M.D. ROGRAMME SPECIFICATION

Rheumatology and Rehabilitation Department

Faculty of Medicine– Mansoura University

Prepared by: Dr. Shereen Aly Machaly

Assistant Prof. of Rheumatology and Rehabilitation

ROGRAMME SPECIFICATION

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme Title & Code	Postgraduate Doctorate degree of Rheumatology & Rehabilitation and Physical Medicine/ REH 600
(2) Final award/degree	M.D
(3) Department (s)	1. Rheumatology & Rehabilitation and Physical Medicine department 2. Human Anatomy and Embryology 3. Medical Physiology department 4. Clinical Pathology 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	26/5/2013
(7) Date of last approval of programme specification by Faculty council	10/6/2013

(B) Professional information

(1) Programme Aims: The broad aims of the Programme are as follows:

1- To give health science professionals and in-depth knowledge of rheumatic diseases either commonly or rarely encountered, and how to construct appropriate and optimal management strategies (both diagnostic and therapeutic including rehabilitation) for patients with common acute& chronic rheumatic conditions.

2- To prepare physicians as senior practitioners, educators, researchers, and administrators capable of practicing Rheumatology and Rehabilitation medicine in academic and clinical settings.

3- To respond to the educational and research training needs of doctors with a special interest in rheumatology and rehabilitation medicine and to advance candidate's knowledge of the basic principles of research, including how research is conducted, evaluated, explained to patients, and applied to patient care. In addition, trainees will be expected to prepare a research proposal and dissertation for an original, self-directed thesis. This should be based on a research question focusing on a real problem.

4- 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.

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 program, the candidate will be able:

A 1- 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. Matches knowledge of anatomy of the musculoskeletal system as it pertains to the patient with musculoskeletal complaint.

A2-Identify theories and fundamentals related to the physiology of musculoskeletal system

A3- Know fundamentals in immunology, innate immunity, immune response, autoantibodies and inflammation, and identify their roles in the pathogenesis of autoimmune rheumatic diseases

A 4-Outline epidemiology, frequency, risk factors, clinical, molecular genetics, immunological aspects, aetiopathogenesis, and basic mechanisms of the spectrum of diseases affecting the musculoskeletal system in different age groups (e.g. RA, SLE, systemic sclerosis, AS, OA …etc..), and their impact on global health.

A 5- Underline the scientific basis of the methodology, and list indications of laboratory tests (immunological, haematological and biochemical), physical tests and imaging procedures used in diagnosis and monitoring of different rheumatic, orthopedic, neurologic disorders and others in need for rehabilitation.

A6- List the pharmacological therapeutic and other treatment options for rheumatic diseases and recognize pharmacology and pharmacokinetics of commonly used drugs e.g. NSIADs, DMARDs, steroids …in treatment of systemic and localized rheumatic diseases.

A7- Describe basic principles of rehabilitation medicine, impairments, disability and handicapping including pediatric and older patients' rehabilitation.

A8- Identify indications, advantages, and limitations for electrodiagnostic studies, electromyography and nerve conduction studies.

A9- Recognize principles of assessment, evaluation and management of patients in a Rehabilitation setting.

A 10- Understand mechanical, manual and functional rehabilitation approaches.

A 11- Identify different categories of physiotherapy modalities (e.g. heat, cold , laser therapy, electrotherapy….etc..), understand their physiologic effects on soft tissues, describe their various mechanisms related to the management of rheumatic, orthopedic, neurological and other disorders and identify benefits and hazards of their uses in the field of rheumatology and rehabilitation medicine

A 12- Recognize exercise guidelines, benefits and hazards and understand physiologic effect of exercise on soft tissues.

A 13- Identify causes and mechanisms of handicapping in children and adolescents and describe basic principles of rehabilitation medicine in these conditions

A14-Describe basic principles of rehabilitation medicine, impairments, disability and handicapping in elderly patients and recognize principles of assessment, evaluation and management of these geriatric patients.

A15- Recognize the pathophysiology and biomechanics related to exercise and sports and different potential mechanisms of sports injuries. Identify different types and sites of sports injuries

A16-Identify theories and fundamentals related to the immune system of human and its response. Recognize treatment modalities related to the immune system including gene therapy.

A17- Identify recent advances and areas under research in the field of physical medicine, rheumatology and rehabilitation.

A18- Identify basics of ethics, medicolegal aspects, malpractice and common medical errors in rheumatology & rehabilitation medicine.

A 19- Identify basic principles, methodology, tools and ethics of scientific research in rheumatology and rehabilitation medicine fields, including how research is conducted, evaluated, explained to patients, and applied to patient care.

B- Intellectual skills

The Doctorate Degree provides opportunities for candidates to achieve and demonstrate the following intellectual qualities:

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 to reach proper diagnosis.

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 problems of rheumatological, musculoskeletal and/or patients in rehabilitation setting.

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.

B5- Follow scientific development and recent advances in the field of electrophysiology, immunology and patho-physiology of musculoskeletal system, laboratory investigations related to immune system, autoimmunity and immune-therapy.

B6- Integrate patient's symptomatology, historic data, abnormal physical signs and investigations into a comprehensive differential diagnosis of various musculoskeletal disorders.

B7- Analyze and evaluate data of different patients attending rheumatology outpatient clinics and physical medicine and rehabilitation units, compare data and conclude results adding to the available literature.

B 8- Select from different diagnostic alternatives and interpret various diagnostic procedures to reach a final diagnosis.

B9 -Formulate appropriate management plans with proper therapy choice for individual patients presenting with musculoskeletal diseases, autoimmune rheumatological disorders.

B10- Integrate knowledge of physical science in the context of managing different musculoskeletal disorders according to the type of lesion.

B11- Apply physical medicine and design rehabilitation program in patients with rheumatologic, neurological, orthopedics and other medical disorders including pediatric and geriatric patients..

B12- Compose exercise/therapy prescription with specific diagnosis and recommended emphasis of treatment.

B13- Analyze and evaluate data of different pediatric and geriatric patients and integrate in context of diagnosis and proper managing of pediatric and geriatric disabilities.

B 14- Evaluate, manage, and construct rehabilitation of exercise-related (sports) illnesses.

B 15- Describe, prescribe and evaluate orthosis and prostheses of different parts of the body.

B16- Compare use of various medical treatment methods (including NSAIDs, DMARDs, steroids and biological therapies) and different physiotherapy and rehabilitation medicine techniques in the context of patient satisfaction, efficacy, and cost-benefit.

B 17- Make decisions needed in different situations of clinical practice based on evidence-based medicine in rheumatology and rehabilitation medicine, using appropriate problem solving skills.

B18- Assess risks in the clinical emergencies in the field of rheumatology and rehabilitation medicine.

B19- Apply ethical issues and resolve ethical dilemmas in relation to clinical practice.

B20- Critically evaluate research; design and conduct of a research thesis.

B21- Analyze literature, generate hypothesis, design and criticize protocol, organize and present data. Locate, appraise, and assimilate evidence from scientific studies related to patients' health problems.

C- Professional/practical skills

C 1- To be able of good history taking in the context of rheumatic patient or patient in a rehabilitation setting, apply the anatomical and physiological facts and properly examine different muscles and joints of the body.

C2- Evaluate and examine patients with rheumatic disorders (RA, SLE, arthropathies , osteoarthritis, osteoporosis,……)

C 3 - Select effectively and perform professionally the appropriate aspiration or intra-articular injection technique for diagnosis and treatment of a selected articular or musculoskeletal problem

C4- 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 (RA, SLE. ankylosing spondilitis….).

C 5- Read and interpret the imaging of the musculoskeletal disorders and bone density measurements.

C6 - 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.

C7 - Employ efficiently physiotherapy modalities in the context of professional managing rheumatic and musculoskeletal disorders.

C8- Apply appropriate assessment & measurement tools to evaluate functional status or outcomes of type of treatment used.

C9- Write and evaluate professionally medical reports, clinical sheets including all collected data relevant to the patient's condition, medical treatment regimen and physiotherapy sheets.

C 10- 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. Analyze and use numerical data including the use of simple statistical methods.

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.
D11- Demonstrate a consultative role to other physicians and health professionals and participate in the education of patients, families, students, residents and other health professionals.
D 12- Manage and lead scientific meetings
D 13- Continue to self-learning and self-evaluation and demonstrate personal learning needs. Set learning and improvement goals.
D14- Demonstrate an educational role in the course by communicating their understanding to their peer groups, by means of presentations and lectures.
D15- Accept personal responsibility for own actions & decisions.
D16- Discover strengths, and deficiencies. Recognize one's own limitation of knowledge and skills and refer patients to appropriate specialized health facility at appropriate stage.
D 17- 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.
D18- Demonstrate compassion, integrity, and respect for all patient's rights and treat all patients equally regardless to their believes, culture and behavior.
D19- Demonstrate respect for patient privacy and autonomy and sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.
D20- Consider effects of personal, social and cultural factors in the disease process and patient management.
D21- Demonstrate responsiveness to patient needs that supersedes self-interest
D22- Demonstrate appropriate professional attitudes and behaviors in different practice situations.
D23- Incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care as appropriate.

(1) Academic standards:

Academic standards for the programme are attached in Appendix I.

A table of comparison between ARS, NARS and Program ILOs 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 Pennsylvania school of medicine; Rheumatology division, - rheumatology fellowship training program. Physical medicine and Rehabilitation fellowship program by Physical medicine and Rehabilitation department(PM&R) - which is oldest (PM&R) department in the U.S., - (both programs are accredited by Accreditation council for Graduate Medical Education (ACGME)-www.acgme.org).

http://www.med.upenn.edu/rheum

http://www.uphs.upenn.edu/rehabmed

2- University of Pittsburgh School of Medicine, Arthritis Institute - Rheumatology and Clinical Immunology Fellowship Program in Clinical Research. It is an ACGME-accredited program.

http://www.dept-med.pitt.edu/Rheum/fellowship/index.html

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

- All program aims of the Benchmarks are covered by the current program.
- The program courses are matched by 80% degree to those offered by the international universities except in the context of credit hours, and the type of degree offered.
- About University of Pennsylvania- school of medicine , they offer rheumatology fellowship program by rheumatology division with subsidiary training in PM&R department mostly of rheumatic conditions and the PM&R fellowship is offered by PM&R department as separate programs meanwhile, both programs are included in our program which much detailed training on all specialties of PM&R.
- University of Pennsylvania- Rheumatology division provides separate Pediatric or Geriatric Rheumatology Fellowship Programs beside the adult rheumatology program, while we offer only MD program for Rheumatology but the fellow can choose one of the optional courses including pediatric or geriatric courses

(2) Curriculum structure and contents:

4.a- Duration of the programme (6 semesters)

4.b- programme structure:

*The programme consists of two parts; the first part composed of three courses which are: Applied Anatomy, Applied physiology and Basic Immunology. The second part composed of three courses; two of them are compulsory courses and one course (out of four) is optional.

*Candidates should fulfill a total of 60 credit hours.

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

First part: 5 credit hours. Second part: 25 credit hours.

Thesis: 15 credit hours. Activities included in the log book: 15 credit hours.

(3) Programme courses:

First part (one semester =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		Laboratory /practical	Field	Total		
		Lectures	seminars					
Applied Anatomy	**REH 601**	2	------	------	----	2	30	**A** 1 **B**1,2
Applied Physiology	**REH 603**	2	------	------	----	2	30	**A** 2 **B** 3
Basic Immunology	**REH 630**	1	------			1	15	**A** 3 **B** 3,4

* Advanced studies in medical fields consist of one hour lecture, 3days/week for 5 weeks.

b- Elective courses: none

Second part (60 weeks duration= 4 semesters)

a- Compulsory courses:

1. Rheumatology
2. Rehabilitation Medicine

b- Elective courses:

The candidate has to choose one of the following optional courses:

1. Pediatric rehabilitation
2. Geriatric rehabilitation
3. Rehabilitation of sport injuries
4. Clinical immunology (advanced course)

Course Title	Course Code	NO. of hours per week				Total teaching hours/60 weeks	Programme ILOs covered (REFERRING TO MATRIX)
		Theoretical		Clinical /practical	Total		
		Lectures	seminars*				
Rheumatology:	**REH 616 RI**			clinical and practical training courses **(REH 616 RIP) (REH 616 RIC)**		180 lectures or tutorials hours and 240 clinical hours /60 weeks	A3,-6,17,18 B 3-9,16 -19 C 1-5, 8-10 All D
1. First Module		**3 hrs /week**		**2 hrs /week**		45lectures 60 clinical	**A3,4, 17,18 B 3-7, 17-19 C1,2, 8-10 D1-23**
2. Second Module		**3 hrs /week**		**2hrs /week**		45lectures 60 clinical	**A 5, 17,18 C 2-5, 9, 10 B3-7, 8, 17-19 D1-23**
3. Third. Module		**3 hrs / week**		**2hrs /week**		45lectures 60 clinical	**A 6, 17,18 B3-7, 9, 16-19 C 1,2, 9, 10 D 1-23**
4. Fourth Module		**3 hrs /week**		**2 hrs /week**		45lectures 60 clinical	**A 4, 17, 18 B 4-7, 17-19 C 1,2, 9,10 All D**

Rehabilitation medicine:	**REH 616 PMR**			clinical and practical training courses **(REH 616 PMRP) (REH 616 PMRC)**		165 lectures or tutorials hours and 210 clinical hours /60 weeks	**A** 2, 5, 7-12, 17,18 **B** 3,6,7, 10-12, 15-19 **C**1, 5-10 **All D**
1. First Module		**3 hrs /week**		**2 hrs /week**		45 hours lectures 60 hours clinical	**A** 2, 7-10, 18 **B** 3,6,7 **C**1,5,6, 8,9,10
2. Second Module		**3 hrs /week**		**2 hrs /week**		45 hours lectures 60 hours clinical	**A** 11, 12, 18 **B** 3,7,10-12,15-19 **C** 7,9,10 **All D**
3- Third. Module		**3 hrs / week**		**2 hrs /week**		45 hours lectures 60 hours clinical	**A** 5, 7, 9,10,18 **B**3,7,11, 16-19 **C** 9,10 **All D**
4- Fourth Module		**2 hrs /week**		**1 hrs /week**		30 hours lectures 30 hours clinical	**A** 5, 7, 9, 10,18 **B** 3,7,11, 16-19 **C** 9,10 **All D**
Optional courses:		**2 hrs / week**			**2 hrs /week**	30 hrs lectures or tutorials /15wks	
1. Pediatric rehabilitation	**REH 616 PR**	**2hrs / week**			**2hrs/ week**	30hrs/ 15wks	**A**13 **B**11, 13
2. Geriatric rehabilitation.	**REH 616 GR**	**2 hrs/ week**			**2 hrs/ week**	30 hrs/ 15wks	**A**14 **B**11, 13
3. Rehabilitation of sport injuries	**REH 616 RSI**	**2 hrs / week**			**2 hrs/ week**	30hrs/ 15wks	**A**15 **B**14
4. Clinical immunology (advanced course)	**REH 616 ACI**	**2hrs/ week**			**2hrs/ week**	30hrs/ 15wks	**A** 16 **B** 5
Thesis						15 credit	**A** 17,19 **B** 20, 21 **C**10 **D**2-8, 18,19

Log book activities						15 credit	**All C & D**

***** Advanced studies in rheumatology and rehabilitation medicine fields including musculoskeletal imaging seminars and journal club in combined rheumatology with immunology, orthopedic and radiology

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.

Course Title/Code	Programme ILOs																																												
	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	B1	B2	B3	B4	B5	B6	B7	B8	B9	B 10	B 11	B 12	B 13	B 14	B 15	B 16	B 17	B 18	B 19	B 20	B 21
Applied anatomy	x																			x	x																				
Applied physiology		x																				x																			
Basic immunology			x																			x	x																		
Rheumatology			x	x	x	x											x	x				x	x	x	x	x	x	x							x	x	x	x		
Rehabilitation medicine		x			x		x	x	x	x	x	x					x	x				x			x	x			x	x	x			x	x	x	x	x		
Pediatric rehabilitation													x																	x		x									
Geriatric rehabilitation														x																x		x									
Rehabilitation of sport injuries															x																		x								
Clinical immunology (advanced course)																x								x																	
Advanced studies in the medical field																			x																				x	x	

Course Title/Code	Programme ILOs																																
	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14	D15	D16	D17	D18	D19	D20	D21	D22	D23
Applied anatomy																																	
Applied physiology																																	
Basic immunology																																	
Rheumatology	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
Rehabilitation medicine	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
Pediatric rehabilitation																																	
Geriatric rehabilitation																																	
Rehabilitation of sport injuries																																	
Clinical immunology (advanced course)																																	
Advanced studies in the medical field												x	x																				

(4) Programme admission requirements:

●General requirements:

According to the faculty postgraduate bylaws Appendix IV.

●Specific requirements (if applicable):

No specific requirements

(5) Regulations for progression and programme completion:

● Student must complete minimum of 60 credit hours in order to obtain the M.D. 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 M.D. thesis is allowed one semester from the day of registration to the programme and must fulfill a total of 15 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 15 credit 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

المقرر	الاختبار	الدرجة	
		تحريري	MQ
التشريح التطبيقي	اختبار تحريري مدته ساعة	80	20
والفسيولوجيا التطبيقية	اختبار تحريري مدته ساعة	80	20
علم المناعة	اختبار تحريري مدته ساعة	80	20

Second part

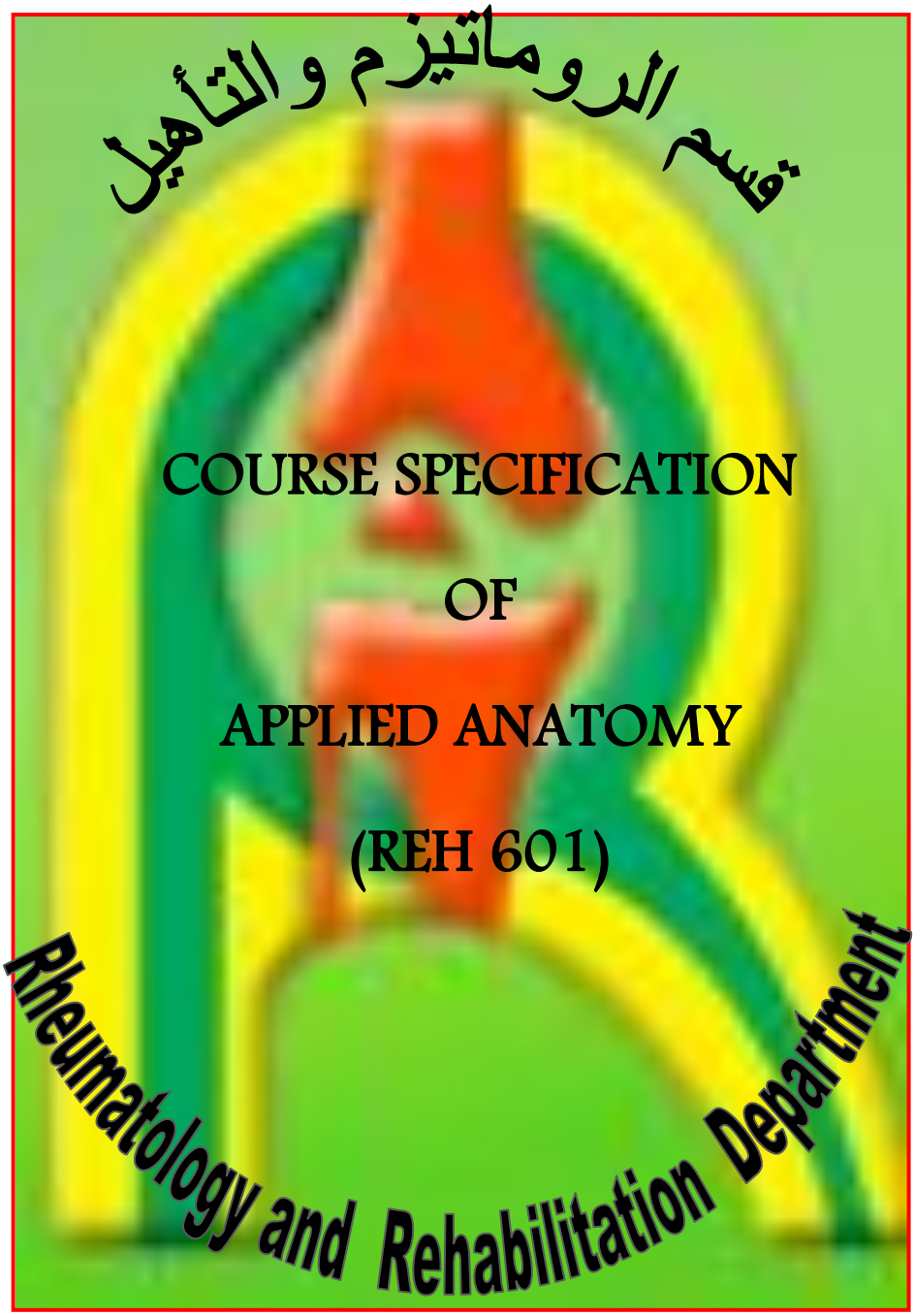
المقرر	الاختبار	الدرجة						إجمالي
		تحريري	وصف حالة	MCQ	شفهي	إكلينيكي	عملي	
الأمراض الروماتيزمية وعلم المناعة	اختبار تحريري مدته ثلاث ساعات + وصف حالة (ساعة ونصف) + اختبار شفهي + اختبار إكلينيكي	92	60	38	100	100		390
الطب الطبيعي والتأهيل	اختبار تحريري مدته ثلاث ساعات + اختبار شفهي + اختبار إكلينيكي + اختبار عملي	104		26	100	100	100	430
المادة الاختيارية	اختبار تحريري مدته ساعة ونصف	64		16				80

(6) 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)**	**Personal communication**	
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 والتأهيل
COURSE SPECIFICATION
OF
APPLIED ANATOMY
(REH 601)
Rheumatology and Rehabilitation Department

COURSE SPECIFICATION
OF APPLIED ANATOMY
Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate Doctorate degree of Physical medicine, Rehabilitation and Rheumatology/ REH600
(2) Department offering the programme:	Rheumatology, Physical medicine and Rehabilitation Department
(3) Department responsible for teaching the course:	Human Anatomy and Embryology Department
(4) Part of the programme:	First Part
(5) Date of approval by the Department`s council	26-5-2013
(6) Date of last approval of programme specification by Faculty council	10-6-2013
(7) Course title:	Applied anatomy
(8) Course code:	REH 601
(9) Credit hours	2 credit hours
(10) Total teaching hours:	30 hrs/ 15 weeks

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

1- The course is designed to prepare the candidate for Systems-based Practice where they must demonstrate an optimal awareness of anatomy of the musculoskeletal system

2- To provide fellows with the basic and applied knowledge about anatomy of musculoskeletal system required to perform as well-trained, productive independent clinical investigators and independent consultants for patients with inflammatory, autoimmune degenerative and other types of musculoskeletal disorders.

(2) Intended Learning Outcomes (ILOs):

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

A- Knowledge and Understanding

A 1- Recognize the structure of the different joints of the human body (upper limb, lower limb and vertebral column) .

A2- Explain the biomechanics of joints and understand how each adapts to its function with the muscles acting upon each joint.

A3- recognize the gross anatomy of central and peripheral nervous system .

A4- recognize the anatomy of respiratory muscles .

B- Intellectual skills

B1 - Integrate the anatomy of the bones, joints, muscles, tendons, nerves and spine of the human body with clinical examination of loco-motor system and utilize major clinical applications of anatomical facts to reach proper diagnosis.

B2- Apply the surface landmarks of the underlying joints , bones , muscles and tendons in clinical examination of these parts to reach accurate diagnosis of specific disorders of these structures and to utilize in successful therapeutic injection.

B3- Matches knowledge of anatomy of the musculoskeletal system with the complaints of the patient with musculoskeletal disorders.

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(3) Course content:

Subjects	Lectures 2hrs/week For 15 weeks	Clinical	Laboratory	Field	Total Teaching Hours (30 hrs/ 15 weeks)
▪ Gross anatomy of central nerves system	2 hrs/wk for one week				2 hrs/ one week
▪ Cranial nerves	2 hrs/wk for one week				2 hrs/ one week
▪ Spinal nerves and dermatomes	2 hrs/wk for one week				2 hrs/ one week
▪ Nerve plexuses (cervical , brachial , lumber and sacral)	2 hrs/wk for one week				2 hrs/ one week
▪ Muscles (features, types and action)	2 hrs/wk for one week				2 hrs/ one week
▪ Joints (types, structures, movements	2 hrs/wk for one week				2 hrs/ one week

and stability					
▪ Vertebral column	2 hrs/wk for one week				2 hrs/ one week
▪ Joints of the upper limb	2 hrs/wk for one week				2 hrs/ one week
▪ Muscle groups of the upper limb	2 hrs/wk for one week				2 hrs/ one week
▪ Joints of the lower limb	2 hrs/wk for one week				2 hrs/ one week
▪ Muscle groups of the lower limb	2 hrs/wk for one week				2 hrs/ one week
▪ Muscle groups of the back and shoulder girdle	2 hrs/wk for one week				2 hrs/ one week
▪ Respiratory muscles	2 hrs/wk for one week				2 hrs/ one week
▪ Surface anatomy of anatomical structures and its applications in clinical practice	2 hrs/wk for 2 week				4 hrs/ 2 weeks

(4) Teaching methods:

4.1: ….Lectures. ……

4.2: ……

(5) Assessment methods:

5.1: **Final written exam** for assessment of knowledge and intllectual ILOs

5.2 **MCQ continuous assessment** for assessment of knowledge and intllectual ILOs

5.3: **Log book**……..……for assessment of attitude and attendance…….

Assessment schedule:

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

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

Percentage of each Assessment to the total mark:

Written exam: ……80 Marks

MCQ…… 20 Marks

Other assessment without marks:……Log book…….

(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

(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 Ibrahim El-Boghdady

Date: 26/5/2013


قسم الروماتيزم و التأهيل
COURSE SPECIFICATION
OF
APPLIED PHYSIOLOGY
(REH 603)
Rheumatology and Rehabilitation Department

COURSE SPECIFICATION
OF APPLIED PHYSIOLOGY
Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate Doctorate degree of Physical medicine, Rehabilitation and Rheumatology REH600
(2) Department offering the programme:	Rheumatology, Physical medicine and Rehabilitation Department
(3) Department responsible for teaching the course:	Medical Physiology Department
(4) Part of the programme:	First part
(5) Date of approval by the Department`s council	26-5-2013
(6) Date of last approval of programme specification by Faculty council	10-6-2013
(7) Course title:	Applied physiology
(8) Course code:	REH 603
(9) Credit hours	2 credit hours
(10) Total teaching hours:	30 hrs/ 15 weeks

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

1- To allow candidates to explain, on a physiological bases, the related clinical pictures seen in the field of the rheumatology

2- To provide candidates with the information of physiological background for treatment of the related abnormal, dysfunction or dysregulated physiological mechanisms accompanying rheumatic diseases

(2) Intended Learning Outcomes (ILOs):

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

A- Knowledge and Understanding

A1- Recognize the bodily pools of calcium and phosphate, their rates of turnover and the organs that play central roles in regulating movement of them between stores

A2 – Recognize the physiology of the nerve and muscle.

A3- explain the physiological basis of cardiovascular, pulmonary and gastrointestinal systems function which are affected by the autoimmune rheumatic diseases themselves and through the course of their treatment.

A4-Recognize the physiology of pain and the role of neuropeptides in neuro analgesia system.

A5- Recognize the physiology of body metabolism especially energy balance.

A6- Define obesity and physical fitness.

B- Intellectual skills

B1- Analyze and evaluate the information of the body physiology and analogies to solve rheumatological and musculoskeletal problems.

B2- Apply appropriate treatment for the autoimmune rheumatic diseases and concerning the possible side effects affecting the physiology of the other body systems.

B3- Follow scientific development and recent advances in the field of electrophysiology and patho-physiology of musculoskeletal system,

(3)Course content:

Subjects	Lectures	Total Teaching Hours 30 hrs/ 15 weeks
▪ Ca++ metabolism	2hr/wk For one wk	2hrs for one wk
▪ PH regulation	2hr/wk For one wk	2hrs for one wk
▪ Control of muscle activity	2hrs/wk For one wk	2hrs for one wk
▪ Pain, sensation & analgesic system	2hrs/wk For one wk	2hrs for one wk
▪ Biological homeostasis , circadian rhythm	2hrs/wk For one wk	2hrs for one wk
▪ All muscles, nerves (except smooth muscles)	2hrs/ wk for 2 wks	4hrs for 2 wks
▪ Regulation of heart rate, control of blood pressure, COP ▪ Effect of training & de-conditioning on cardiovascular system	2hrs/wk For one wk	2hrs for one wk

▪ Work of breathing ▪ Pulmonary ventilation ▪ Assessment pulmonary function ▪ Hypoxia	2hr/wk For 2 wk	4hrs for 2 wks
▪ Neuro-peptides	2hrs/wk For one wk	2hrs for one wk
▪ Gastric secretion	2hrs/wk For one wk	2hrs for one wk
▪ Energy balance	2hrs/wk For one wk	2hrs for one wk
▪ Obesity	2hrs/wk For one wk	2hrs for one wk
▪ Physical fitness	2hrs/wk For one wk	2hrs for one wk

(4) Teaching methods:

4.1: …Lectures. ……

4.2: ……

(5) Assessment methods:

5.1: **Final written exam** for assessment of knowledge and intellectual ILOs

5.2: **MCQ continuous assessment** for assessment of knowledge and intellectual ILOs

5.2: **Log book**……for assessment of attitude and attendance……

Assessment schedule:

Assessment 1:…at the end of….6th month: (one smester)……

Assessment 2:…… ……week/month:……

Percentage of each Assessment to the total mark:

Written exam: 80 Marks

MCQ 20 Marks

Other assessment without marks: log book

(6) References of the course:

6.1: Hand books:…Handbook of the Physiology department……..

……..A Handbook of Physiology by Vinay Jain (2009)

6.2: Text books: (a) Guyton and Hall Textbook of Medical Physiology, 12th edition.

(b) Applied Exercise & Sport Physiology, with Labs, 3rd edition by Housh,

Housh and DeVries, …….

6.3: Journals:…… ……..Physiological Reviews ……

……Physiology……..

……Annual Review of Physiology……

6.4: Websites:…… http://getbodysmart.com/

……http://muscle.ucsd.edu/

(7) Facilities and resources mandatory for course completion:

-Laptop and data show projector

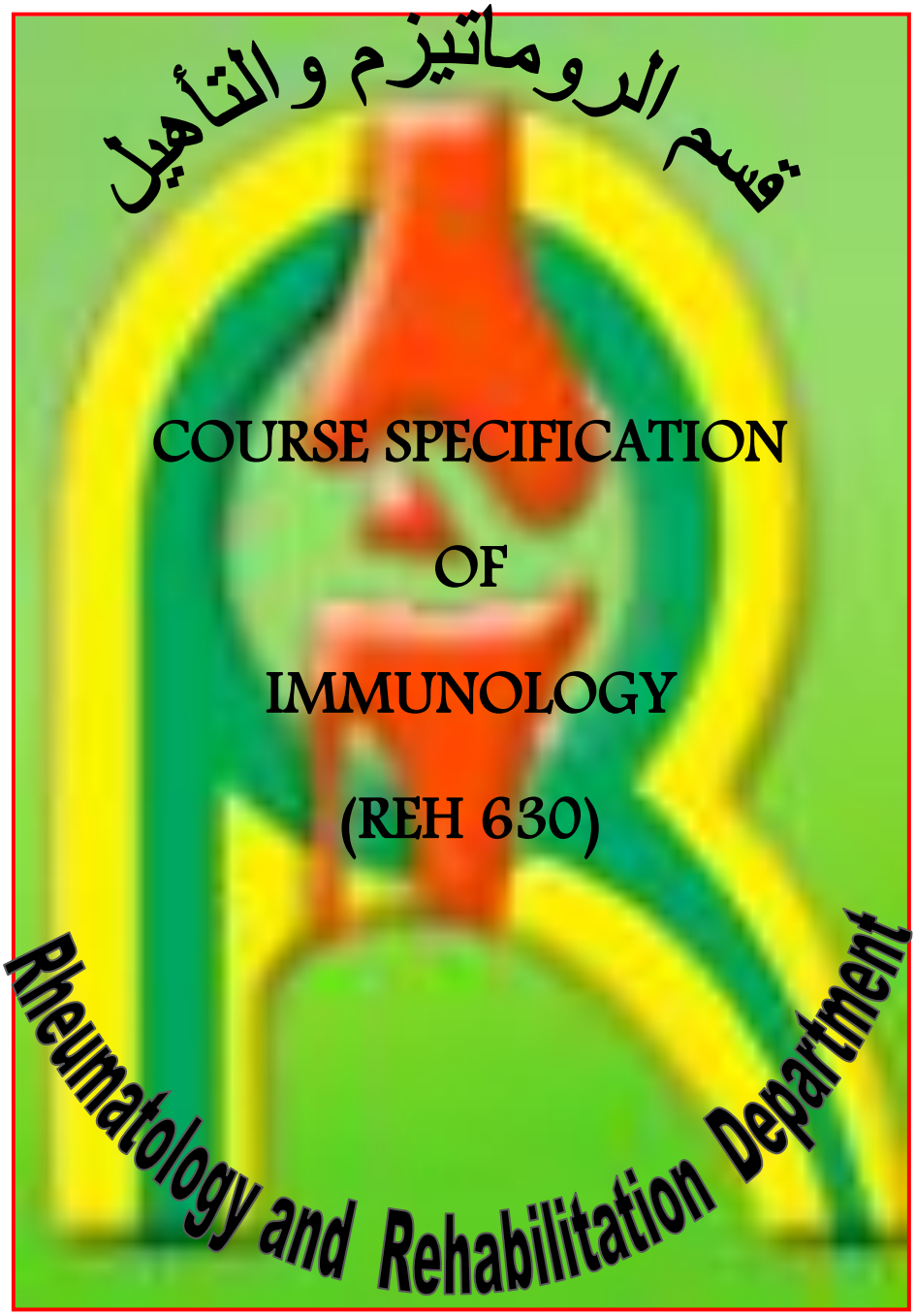
-Laser pointer and white board

-Comfortable and well prepared classroom

Course coordinator: Dr Shereen Aly Machaly

Head of the department: Prof. Ibrahim El-Boghdady

Date: 26/5/2013


قسم الروماتيزم والتأهيل
COURSE SPECIFICATION
OF
IMMUNOLOGY
(REH 630)
Rheumatology and Rehabilitation Department

COURSE SPECIFICATION
OF IMMUNOLOGY
Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate Doctorate degree of Rheumatology, Physical medicine and Rehabilitation /REH 600
(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	26-5-2013
(6) Date of last approval of programme specification by Faculty council	10-6-2013
(7) Course title:	Immunology
(8) Course code:	REH 630
(9) Credit hours:	One credit hour
(10) Total teaching hours:	15 hrs /15 weeks

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

1- To enable the candidate to be aware of all basic immunological knowledge and information regarding the rheumatic autoimmune disease

2- To provide fellows with information of immunological background for treatment of the related abnormal, dysfunction or dysregulated immunological mechanisms accompanying rheumatic diseases

(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:

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

A1 –Recognize the basics of immunology including (inflammation, innate immunity, lymphocytes, cytokines, complement, major histo-compitability, immunoglobulins)

A2- Attain a core body of knowledge in fundamental immunology and its role in the pathogenesis of autoimmune rheumatic muscle and joint diseases

A3 – Describe the investigation and management of patients with rheumatic autoimmune diseases and systemic vasculitides

B- Intellectual skills:

B1- Analyze and evaluate the information of the body immunology to solve rheumatological and musculoskeletal problems.

B2- Integrate basic science of genetics and immunology with clinical evaluation and diagnosis of patients with rheumatic disorders.

B3- Follow scientific development and recent advances in the field of immunology of musculoskeletal system, laboratory investigations related to immune system, autoimmunity and immune-therapy.

(3) Course content:

Subjects	Lectures	Total Teaching Hours (15hrs/ 15 weeks)
▪ Innate immunity	1hr/wk for one week	1hr or 1 wk
▪ Lymphocytes & lymphoid tissues	1hr/wk for one week	1hr or 1 wk
▪ Immune response	1 hr/wk for one week	1hr or 1 wk
▪ Antigen presentation & Major histocomptability complex	1hr/wk for one week	1hr or 1 wk
▪ Immunoglobulins & Immunoglobulin genes	1 hr/wk for one week	1hr or 1 wk
▪ Cytokines	1 hr/wk for one week	1hr or 1 wk
▪ Chemokines	1hr/wk for one week	1hr or 1 wk
▪ Complement & Kinin	1hr/wk for one week	1hr or 1 wk
▪ Inflammation	1 hr/wk for one week	1hr or 1 wk
▪ Apoptosis	1hr/wk for one week	1hr or 1 wk
▪ Autoimmune diseases	1hr/wk for 2 wks	2 hrs for 2wks
▪ Immunodeficiency disorders	1hr/wk for one week	1hr or 1 wk
▪ Recent trends in immune therapy	1hr/wk for 2 wks	2 hrs for 2wks

(4) Teaching methods:

4.1: lectures

(5) Assessment methods:

5.1. **Final written exam** for assessment of knowledge and intellectual ILOs

5.2 **MCQ continuous assessment** of knowledge and intellectual ILOs

5.3: **Log book**…….…… for assessment of……attitude and attendance…

Assessment schedule:

Assessment 1:…… at the end of…….6th month……

Assessment 1:…… at the end of…….6th month……

Percentage of each Assessment to the total mark: …….

Written exam: 80 Marks

MCQ: 20 Marks

Other assessment without marks: Log book

(6) References of the course:

6.1: **Hand books:** Handbook of Human Immunology, Second Edition by O'Gorman, Donnenberg (Editor)

6.2: **Text books:** **(a)** Basic Immunology Updated Edition: Functions and Disorders of the Immune System, 3rd edition by Abbas and Lichtman ……..

(b) Cellular and Molecular Immunology Text book, 7th edition by Abbas , Lichtman and Pillai ……

6.3: **Journals:** ……Annual Review of Immunology

……..Immunity…….

……The Journal of Immunology

……..Journal of Clinical Immunolology

6.4: **Websites:**…… **http://www.theimmunology.com/**

…….. **http://www.acaai.org/**

(7) Facilities and resources mandatory for course completion:

-Laptop and data show projector

-Laser pointer and blackboard

-Comfortable and well prepared classroom

Course coordinator: Dr Shereen Aly Machaly

Head of the department: Prof. Ibrahim El-Boghdady

Date: 26/5/2013


قسم الروماتيزم و التأهيل
COURSE SPECIFICATION
OF
RHEUMATOLOGY
AND
IMMUNOLOGY
(REH 616 RI)
Rheumatology and Rehabilitation Department

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

(A) Administrative information:

(1) Programme offering the course:	Postgraduate Doctorate degree of Rheumatology & Rehabilitation and Physical Medicine/ REH 600
(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	26/5/2013
(6) Date of last approval of programme specification by Faculty council	10/6/2013
(7) Course title:	Rheumatology & Immunology
(8) Course code:	**REH 616 RI**
(9) Credit hours	**12 hours lectures** in 4 semesters **8 hours clinical**
(10) Total teaching hours:	180 lectures or tutorials hours 240 clinical teaching hours

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

1- To enable the candidates to specialize in the area of Rheumatology and Clinical immunology and to provide fellows with the skills required to perform as well-trained, productive independent clinical investigators, independent rheumatology consultants and specialized health care providers for patients with inflammatory, autoimmune rheumatic and degenerative musculoskeletal disorders. These goals are optimally met in a three-year program

2- 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

3- 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.

(2) Intended Learning Outcomes (ILOs):

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

A-Knowledge and Understanding:

A1-Identify theories and fundamentals related to the immune system of human and its response with its impact on the of musculoskeletal system in health and disease.

A2- Recognize cytokines and apoptosis .

A3-Outline epidemiology, frequency, risk factors, clinical, molecular genetics, immunological aspects, aetiopathogenesis, and basic mechanisms of the spectrum of diseases affecting the musculoskeletal system in different age groups, and their impact on global health.

A 4 - Underline 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.

A5- List the pharmacological therapeutic and other treatment options for rheumatic diseases, including complementary and alternative therapies and recognize pharmacology and pharmacokinetics of commonly used drugs in treatment of rheumatic diseases.

A6-Recognize the clinical manifestations , the characteristic laboratory tests and specific lines of teatment of different autoimmune rheumatic diseases (rheumatoid arthritis , SLE, spondyloarthropathies, vasculitis, sjogren's, inflammatory muscle diseases, dermatomyositis, systemic sclerosis…….)

A7- Recognize the clinical manifestations , the characteristic laboratory tests and specific lines of teatment of degenerative rheumatic diseases (osteoarthritis) and crystal deposition diseases (gout and pseudogout).

A8- Recognize the clinical manifestations , the characteristic laboratory tests and specific lines of treatment of endocrinal, heamatological , renal , infection and malignancy related arthropathies.

A9- Define and recognize clinical characteristics and management of osteomalacia, osteonecrosis ,osteoporosis and paget disease

A10 - Define and recognize amyloidosis , sarcoidosis, infilterative disorders associated arthropathies ,tumours involving joints and fibromyalgia.

A11 – List and understand rheumatic diseases of the childhood.

A12- Understand the entrapment neuropathies and low back pain.

A13- Gain knowledge of reflex sympathetic dystrophy and psychogenic rheumatism.

A14- Understand the pharmacological basis of the antirheumatic drugs (NSAIDs, Glucocorticoids, DMARDs, antihyperuricemics and bone strengthening drugs).

A15- Recognize the nutritional aspect of rheumatic disorders.

A16- Identify recent advances and areas under research in the field of, rheumatology and joint diseases.

A17- Identify basics of ethics, medicolegal aspects, malpractice and common medical errors in rheumatology.

B- Intellectual activities (I)

The Doctoral Degree provides opportunities for candidates to achieve and demonstrate the following intellectual skills:

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 and the surface anatomy landmarks to reach proper diagnosis and for therapeutic injection..

B2- Integrate patient's symptomatology, historic data, abnormal physical signs and investigations into a comprehensive differential diagnosis of various musculoskeletal disorders (e.g. (RA, SLE. Ankylosing spondylitis..etc..) .

B3- Select from different diagnostic alternatives and interpret various diagnostic procedures: laboratory markers (Hematological, biochemical & immunological) and imaging to reach a final diagnosis.

B4 -Formulate appropriate management plans with proper therapy choice for individual patients presenting with musculoskeletal diseases, autoimmune rheumatological disorders (e.g. RA, SLE, sjogren,…etc…)

B5- Compare use of various treatment methods including: steroidal and non steroidal anti-inflammatory drugs, the disease modifying antirheumatic drugs (DMARDS) and biological drugs in the context of patient satisfaction, efficacy, and cost-benefit.

B6- Make decisions needed in different situations of clinical practice based on evidence-based medicine in rheumatology and rehabilitation medicine, using appropriate problem solving skills.

B7- Follow scientific development and recent advances in the field of immunology and patho-physiology of musculoskeletal system, laboratory investigations related to immune system, autoimmunity and immune-therapy.

B8- Assess risks in the clinical emergencies in the field of rheumatology.

B9- Apply ethical issues and resolve ethical dilemmas in relation to clinical practice.

C- Professional/practical skills: to be able to

C 1 –Carry out good history taking in the context of rheumatic patient.

C2- Examine the different muscles and joints of the body.

C3- Evaluate and examine patients with rheumatic disorders (RA, SLE, arthropathies , osteoarthritis, osteoporosis,……)

C4- Perform professionally aspiration of joints and intra- articular injection as a line of diagnosis and treatment .

C 5- Evaluate and interpret the imaging of the musculoskeletal disorders and bone density measurements.

C 6- Apply appropriate assessment & measurement tools to evaluate functional status or outcomes of type of treatment used.

C7- Write and evaluate professionally medical reports, clinical sheets including all collected data relevant to the patient's condition and treatment regimen sheets.

C 8- 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 and continue to self-learning and self-evaluation and demonstrate personal learning needs.

D 2- Use different resources to gain knowledge and information related to rheumatology and use this information and communication technology effectively as well as retrieve, manage, and manipulate information by all means.

D 3- Communicate ideas and arguments effectively and demonstrate an educational role in the course by communicating their understanding to their peer groups, by means of presentations and lectures and present clearly, and effectively a scientific topic in front of audience using computer and power point skills.

D 4- Demonstrate caring, compassion, integrity and respectful behaviors with patients and staff.

D 5- Work effectively within a team and leadership teams in health care team or other various professional contexts.

D 6-Communicate effectively in its different forms with other specialties and generate the ethos of a multidisciplinary approach in the clinical setting.

D 7- Analyze and use numerical data including the use of simple statistical methods.

D 8- 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 9- Demonstrate responsiveness to patient needs that supersedes self-interest and respect for patient privacy and autonomy.

D 10- Demonstrate accountability; sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.

D11- Demonstrate a consultative role to other physicians and health professionals and participate in the education of patients, families, students, residents and other health professionals.

D12- Identify proper patient care and patient's rights to obtain the optimum health care and effective treatment of rheumatic diseases.

D13- Accept personal responsibility for own actions & decisions.

D14- Recognize one's own limitation of knowledge and skills and refer patients to appropriate specialized health facility at appropriate stage.

(3) Course content:

Module 1 (3 credit hours) (45 teaching hours)	
Subjects	**Lectures (3 credit hrs/15 wks) (3 teaching hours/week)**
Structure, function of joints, C.T and muscles.	2 hrs
Immune & Inflammatory response.	3 hrs
Neuro-endocrinal aspects of the immune system & inflammation.	2 hrs
The role of free radicals, endothelium, adhesion molecules in the etipathogensis of rheumatic diseases.	2 hrs
cytokines and apoptosis in rheumatic diseases	2hrs
History taking, clinical examination and patient evaluation	4 hrs
Rheumatoid arthritis	3 hrs
Sjogren's syndrome	1 hr
Palindromic rheumatism	1 hr
Systemic lupus Erythematosus	3 hrs
Systemic sclerosis	3 hrs
Inflammatory diseases of muscles and other myopathies.	3 hrs
Dermatopolymyositis	3 hrs
Large and medium-sized vessel vasculitic syndromes	2 hrs
Small vessel vasculitic syndromes	2 hrs
Behcet disease	2 hrs
Spondyloarthropathies.	3 hrs
Rheumatic diseases of childhood.	4 hrs
Module 2 (3credit hours) (45 teaching hours)	
Subjects	**Lectures (3 credit hrs/15 wks) (3 teaching hours/week)**
Crystal deposition arthropathies: gout and pseudo gout.	3 hrs
Osteoarthritis.	3 hrs
Osteoporosis.	3 hrs

Osteomalacia	2 hrs
Paget's disease of bone	2 hrs
Osteonecrosis .	1 hr
Amyloidosis,	1 hr
Sarcoidosis	1 hr
Haematological associated arthropathies	2 hrs
Endocrine associated arthropathies	2 hrs
Malignant associated arthropathies	2 hrs
Syndromes of impaired immune function; HIV, complement deficiency	2 hrs
Infection & arthritis	3 hrs
Diagnostic tests, procedures & lab markers (Hematological, biochemical & immunological) in rheumatic diseases.	4 hrs
Aspiration analysis and injection of joints & soft tissues.	3 hrs
Imaging of musculoskeletal system	4 hrs
Differential diagnosis of different types of arthritis	3 hrs
Fibromyalgia syndrome	2hrs
Psychogenic rheumatism	2 hrs

Module 3 (3credit hours) (45 teaching hours)

Subjects	**Lectures (3 credit hrs/15 wks) (3 teaching hours/week)**
Reflex sympathetic dystrophy	2 hrs
Renal bone diseases (osteodystrophy)	2 hrs
Regional and soft tissue pain	6 hrs
Pregnancy & lactation with rheumatic diseases.	3 hrs
Non steroidal anti-inflammatory drugs.	3 hrs
Glucocorticoids	3 hrs
Disease modifying ant-rheumatic drugs.	4 hrs
Immunoregulatory agents	2 hrs
Anti-hyperuricemic drugs.	3 hrs
Biologic agents in treatment of rheumatic diseases.	6 hrs

Bone strengthening agents.	2 hrs
Rehabilitation of patients with rheumatic diseases.	4 hrs
Intra-articular therapy.	2 hrs
Indications of surgery in rheumatic diseases.	3 hrs

Module 4 (3 credit hours) (45 teaching hours)

Subjects	**Lectures (3 credit hrs/15 wks) (3 teaching hours/week)**
Genetic and gene therapy of rheumatic diseases.	6 hrs
Entrapment neuropathy	8 hrs
Low back pain	6 hrs
Bone and joint dysplasia. .	2 hrs
Polychondritis	2 hrs
Epidemiology, incidence, mortality & morbidity in rheumatic diseases	3 hrs
Systemic manifestations of rheumatic diseases.	6 hrs
Tumors involving joints, muscles and related structures.	6 hrs
Infiltrative disorder associated with rheumatic diseases.	3 hrs
Nutritional aspects of rheumatic diseases.	3 hrs

Clinical skills (240 teaching hours)

Clinical skill	Teaching hours
Module I (60 clinical hours)	
History taking, clinical examination and patient evaluation	8 hrs
How to examine, evaluate, diagnose , differentiate from other diseases and treat rheumatoid arthritis patient	6 hrs
How to examine, evaluate, diagnose , differentiate from other diseases and treat patients of Sjogren's syndrome	2 hrs
How to examine, evaluate, diagnose , differentiate from other diseases and treat patients of Palindromic rheumatism	2 hr
How to examine, evaluate, diagnose , differentiate from other diseases and treat patients of Systemic lupus Erythematosus	6 hrs

How to examine, evaluate, diagnose , differentiate from other diseases and treat patients of Systemic sclerosis	4 hrs
How to examine, evaluate, diagnose , differentiate from other diseases and treat patients of Inflammatory diseases of muscles and other myopathies.	4 hrs
How to examine, evaluate, diagnose , differentiate from other diseases and treat patients of Dermatopolymyositis	4 hrs
How to examine, evaluate, diagnose , differentiate from other diseases and treat patients of Large and medium-sized vessel vasculitic syndromes	4 hrs
How to examine, evaluate, diagnose , differentiate from other diseases and treat patients of Small vessel vasculitic syndromes	4 hrs
How to examine, evaluate, diagnose , differentiate from other diseases and treat patients of Behcet disease	4 hrs
How to examine, evaluate, diagnose , differentiate from other diseases and treat patients of Spondyloarthropathies.	6 hrs
How to examine, evaluate, diagnose , differentiate from other diseases and treat children with pediatric Rheumatic diseases.	6 hrs
Module II (60 clinical hours)	
How to examine, evaluate, diagnose , differentiate from other diseases and treat patients of Crystal deposition arthropathies: gout and pseudo gout.	4 hrs
How to examine, evaluate, diagnose , differentiate from other diseases and treat patients of Osteoarthritis.	4 hrs
How to examine, evaluate, diagnose , differentiate from other diseases and treat patients of Osteoporosis.	4 hrs
How to examine, evaluate, diagnose , differentiate from other diseases and treat patients of Osteomalacia	2 hrs
How to examine, evaluate, diagnose , differentiate from other diseases and treat patients of Paget's disease of bone	1 hr
How to examine, evaluate, diagnose , differentiate from other diseases and treat patients of Osteonecrosis .	1 hr
How to examine, evaluate, diagnose , differentiate from other diseases and treat patients of Amyloidosis,	1 hr
How to examine, evaluate, diagnose , differentiate from other diseases and treat patients of Sarcoidosis	1 hr
How to examine, evaluate, diagnose , differentiate from other diseases and treat patients with Haematological associated	2 hrs

arthropathies	
How to examine, evaluate, diagnose , differentiate from other diseases and treat patients with Endocrine associated arthropathies	3 hrs
How to examine, evaluate, diagnose , differentiate from other diseases and treat patients with Malignant associated arthropathies	3 hrs
How to examine, evaluate, diagnose , differentiate from other diseases and treat patients with Syndromes of impaired immune function; HIV, complement deficiency	1 hr
How to examine, evaluate, diagnose , differentiate from other diseases and treat patients with Infection & arthritis	3 hrs
How to perform, indicate and interpret Diagnostic tests, procedures & lab markers (Hematological, biochemical & immunological) in rheumatic diseases.	6 hrs
How to perform aspiration analysis and injection of different joints & soft tissues.	10 hrs
Read, evaluate and interpret Imaging of musculoskeletal system	6 hrs
How to Differentiate diagnosis of different types of arthritis	4 hrs
How to examine, evaluate, diagnose , differentiate from other diseases and treat patients of Fibromyalgia syndrome	2 hrs
How to examine, evaluate, diagnose , differentiate from other diseases and treat patients of Psychogenic rheumatism	2 hrs
Module III (60 clinical hours)	
How to examine, evaluate, diagnose , differentiate from other diseases and treat patients with Reflex sympathetic dystrophy	4 hrs
How to examine, evaluate, diagnose , differentiate from other diseases and treat patients with Renal bone diseases (osteodystrophy)	4 hrs
How to examine, evaluate, diagnose , differentiate from other diseases and treat patients with different Regional and soft tissue pain	24 hrs
How to examine, evaluate, and treat patients with rheumatic diseases during Pregnancy & lactation.	2 hrs
Indicate, prescribe, avoid contraindication and manage side effects of Non steroidal anti-inflammatory drugs.	2 hrs
Indicate, prescribe, avoid contraindication and manage side effects of Glucocorticoids	2 hrs
Indicate, prescribe, avoid contraindication and manage side effects of Disease modifying ant-rheumatic drugs.	2 hrs

Indicate, prescribe, avoid contraindication and manage side effects of Immunoregulatory agents	2 hrs
Indicate, prescribe, avoid contraindication and manage side effects of Anti-hyperuricemic drugs.	2 hrs
Indicate, prescribe, avoid contraindication and manage side effects of Biologic agents in treatment of rheumatic diseases.	4 hrs
Indicate, prescribe, avoid contraindication and manage side effects of Bone strengthening agents.	2 hrs
How to design and prescribe rehabilitation of patients with rheumatic diseases.	10 hrs
Module VI (60 clinical hours)	
Examine, evaluate, diagnose and treat patients with Entrapment neuropathy	16 hrs
Examine, evaluate, diagnose and treat patients with Low back pain	14 hrs
Examine, evaluate, diagnose and treat patients with Bone and joint dysplasia. .	2 hrs
Examine, evaluate, diagnose and treat patients with Polychondritis	2 hrs
Evaluate, diagnose and treat Systemic manifestations of rheumatic diseases.	20 hrs
Examine, evaluate, and diagnose Tumors involving joints, muscles and related structures.	4 hrs
Examine, evaluate, diagnose and treat Infiltrative disorder associated with rheumatic diseases.	2 hrs

(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 knowledge and intellectual ILOs

5.2: Written commentary…. for assessment of knowledge and intellectual ILO

5.3: **Oral exam** for assessment of knowledge, intellectual and transferable ILOs,

5.4: **OSCE Clinical exam** for assessment of knowledge intellectual practical, transferable ILOs.

5.5: **MCQ continuous assessment at the end of each semester ….** for assessment of knowledge and intellectual ILOs

5.6: **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)…….**

5.7: **Log book….**

Assessment schedule:

Written exam:…at the end of 6 semesters

MCQ:… at the end of each semester

OSCE Clinical exam: … at the end of 6 semesters

Oral exam … at the end of 6 semesters

Percentage of each Assessment to the total mark :

Written exam:……92……%: (33.34)……

Written commentary…. .60……..%: (15.38)……

MCQ 38 Marks

OSCE Clinical exam:……100/390……

Oral exam:……100/390…… ….%:: (25.64)……

Other assessment without marks: ……dissertation, log book

(6) References of the course:

6.1: **Hand books:…** -Oxford Textbook of Rheumatology, 2nd edition, Maddison, Isenberg, Woo, ...

-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, 12th edition, Athritis Foundation, eds J.H. Klippel, P.A. Dieppe .....

6.3: Journals: - Arthritis and Rheumatism (www.interscience.wiley.com) ... . Annals of Rheumatic Diseases ....Journal of Rheumatology (www.jrheum.com).....

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

6.5: Others .....Attending meetings & 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.

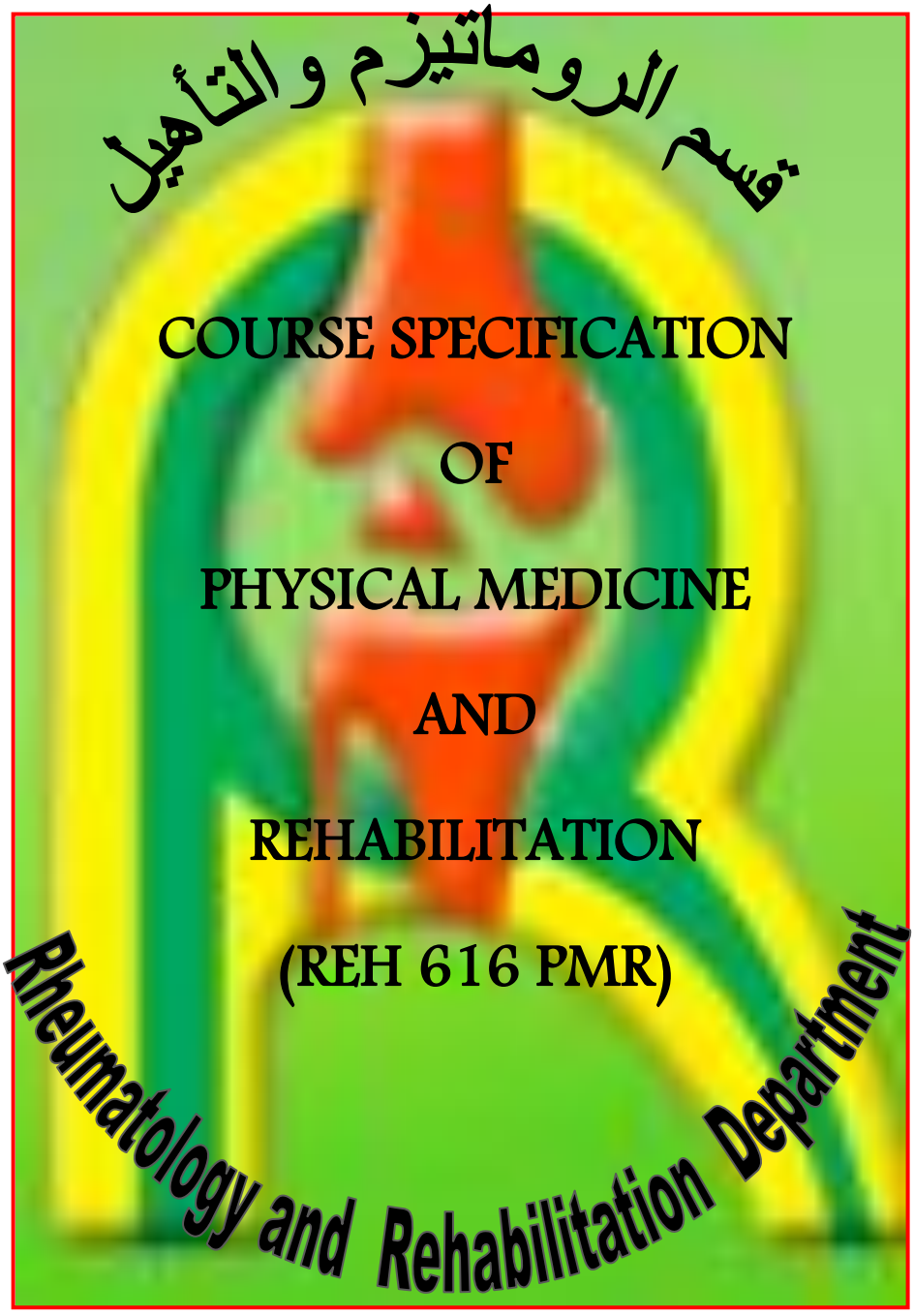
2- Outpatient clinic for collection of clinical cases

3- Pharmacy for pharmacological treatment of patients

Course coordinator: Dr Shereen Aly Machaly

Head of the department: Prof Ibrahim El-Boghdady

Date: 26/5/2013


قسم الروماتيزم و التأهيل
COURSE SPECIFICATION
OF
PHYSICAL MEDICINE
AND
REHABILITATION
(REH 616 PMR)
Rheumatology and Rehabilitation Department

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

(A) Administrative information

(1) Programme offering the course:	Postgraduate Doctorate degree of Rheumatology & Rehabilitation and Physical Medicine/ REH 600
(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	26/5/2013
(6) Date of last approval of programme specification by Faculty council	10/6/2013
(7) Course title:	Physical Medicine & Rehabilitation
(8) Course code:	REH 616 PMR
(9) Credit hours	11 hours lectures in 4 semesters 7 hours clinical
(10) Total teaching hours:	165 lectures or tutorials hours 210 clinical teaching hours

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

1- To enable the candidate to have the basic and professional knowledge and clinical skills necessary for diagnosis of most of handicapping problems, infirmities and other conditions in need of medical and functional rehabilitation and to have the ability of dealing with these conditions so as to minimize the handicapping and pain and maximize function of the affected organs and systems.

2- To provide fellows with the skills required to perform as well-trained, productive independent medical rehabilitation consultants and specialized health care providers for patients needing medical rehabilitation or physical therapy. 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.

3- To enable the candidates to interact with community problems, respect ethical values according to community culture, and promote their medical standards through engaging in continuing medical education. The course also aims to introduce the candidate to the basics of scientific medical research.

(2) Intended Learning Outcomes (ILOs):

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

A- Knowledge and Understanding:

A1-Describe functional assessment of patients with locomotor system.

A2- State vocational evaluation before starting musculoskeletal rehabilitation program.

A3- Retell psychological impact on the outcome of rehabilitation.

A4- Describe functional outcome assessment, self-care evaluation and management.

A5- Identify indications, advantages, and limitations for electrodiagnostic studies, electromyography and nerve conduction studies.

A6- Recall the normal electrophysiology of a sound muscle.

A7- Recognize the electrophysiologic response of a skeletal muscle during rest and active contraction.

A8- Match different patterns of nerve conduction study in different kind of neuropathies.

A9- List major neuromuscular junction pathologies and elaborate their different electrophysiologic findings.

A10- Describe basic principles of rehabilitation medicine, impairments, disability and handicapping including pediatric and older patients' rehabilitation.

A 11- Identify different categories of physiotherapy modalities, understand their physiologic effects on soft tissues, describe their various mechanisms related to the management of rheumatic, orthopedic, neurological and other disorders and identify benefits and hazards of their uses in the field of rheumatology and rehabilitation medicine.

A12- Select the proper indications of heat therapy in the process of rehabilitation.

A13- Retell the basic requirement for hydrotherapy in a rehabilitation center.

A14- Name the physiological background of the use of cold therapy in rehabilitation.

A15- label the mechanism of action of infrared laser in management of musculoskeletal problem.

A16- Indicate the electromagnetic therapy in rehabilitation of musculoskeletal conditions.

A17- Recognize different types of electric stimulation for rehabilitation purposes with elaboration of main characteristic features of each.

A18- Match different types of skeletal traction for their proper indications.

A19- Recall value of manipulation in management of chronic non-specific spinal pain and other typs of joint and myofacial pain.

A20- State value of different types of massage in musculoskeletal problems.

A 21- Understand exercise guidelines, benefits and hazards and understand physiologic effect of exercise on soft tissues.

A22- Identify different upper and lower limb orthosis and prosthesis.

A23- Tell about adaptive system and devices for disabled patients.

A24- Label walking aid and wheel chair used for disabled patients.

A25- Identify evaluation of patients with painful arthritis before starting rehabilitation program.

A26- Study rehabilitation of patients with stroke, spinal cord injuries, neurogenic bowel and bladder.

A27- Formulate a rehabilitation program for patients with multiple sclerosis and spasticity.

A28- Name the proper rehabilitation conduct for different orthopedic and traumatic conditions, amputee and joint replacement surgery.

A29- Match different gait abnormalities with their proper gait training programs.

A30- Identify rehabilitation of osteoporosis.

A31- Recognize rehabilitation of scoliosis.

A32- Memorize rehabilitation of patients suffering from cardiac problems, pulmonary diseases, vascular diseases and diabetic foot.

A33- Reproduce rehabilitation program for patients with burn, bed ulcers and immobilization syndrome.

A34- Enumerate benefits of therapeutic exercises in gynecology and obstetrics.

A35- Describe assessments of speech, swallowing, auditory and communications problems.

A36- Know approaches of mechanical, manual and functional rehabilitation.

A37- Label training of functional independence.

A38- Identify rehabilitation of communication and movement disorders.

A39- Reproduce a rehabilitation programs in patients with vestibular problems and blindness.

A40- Recognize rehabilitation of cancer patients.

A41- State rehabilitation of degenerative diseases of spine and joints.

A42- Identify vocational, industrial and occupational rehabilitation.

A43- Know nutritional aspect of rehabilitation.

B- Intellectual skills: The Postgraduate Degree provides opportunities for candidates to achieve and demonstrate the following intellectual activities:

. **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 to reach proper application of suitable rehabilitation program without complications.

B2- Prepare for clinical, vocational, functional and psychological evaluation before starting rehabilitation.

B3- Employ electrodiagnosis of nerve, muscle and neuromuscular junction pathologies into proper diagnosis and then management of nerve and muscle abnormalities.

B4- Apply physical medicine and design rehabilitation program in patients with rheumatologic, neurological, orthopedics and other medical disorders including pediatric and geriatric patients.

B5- Implement different physiotherapy modalities as heat, cold, hydrotherapy, laser, electromagnetic therapy and electric stimulation in musculoskeletal rehabilitation.

B6- Compose exercise/therapy prescription with specific diagnosis and recommended emphasis of treatment.

B7- Utilize traction, manipulation and massage for treatment of musculoskeletal problems.

B 8- Prescribe and evaluate orthosis and prostheses of different parts of the body.

B9- Use adaptive devices, walking aids and wheel chair for disabled patients.

B10- Compare use of various treatment methods including physiotherapy, manual approaches, exercise and patient training in the context of patient satisfaction, efficacy, and cost-benefit.

B11- Pertain rehabilitation of patients with arthritis, chronic pain, degenerative joint and spinal problems.

B12- Plan rehabilitation of patient with stroke, spinal cord injury, multiple sclerosis, neurogenic bowel and bladder, spasticity and gait training.

B13- Apply rehabilitation of orthopedic and traumatic conditions, scoliosis, amputee, joint replacement surgery and osteoporosis.

B14- Infer rehabilitation of cardiac, pulmonary, vascular problems and diabetic foot.

B15- Imply rehabilitation of immobilization, bed ulcers and burn.

B 16- Judge value of rehabilitation in gynecological and obstetric disorders.

B17- Demonstrate evaluation of disability, handicapped, speech, language, swallowing, auditory and communication disorders.

B18- Imply the principles of mechanical, manual and functional rehabilitation approaches, plus training of functional independence.

B10- Signify rehabilitation of disorders regarding communications, movement, cancer, blindness, and vestibular problems.

B20- Solve vocational, industrial and occupational hindrances in rehabilitation.

B21- Understand nutritional aspects of different rehabilitation diversities.

B22- Value sexual rehabilitation of different spinal and arthritic problems.

B23- Follow scientific development and recent advances in the field of electrophysiology, physiotherapy and rehabilitation medicine approaches.

C- Professional/practical skills:

C 1- Carry out clinical evaluation of musculoskeletal problems taking in consideration motor and functional assessment.

C2- Estimate psychological, vocational and self-assessment aspects before starting a rehabilitation program.

C 3 - 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.

C4- Employ efficiently physiotherapy modalities in the context of professional managing rheumatic, musculoskeletal and other disorders in a rehabilitation setting.

C4- Select and adapt spinal, upper and lower limbs supporting and substituting devices and other assistive devices for limb and spinal problems and evaluate them with follow up of the patients

C5 - Apply appropriate assessment & measurement tools to evaluate functional status or outcomes of type of treatment used.

C 6- Write and evaluate professionally medical reports, clinical sheets including all collected data relevant to the patient's condition and physiotherapy treatment regimen sheets.

C 7- 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 physical & rehabilitation medicine, and continue to self-learning and self-evaluation and demonstrate personal learning needs.

D 2- Use different resources to gain knowledge and information related to physical and rehabilitation medicine field and use information and communication technology effectively.

D 3- Retrieve, manage, and manipulate information by all means and communicate ideas and arguments effectively.

D 4- Demonstrate caring/respectful behaviors with patients and staff.

D 5- Work effectively within a team and leadership teams in rehabilitation team or other various professional contexts. And communicate effectively in its different forms with other specialties and generate the ethos of a multidisciplinary approach in the clinical setting.

D6- 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.

D7- Demonstrate an educational role in the course by communicating their understanding to their peer groups, students, residents and other health professionals by means of presentations and lectures and demonstrate a consultative role to other physicians and health professionals

D8-Demonstrate compassion, integrity, and respect for all patient's rights. privacy and autonomy and treat all patients equally regardless to their believes, culture and behavior.

D9- Recognize one's own limitation of knowledge and skills and refer patients to appropriate specialized health facility at appropriate stage.

D10- 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 and incorporate formative evaluation feedback into daily practice.

D11- Identify basic principles, methodology, tools and ethics of scientific research in physical and rehabilitation medicine fields, including how research is conducted, evaluated, explained to patients, and applied to patient care. Analyze and use numerical data including the use of simple statistical methods.

D12- Maintain comprehensive, timely, and legible medical records, if applicable.

(3) Course content:

Module 1 (3 credit hours) (45 teaching hours)	
Subjects	**Lectures** **(3 credit hr/ 15 wks)** **(3 teaching hours/week)**
▪ Clinical and vocational evaluation & principles of assessment of patients in a Rehabilitation setting.	2 hrs
▪ Psychological aspects and rehabilitation	2 hrs
▪ Functional outcome assessment, self care evaluation & management	2 hrs
▪ Disability, functional independence & handicapping evaluation.	2 hrs
▪ Principles of mechanical, manual & functional rehabilitation approaches	2 hrs
▪ Electrodiagnosis	3 hrs
▪ Electrophysiological studies of muscles in normal & pathological conditions.	12 hrs

▪ Nerve conduction studies.	12 hrs
▪ Neuromuscular junction studies.	4 hrs
▪ Electric stimulation and therapy	4 hrs

Module 2 (3 credit hours) (45 teaching hours)

Subjects	Lectures (3 credit hr/ 15 wks) (3 teaching hours/week)
▪ Heat therapy	4 hrs
▪ Cold therapy	1 hr
▪ Laser	2 hrs
▪ Electromagnetic therapy	2 hrs
▪ Hydrotherapy.	1 hr
▪ Traction	2 hrs
▪ Manipulation.	2 hrs
▪ Massage	2 hrs
▪ Therapeutic exercise	3 hrs
▪ Adaptive system and devices for disabled patients	2 hrs
▪ Upper limb orthosis & prosthesis	6 hrs
▪ Lower limb orthosis & prosthesis.	6 hrs
▪ Spinal orthosis (cervical, lumbar, thoraco-lumbar)	8 hrs
▪ Transfer, wheelchairs and walking aids	4 hrs

Module 3 (3 credit hours) (45 teaching hours)

Subjects	Lectures (3 credit hr/ 15 wks) (3 teaching hours/week)
▪ Rehabilitation of patients with arthritis	2 hrs
▪ Rehabilitation of patients with pain	2 hrs

▪ Rehabilitation of patients with stroke.	4 hrs
▪ Rehabilitation of patients with spinal cord injuries	3 hrs
▪ Rehabilitation of patients with multiple sclerosis.	2 hrs
▪ Rehabilitation of patients with Neurogenic bladder and bowel.	2 hrs
▪ Rehabilitation of spasticity and abnormalities of muscle tone	3 hrs
▪ Rehabilitation of orthopedic and traumatic conditions	2 hrs
▪ Rehabilitation of scoliosis	3 hrs
▪ Rehabilitation of amputee	2 hrs
▪ Rehabilitation after joint replacement surgery	3 hrs
▪ Gait training	3 hrs
▪ Rehabilitation of osteoporosis	2 hrs
▪ Rehabilitation of cardiac patients	2 hrs
▪ Rehabilitation of patients with pulmonary diseases	3 hrs
▪ Rehabilitation of patients with vascular diseases	2 hrs
▪ Rehabilitation of diabetic foot patients	3 hrs
▪ Rehabilitation of gynecological & obstetric disorders	2 hrs

Module 4 (2 credit hours) (30 teaching hours)

Subjects	Lectures (2 credit hrs/ 15 wks) (2 teaching hours/week)
Training of functional independence	2 hrs
Immobilization syndrome and bed ulcers	2 hrs
Rehabilitation of patients with burn	2 hrs
Swallowing disorders rehabilitation	2 hrs
Auditory disorders rehabilitation	2 hrs
Rehabilitation of Speech, language communication disorders	2 hrs
Rehabilitation of patients with movement disorders	2 hrs
Rehabilitation of cancer patients	2 hrs
Vestibular rehabilitation	2 hrs
Rehabilitation of the blind	2 hrs
Rehabilitation of degenerative spine & peripheral joints diseases	2 hrs
Rehabilitation of sexual problems in disabled patients.	2 hrs

Vocational rehabilitation	2 hrs
Industrial rehabilitation	2 hrs
Nutritional aspects of rehabilitation	2 hrs

Clinical skills (210 teaching hours)

Clinical skill	Teaching hours
Module I (60 clinical hours)	
▪ Evaluate the clinical status and perform vocational evaluation & assessment of patients in a Rehabilitation setting.	4 hrs
▪ Assess functional outcome & evaluate patient's self care	2 hrs
▪ Evaluate disability, functional independence & handicapping.	2 hr
▪ Perform and apply Electrodiagnosis	4 hrs
▪ Perform, apply electrophysiological studies of muscles (EMG) in normal and pathological conditions, write and interpret their reports	16 hrs
▪ Perform, apply Nerve conduction velocity studies (NCV), write and interpret reports.	20 hrs
▪ Perform, apply Neuromuscular junction studies,), write and interpret reports.	8 hrs
▪ Prescribe and apply electrotherapy	4 hrs
Module II (60 clinical hours)	
▪ Prescribe and apply different modalities of Heat therapy	6 hrs
▪ Prescribe and apply Cold therapy	2 hrs
▪ Prescribe and apply Laser therapy for musculoskeletal system	4 hrs
▪ Prescribe and apply Electromagnetic therapy	4 hrs
▪ Prescribe and apply Hydrotherapy.	2 hrs
▪ Prescribe and apply cervical and lumbar spine Traction	4 hrs
▪ Prescribe and perform Manipulation.	4 hrs
▪ Prescribe and apply Massage	2 hrs
▪ Prescribe and apply Therapeutic exercise	4 hrs
▪ Prescribe and adapt Upper limb orthosis & prosthesis to patients in need	8 hrs

▪ Prescribe and adapt Lower limb orthosis & prosthesis.	8 hrs
▪ Prescribe and adapt Spinal orthosis (cervical, lumbar, thoraco-lumbar)	8 hrs
▪ Prescribe and use wheelchairs and walking aids	4 hrs
Module III (45 clinical hours)	
▪ Design and follow up rehabilitation program of patients with arthritis	2 hrs
▪ Design and follow up rehabilitation program of patients with pain	2 hrs
▪ Design and follow up rehabilitation program of patients with stroke.	3 hrs
▪ Design and follow up rehabilitation program of patients with spinal cord injuries	3 hrs
▪ Design and follow up rehabilitation program of patients with multiple sclerosis.	2 hrs
▪ Design and follow up rehabilitation program of patients with Neurogenic bladder and bowel.	2 hrs
▪ Design and follow up rehabilitation program of spasticity and abnormalities of muscle tone	3 hrs
▪ Design and follow up rehabilitation program of orthopedic and traumatic conditions	3 hrs
▪ Design and follow up rehabilitation program of scoliosis	3 hrs
▪ Design and follow up rehabilitation program of amputee	3 hrs
▪ Design and follow up rehabilitation program after joint replacement surgery	3 hrs
▪ Apply Gait training	3 hrs
▪ Design and follow up rehabilitation program of osteoporosis	2 hrs
▪ Design and follow up rehabilitation program of cardiac patients	2 hrs
▪ Design and follow up rehabilitation program of patients with pulmonary diseases	3 hrs
▪ Design and follow up rehabilitation program of patients with vascular diseases	2 hrs
▪ Design and follow up rehabilitation program of diabetic foot patients	2 hrs
▪ Design and follow up rehabilitation program of gynecological & obstetric disorders	2 hrs
Module VI (45 clinical hours)	
Training of functional independence	4 hrs

Evaluate and manage immobilization syndrome and bed ulcers	4 hrs
Design and evaluate rehabilitation program of patients with burn	4 hrs
Design and evaluate swallowing disorders rehabilitation program	4 hrs
Apply and evaluate auditory disorders rehabilitation program	4 hrs
Apply and evaluate rehabilitation of Speech, language communication disorders	4 hrs
Apply rehabilitation of patients with movement disorders	4 hrs
Design and evaluate rehabilitation program of cancer patients	4 hrs
Apply and evaluate Vestibular rehabilitation	4 hrs
Design and evaluate rehabilitation program of the blind	4 hrs
Design and apply rehabilitation program of degenerative spine & peripheral joints diseases	5 hrs

(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 knowledge and intellectual ILOs

5.2: **Structured Oral exam** for assessment of knowledge and intellectual and transferable ILOs

5.3: **OSE Clinical exam…….** for assessment of knowledge and intellectual , clinical and transferable ILOs

5.4: **Practical exam in orthosis & prosthesis and electromyography** of knowledge and intellectual , clinical and transferable ILOs

5.5 **MCQ continuous assessment** for assessment of knowledge and intellectual ILOs

5.5: 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).....

5.6: Log book

Assessment schedule:

Assessment 1:...After 6 semesters

Assessment 2:... After 6 semesters

Assessment 3: ... After 6 semesters

Assessment 4: ... After 6 semesters

Assessment 5: ...At the end of each semester

Assessment 6: .....throughout the course duration.:.....

Percentage of each Assessment to the total mark of the M.D. programme:

Written exam:.....104/430

OSCE Clinical exam:.....100/430.....

Structured Oral exam:.....100/430.....

Practical exam in orthosis & prosthesis and electromyography: 100/430

MCQ: 26 marks

Other assessment without marks: .....dissertation, log book

(6) References of the course:

6.1: Hand books:...(a) Oxford Handbook of Clinical Rehabilitation, 2nd edition by Ward, Barnes, Stark , Ryan (Authors)

(b) Tidy's Physiotherapy by Stuart Porter ...

6.2: Text books:- (a) Krusen's Textbook of Physical Medicine and Rehabilitation

(b) Physical Medicine and Rehabilitation, 4th Edition, Randall Braddom (editor), Elsevier Limited, UK.

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

.....- Journal of Rehabilitation Medicine.....

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

.....http://www.bsrm.co.uk/.....

6.5: Others .....Attending meetings & 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

4-Rehabilitation measures & physiotherapy equipments for rehabilitating patients

Course coordinator: Dr Shereen Aly Machaly

Head of the department: Prof Ibrahim El-Boghdady

Date: 26/5/2013


قسم الروماتيزم و التأهيل
COURSE SPECIFICATION
OF
PEDIATRIC
REHABILITATION
(REH 616 PR)
Rheumatology and Rehabilitation Department

COURSE SPECIFICATION
OF PEDIATRIC REHABILITATION
Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Program offering the course:	Postgraduate Doctorate 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 program:	Second part
(5) Date of approval by the Department`s council	26/5/2013
(6) Date of last approval of programme specification by Faculty council	10 /6/2013
(7) Course title:	(elective Course) Pediatric Rehabilitation
(8) Course code:	REH 616 PR
(9) Credit hours:	2 credit hours
(10) Total teaching hours:	30 hours/15week

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

1. Provide fellows with a broad knowledge base of medical issues related to rehabilitation of children and adolescents.
2. Provide the proper scientific education necessary to promote and thoroughly develop fellow's ability to accurately diagnose needs and manage a wide variety of patients requires pediatric rehabilitation.
3. Allow the fellow in the field of pediatric rehabilitation to become academic leaders in the care of health problems in children and adolescents in need of medical rehabilitation and allow him/her to become a teacher and researcher in the field of pediatric rehabilitation.

(2) Intended Learning Outcomes (ILOs):

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

A- Knowledge and Understanding

A1- Identify causes and mechanisms of handicapping in children and adolescents and recognize principles of assessment, evaluation and rehabilitation medicine in these conditions.
A 2- Identify rehabilitation of congenital and acquired disabilities in children.
A 3- Describe the rehabilitation of pediatric traumatic brain injury and spinal cord injury.
A4- Know the rehabilitation program for neuromuscular diseases and stroke in children including therapeutic exercises and electric stimulation.
A5- Recognize the management of cerebral palsy and spasticity in children.
A6- List the rehabilitation program of different types of spina bifida.
A7- Enumerate pediatric bracing and prosthetic devices..

A8- Understand exercise guidelines, benefits and hazards in children and adolescents and understand physiologic effect of exercise on soft tissues.

A9- State pediatric burn wound care.

A10- label rehabilitation of juvenile idiopathic arthritis and musculoskeletal pain syndrome in children.

A11- Explain rehabilitation of pulmonary disease in children.

A12- Discuss the abnormalities in gait of children

B- Intellectual skills

B1 – Manage the rehabilitation of a child with disability (congenital and/ or acquired), spina bifida and burn wound.

B2- Apply a rehabilitation program of a child with traumatic brain injury, spinal cord injury and stroke.

B3- Estimate the abnormalities of gait in children.

B4- Contrast the rehabilitation of neuromuscular disorders, cerebral palsy and spasticity of children with their therapeutic exercises and electric stimulation.

B5- Select and adjust use of the prosthetic devices and bracing in children.

B6- Apply pediatric pulmonary rehabilitation.

B7- Diagram a rehabilitation program of a child with musculoskeletal pain syndromes, juvenile idiopathic arthritis.

(3) Course content: Two credit hours for lectures

Subjects	Lectures (30 hrs)
Rehabilitation of congenital and acquired disabilities.	2 hrs for one week
Rehabilitation of Pediatric traumatic brain injury.	2 hrs for one week
Rehabilitation of Pediatric spinal cord injury.	2 hrs for one week
Rehabilitation of stroke in children.	2 hrs for one week
Abnormal gait in children.	2 hrs for one week
Rehabilitation of neuromuscular diseases.	2 hrs for one week
Cerebral palsy, spasticity management.	2 hrs for one week
Rehabilitation of different forms of spinal bifida.	2 hrs for one week
Therapeutic exercise, electrical stimulation.	2 hrs for one week
Bracing equipment with anticipatory guidance in children.	2 hrs for one week
Rehabilitation of pediatric amputee, pre-prosthetic and prosthetic devices.	2 hrs for one week
Pediatric burn wound care.	2 hrs for one week
Rehabilitation of juvenile idiopathic arthritis.	2 hrs for one week
Musculoskeletal pain syndromes involving the back, knee anterior leg, ankle/foot and upper extremity in pediatric patients.	2 hrs for one week
Pulmonary rehabilitation.	2 hrs for one week

(4) Teaching methods:

4.1: Lectures

4.2: Scientific seminars

(5) Assessment methods:

5.1: Final written exam for assessment of ……knowledge and intellectual ILOs

5.2 MCQ: for assessment of ……knowledge and intellectual ILOs

5.3: Log book for assessment of

Percentage of each Assessment to the total mark:

Written exam:. 64 marks

MCQ: 16 marks

Log book: without marks

(6) References of the course:

6.1: Hand books:

(a) Handbook of Pediatric Physical Therapy (Long, Handbook of Pediatric Physical Therapy), 2nd edition by Long, and Toscano

(b) Pediatrics (Rehabilitation Medicine Quick Reference) by Nelson (Author), and Buschbacher (Editor)

6.2: Text books: Pediatric Rehabilitation: Principles & Practices, fourth edition by Alexander and Matthews

6.3: Journals: …….Journal of Pediatric Rehabilitation Medicine…..

……...Developmental Neurorehabilitation (formerly Pediatric Rehabilitation)

6.4: Websites: .http://www.family-friendly-fun.com/therapy/child-development.htm

……www.cerebralpalsystemcells.com

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-Rehabilitation measures & physiotherapy equipments for rehabilitating patients

Course coordinator: Dr Shereen Aly Machaly

Head of the department: Prof Ibrahim El-Boghdaady

Date: 26-5-2013


قسم الروماتيزم والتأهيل
COURSE SPECIFICATION
OF
GERIATRIC
REHABILITATION
(REH 616 GR)
Rheumatology and Rehabilitation Department

COURSE SPECIFICATION
OF GERIATRIC REHABILITATION
Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Program offering the course:	Postgraduate Doctorate 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 program:	Second part
(5) Date of approval by the Department`s council	26-5-2013
(6) Date of last approval of programme specification by Faculty council	10-6-2013
(7) Course title:	(elective Course) Geriatric Rehabilitation
(8) Course code:	REH 616 GR
(9) Credit hours:	2 credit hours
(10) Total teaching hours:	30 hours/15 weeks

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

1) Provide the opportunity for the fellow to learn rehabilitation assessment and principles and to learn the delivery of a comprehensive rehabilitation program in older adult patients.

2) Enable candidates to contribute to geriatric patient care service development regionally and nationally

3) Train the fellow in the field of geriatric rehabilitation to become academic leaders in the care of health problems in elderly patients in need of medical rehabilitation and allow him to become a teacher and researcher in the field of geriatric rehabilitation.

(2) Intended Learning Outcomes (ILOs):

A 1-State theories of aging, age related changes (anatomy and physiology).

A 2 – Know basic assessment of musculoskeletal system in geriatrics with administration of preliminary rehabilitation program taken in consideration nutrition, current medication, comorbidities and functional limitations,

A3-Describe basic principles of rehabilitation medicine, impairments, disability and handicapping in elderly patients.

A4- Determine risk factors for falling, their prevention and their rehabilitation afterwards.

A 5- Outline the diagnostic workup for osteoporosis, its consequences, prevention and treatment.

A 6- Identify the rehabilitation of osteoarthritis, spondylosis and after joint replacement.

A 7- Label geriatric malnutrition risk factors, assessment and treatment.

A 8- Select proper assessment and assistance for geriatric auditory and visual impairments.

A9- Figure out a proper rehabilitation program for cardiovascular diseases in elderly.

A10- Recall psychological consideration of aging, screening for depression and cognitive function assessment.

A11- Identify cancer rehabilitation in geriatrics.

B- Intellectual skills

B1- Evaluate and analyze clinical data of geriatric patients to recognize patients with life threatening conditions and/or potential disabilities or handicapping and integrate knowledge of physical science in the context of managing their musculoskeletal disorders and/or rehabilitation.

B2- Point out different comorbidities, medications and body functions in elderly and imply the role of physical therapy for their care.

B3- Deal with the possible complications and precautions of different physical modalities in geriatric rehabilitation.

B2- Adjust malnutrition risk factors, assess the nutritional background in elderly subjects and arrange a proper treatment for them.

B4- Prevent and manage falling in elderly and apply rehabilitation after fall.

B5- Deal with and prevent the age related osteoporosis with diagnostic workup, management, and handling the complications.

B6- Construct rehabilitation program for degenerative joint and spinal problems, and after their replacement surgeries.

B8- Prepare a proper assessment, treatment and rehabilitation program for old people with auditory and visual impairments.

B9- Appreciate psychological and cognitive implication in geriatric rehabilitation.

B10- Plan a rehabilitation program for geriatric cancer patients.

(1) Course content:

Two credit hours for lectures

Subjects	Lectures (30 hrs)
Principles of practice in geriatric rehabilitation.	2 hrs/wk for one week

Theories of aging.	2 hrs/wk for one week
Age related changes in anatomy, physiology and function.	2 hrs/wk for one week
Nutritional considerations with aging.	2 hrs/wk for one week
Drugs and function in the elderly.	2 hrs/wk for one week
The role of the physical therapy in care of geriatrics.	2 hrs/wk for one week
Risk factors for falling. Prevention of falls	2 hrs/wk for one week
Rehabilitation after a fall.	
Osteoporosis.	2 hrs/wk for one week
Diagnostic workup for osteoporosis.	
Consequences of osteoporosis.	
Prevention of osteoporosis.	
Treatment of osteoporosis	
Rehabilitation after hip, knee replacement	2hrs/wk for one week
Some pathological conditions common in elderly. Cardiovascular disease.	2 hrs/ wk for one week
Arthritis, osteoarthritis, spondylosis.	2 hrs/wk for one week
Aging with life-long disabilities.	2 hrs/wk for one week
Risk factors for malnutrition	2 hrs/wk for one week
Assessment of malnutrition	
Treatment of malnutrition	
Auditory Impairment	1 hr/wk for one week
Management of auditory impairment	
Visual impairment.	1 hr/wk for one week

Management of visual impairment.	
Psychological theories and considerations of aging.	1 hr/wk for one week
• Screening for depression • Cognitive impairment; delirium, dementia, Alzheimer's disease.	
• Cancer	1 hr/ week

(2) Teaching methods:

4.1: Lectures

4.2: Scientific seminars……..

(3) Assessment methods:

5.1: Final written exam for assessment of knowledge and intellectual ILOS

5.2 MCQ for assessment of knowledge and intellectual ILOS

5.3: Log book

Percentage of each Assessment to the total mark:

Written exam:. 64 marks

MCQ: 16 marks

(4) References of the course:

6.1: Hand books: Geriatric Rehabilitation Manual (2nd edition) by Kauffman

6.2: Text books: (a) Geriatric Rehabilitation: A Clinical Approach (3rd Edition) by Lewis and Bottomley

(b) Geriatric Rehabilitation: A Textbook for the Physical Therapist Assistant, by Bottomley

6.3: Journals: ……..– Topics in Geriatric Rehabilitation.

,……..– Journal of geriatric physical therapy

6.4: Websites: – Geriatric rehabilitation encyclopedia (http://en.wikipedia.org/wiki/Geriatric_rehabilitation).....

……..- http://www.ah.ouhsc.edu/geriatric_resources/.....

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

(5) 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-Rehabilitation measures & physiotherapy equipments for rehabilitating patients

Course coordinator: Dr Shereen Aly Machaly

Head of the department: Prof. Ibrahim El-Boghdady

Date:


قسم الروماتيزم والتأهيل
Rheumatology and Rehabilitation Department

COURSE SPECIFICATION

OF REHABILITATION OF SPORT INJURIES

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Program offering the course:	Postgraduate Doctorate 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 program:	Second part
(5) Date of approval by the Department`s council	10-6-2013
(6) Date of last approval of programme specification by Faculty council	26-5-2010
(7) Course title:	(elective Course) Sport Injuries
(8) Course code:	REH 616 RSI
(9) Credit hours:	2 credit hours
(10) Total teaching hours:	30 hours/ 15 weeks

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

1. Provide fellows with a broad knowledge base of medical issues surrounding exercise and athletic competition.
2. To allow fellows in the field of sports medicine to become academic leaders in the care of sports related problems in children, adolescents and adults.
3. Provide the scientific education necessary to evaluate and treat a wide variety of sports related problems and allow the physician to become a teacher and researcher in sports medicine.

(2) Intended Learning Outcomes (ILOs):

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

A- Knowledge and Understanding

A1- Recognize the pathophysiology and biomechanics related to exercise and sports and different potential mechanisms of sports injuries.

A2- Identify different types and sites of sports injuries

A3- Demonstrate knowledge of the basic principles of Physical Medicine and Rehabilitation as they apply to the patients of sport injuries

A 4- Understand mechanical, manual and functional rehabilitation approaches in sports injuries.

A 5- Understand exercise guidelines, benefits and hazards and understand physiologic effect of exercise on soft tissues including stretching and strengthening.

A6- Recognize the indications for specific assistive devices in the field of sport injuries

A 7- Identify different categories of physiotherapy used in managing sport injuries and, understand their physiologic effects on soft tissues, tendons, ligaments and muscles

A 8 – Recognize the rehabilitation approaches for foot injuries (e.g blisters, bunions, plantar fascia strain,…….etc) in marathon runners, and lower leg and ankle injuries (e.g. ankle sprain, Achilles tendon rupture ,….etc) in jumping sports.

A9- Identify the proper rehabilitation program for knee injuries (e.g. ACL injury, jumper's knee, meniscal injury, ….. et) in contact sports.

A 10- Realize head, cervical and back problems after sport injuries, and their prevention and management.

A11- List chest and abdominal injuries (e.g. sternoclavicular joint sprain, abdominal strain hernia, …. etc) in water sports, their prevention and rehabilitation.

A12- Enumerate wrist and hand injuries (e.g. carpal tunnel syndrome, wrist hand bursitis, …. etc) and elbow injuries (e.g. tennis and golfer's elbows) and know their management.

A13- Identify basics of ethics, medicolegal aspects, malpractice and common medical errors in the field of sports injuries.

B- Intellectual skills

B1- Integrate knowledge of physical science in the context of managing different sports injuries according to the type of lesion.

B2 -Design appropriate management plans with proper rehabilitation program choice for individuals presenting with sports injuries (foot, ankle, knee, cervical, back, chest, abdominal, shoulder, elbow and wrist injuries) .

B3- Appropriately prescribe assistive and adaptive devices in managing injured tendons, muscles and joints related to sports

B4- Select and apply a proper splinting and casting for elbow, wrist and hand injuries

B 5- Examine patients with cervical or low back pain after motor sports injury and order a proper treatment and rehabilitation program

B6- Assess risks in the clinical emergencies in the field of sports injuries medicine.

B7- Observe patients of head or chest injuries after sports and select a proper rehabilitation

B8- Apply an appropriate massage (strapping and tapping), exercises (stretching and strengthening) after sports injuries.

(2) Course content:

Subjects	Lectures 30 hrs/15 weeks
Foot Injuries Foot pin, Plantar fasciitis, Bruised heel, Blisters, Bunions, Plantar fascia strain, metatarsal fracture, Mortons neuroma, Metatarsalgia, Turf toe, Athletes foot, Heel pain.	4 hrs

Lower leg & Ankle Injuries Ankle pain, sprained ankle, broken ankle, shin splints, calf strain, Achilles tendon rupture, Achilles pain, Sever's disease, Anterior compartment syndrome, Peroneal tendinopathy, Cramp, Calf pain, Ankle excercises.	4 hrs
Knee Injuries Knee pain, Patella pain syndrome, ACL injury, Iliotibial band syndrome, Jumper's knee, Osgood schlatters disease, Posterior cruciate ligament injury, Medical cartilage meniscus injury, Medical ligament injury, Osteoarthritis, Housemaids knee, Articular cartilage injury, Quadriceps tendon inflammation, Baker's cyst, Knee exercises.	4 hrs
Lower Back Pain Lower back pain, Lumbago, Scoliosis, Sciatica, SI joint, Facet joint pain, Muscle strains, Slipped disc, Back exercises.	4 hrs
Upper Back & Neck Pain Neck pain, Whiplash, Cervical posture syndrome, Scheuermanns disease.	2 hrs
Head Injuries	1 hr
Chest & Abdominal Injuries Abdominal strain hernia, Fracture of the ribs, Breast pain, Sternoclavicular joint sprain, Referred pain from the thoracic spine, Costochondritis / Tietze's syndrome, Stress fracture of the ribs.	2 hrs
Elbow Injuries Elbow pain, Tennis elbow, Golfer's elbow, Triceps tendon rupture, Hyperextension injury, Students elbow.	2 hrs
Wrist & Hand Injuries Wrist & Hand pain, Wrist hand bursitis, Carpal tunnel syndrome, Repetitive strain injuries, Fractured scaphoid, Metacarpal fracture, Sprained thumb, De Quervains tenosynovitis, Wrist exercises.	4 hrs
Sports Massage	1 hr
Strapping & Taping	1 hr
Stretching & strengthening	1 hr

(3) Teaching methods:

4.1: Lectures

4.2: Scientific seminars

(4) Assessment methods:

5.1. **Final written exam** for assessment of knowledge and intellectual ILOs

5.2 **MCQ exam** for assessment of knowledge and intellectual ILOs

5.3: Log book

Percentage of each Assessment to the total mark:

Written exam:. 64 marks

MCQ: 16 Marks

(5) References of the course:

6.1: **Hand books:** Sports medicine secrets By Mellion, Putukian, and Madden, 3rd edition……

6.2: **Text books:** Textbook of Sports Medicine: Basic Science and Clinical Aspects of Sports Injury and Physical Activity by Kjaer, Krogsgaard, Magnusson, Engebretsen, Roos, Takala, Woo (Editors)

6.3: **Journals:** …….American Journal of Sports Medicine

…… British Journal of Sports Medicine

…….Journals of Orthopedics.

6.4: **Websites: (a) Sport injuries encyclopedia**

(http://en.wikipedia.org/wiki/Sports_injury).

(b) Sports Injuries :MedlinePlus

(http://www.nlm.nih.gov/medlineplus/sportsinjuries.html)

6.5: **Others**:……..Attending meetings, conferences and workshops…….

(6) 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-Rehabilitation measures & physiotherapy equipments for rehabilitating patients

Course coordinator: Dr Shereen Aly Machaly

Head of the department: Prof. Ibrahim El-Boghdady

Date: 26-5-2013


قسم الروماتيزم والتأهيل
Rheumatology and Rehabilitation Department

COURSE SPECIFICATION
OF CLINICAL IMMUNOLOGY (ADVANCED COURSE)
Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Program offering the course:	Postgraduate Doctorate 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 program:	Second part
(5) Date of approval by the Department`s council	26-5-2013
(6) Date of last approval of programme specification by Faculty council	10-6-2013
(7) Course title:	(Optional Course) Advanced Clinical Immunology
(8) Course code:	REH 616 ACI
(9) Credit hours:	2 credit hours
(10) Total teaching hours:	30 hours/15 weeks

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

1- To enable the candidate to demonstrate an awareness of advanced immunological data related to the musculoskeletal and rheumatic autoimmune diseases

2- To provide fellows with all the genetic background regarding the rheumatic autoimmune disease with emphasis on gene-therapy in management of these conditions.

3- To allow individuals interested in developing careers as independent physician-scientists in autoimmune rheumatology, to follow the updated and advanced research in immunological knowledge.

(2) Intended Learning Outcomes (ILOs):

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

A- Knowledge and Understanding

A1-Identify theories and fundamentals related to the immune system of human and its response.

A2 -Describe the genetic basis of autoimmune and immune- deficiency diseases and their implications in immune therapy

A3- Identify treatment modalities related to the immune system including gene therapy.

A4- Recognize value of bone marrow transplant in autoimmunity.

A5- Realize the role of blood banks in rheumatology.

B- Intellectual skills: The Doctorate Degree provides opportunities for candidates to achieve and demonstrate the following intellectual activities:

B1- Analyze and evaluate the information of the genetics and body immunology and analogies to solve rheumatological and musculoskeletal problems.

B2- Follow scientific development, recent advances and areas under research in the field of clinical immunology, autoimmunity and immune-therapy.

B3-Improve performance in the field of clinical immunology and autoimmunity-related rheumatic diseases .

(3) Course content:

Sixth Semester **2 credit hours (30 teaching hours lectures)**		
Subjects	**Lectures**	**Total Teaching Hours (15 weeks)**
Basis of genetics	2hrs/wk for 2 wks	4hrs lectures
Genetics basis of autoimmune diseases	2hrs/wk for 3wks	6hrs lectures
Immunotherapy	2hrs/wk for 3wks	6hrs lectures
Blood Banks	2hrs/wk for 2 wks	4hrs lectures
Genetics basis of immune-deficiency diseases	2hrs/wk for 3wks	6hrs lectures
Bone marrow transplantation	2hrs/wk for 2 wks	4hrs lectures

(4) Teaching methods:

4.1: Lectures

(5) Assessment methods:

5.1: **Final exam** for assessment of knowledge and intellectual ILOs

5.2 **MCQ exam** for assessment of knowledge and intellectual ILOs

5.3: **Log book for assessment of**

Percentage of each Assessment to the total mark:

Written exam:. 64 marks

MCQ: 16 marks

Log book : without marks

(6) References of the course:

6.1: Hand books: Handbook of Human Immunology, Second Edition by O'Gorman, Donnenberg (Editor)

6.2: Text books: (a)Basic Immunology Updated Edition: Functions and Disorders of the Immune System, 3rd edition by Abbas and Lichtman ……..

(b) Cellular and Molecular Immunology Text book, 7th edition by Abbas , Lichtman and Pillai ……

6.3: Journals: ……Annual Review of Immunology

……..Immunity…….

……The Journal of Immunology

……..Journal of Clinical Immunolology

6.4: Websites:…… http://www.theimmunology.com/

…….. http://www.acaai.org/

(7) Facilities and resources mandatory for course completion:

-Laptop and data show projector

-Laser pointer and blackboard

-Comfortable and well prepared classroom

Course coordinator: Dr Shereen Aly Machaly

Head of the department: Prof. Ibraim El-Boghdady

Date: 26-5-2013