; (2) set learning and improvement goals; (3) identify and perform appropriate learning activities; (4) systematically analyze practice using quality improvement methods, and

		level. - Take responsibility for continuing to develop their own knowledge and skills. - Teach others how to find, critically appraise and implement evidence-based research. - Demonstrate their knowledge gained on the course in the form of presentations. **(University of Oxford)**	implement changes with the goal of practice improvement; (5) incorporate formative evaluation feedback into daily practice; (6) locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems; (7) use information technology to optimize learning; and participate in the education of patients, families, students, residents and other health professionals
1.Rheumatology and immunology 2.Physical medicine and rehabilitation 3.Regional musculoskeletal disorders 4.Internal medicine	**B** 11, 12, 18 **D** 17, 19	- Identify, critically appraise and incorporate the results of basic and clinical research in rheumatic diseases into the day-to-day decision making of clinical, scientific and administrative practice. **(University of Oxford)**	7- Decision making skills.

ج - المهارات العملية:

المقررات التى تحقق المعايير الأكاديمية للبرامج	مخرجات التعلم المستهدفة ILOs	(ARS) Benchmark المعايير الأكاديمية لجامعة	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجة الماجستير في الطب الطبيعي والروماتيزم والتأهيل)
1.Rheumatology and immunology 2.Physical medicine and rehabilitation 3.Applied physics 4.Regional musculoskeletal disorders 5.Internal medicine	**C** 12, 13 **D** 7, 18	- Plan how to implement the findings of research to improve health care. - Demonstrate awareness of the ethical issues. **(University of Oxford)** - Understand ethical issues and manage and resolve ethical dilemmas in relation to clinical practice. **(King's College London)** - Be adaptable, and show originality, insight, and critical and reflective abilities which can all be brought to bear upon problem situations. **(University of Oxford)**	1- Professionalism and up to date practise. Residents provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. In this context; Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to 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.
1.Rheumatology and immunology 2.Physical medicine and rehab. 3.Applied physics 4.Regional musculoskeletal disorders 5.Internal medicine	**C** 10	_____	2- Medical report writing and evaluation/appropriateness of patient medical report.

1. Rheumatology and immunology 2. Physical medicine and rehabilitation	B 30	- Evaluate and integrate research evidence and practice in a wide range of situations. - Take responsibility for continuing to develop their own knowledge and skills. **(University of Oxford)**	3- Ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning.

د- مهارات الاتصال:

المقررات التى تحقق المعايير الأكاديمية للبرامج	مخرجات التعلم المستهدفة ILOs	(ARS) Benchmark المعايير الأكاديمية لجامعة	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجة الماجستير في الطب الطبيعي والروماتيزم والتأهيل)
1.Rheumatology and immunology 2.Physical medicine and rehabilitation 3.Regional musculoskeletal disorders 4.Internal medicine 5. Log book	D 6, 8, 10, 14,16,	- Teach others how to find, critically appraise and implement evidence-based research. - Demonstrate their knowledge gained on the course in the form of presentations, **(University of Oxford)**	1- Interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals
1.Rheumatology and immunology 2.Physical medicine and rehabilitation 3.Applied physics 4.Regional musculoskeletal disorders 5.Internal medicine 6. Applied physiology and anatomy 7.Basics of clinical immunology 8.Log book	B 30 (b, g ,h) D 2,3,4,5, 14, 16	-Students will perform Research Literature Review to be able to: Carry out advanced literature search; Assess the strengths and weaknesses of different research designs; Evaluate and use different checklists for critically appraising research and research papers; Use databases for searching the published literature; Critically appraise published work in literature review; Identify areas within rheumatology that would benefit from further research; Integrate appropriate published work into written literature reviews. **(King's College London)**	2- Effective use of IT and healthcare information system in medical practise and patient medical records to optimize learning; and participate in the education of patients, families, students, residents &other health professionals
1.Rheumatology and immunology 2.Physical medicine and rehab.	B30 (a, b, c) D 15	--------	3- Self-appraisal and needs assessment.
All courses Log book Msc thesis	D 2, 3, 4	- Identify sources of up-to-date, specialist knowledge in their field of interest. **(University of Oxford)** -Carry out advanced literature search and use databases for searching the published literature. **(King's College London)**	4- Accessibility to specialty-specific and other appropriate reference material in print or electronic format. Electronic medical literature databases with search capabilities.
1.Rheumatology and immunology 2.Physical medicine and rehabilitation	B30 (e)	- Identify, critically appraise and incorporate the results of basic and clinical research in rheumatic diseases into the	5- Incorporate formative evaluation feedback into daily practice.

		day-to-day decision making of clinical, scientific and administrative practice. **(University of Oxford)**	
1. Rheumatology and immunology 2. Physical medicine and rehabilitation 3. Log book 4. Msc thesis	**D** 8, 9, 10	_____	6- Team work/leadership.
1. Rheumatology and immunology 2. Physical medicine & rehabilitation 3. Log book 4. Msc thesis	**D** 13	- Organise workload in order to meet deadlines. **(King's College London)**	7- Time management.
1. Rheumatology and immunology 2. Physical medicine & rehabilitation 3. Log book	**D** 1,15	- Take responsibility for continuing to develop their own knowledge and skills. **(University of Oxford)**	8- Self-learning ability and continuous medical education programme participation.