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	15/8/2010
(7) Date of last approval of programme specification by Faculty council	17/8/2010

(B) Professional information

(1) Programme Aims:

The broad aims of the Programme are as follows:

1- Within the philosophy of M.D., we aim to foster the development of personal communication skills with much emphasis on leadership & decision making skills as well as informational technology orientation.

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

3- The certificate aims to prepare physicians as senior practitioners, educators, researchers, and administrators capable of practicing Rheumatology and Rehabilitation medicine in academic and clinical settings. The curriculum advances students' knowledge of the basic principles of research, including how research is conducted, evaluated, explained to patients, and applied to patient care.

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

5- To respond to the educational and research training needs of doctors with a special interest in rheumatology and rehabilitation medicine, the programme provides 8 basic study modules (4 rheumatology & 4 rehabilitation medicine) with one (out of 4) additional optional module, designed to give candidates a sound understanding of concepts and research in rheumatic diseases. In addition, trainees will be expected to prepare a research proposal and dissertation for an original, self-directed project. This should be based on a research question focussing on a real problem. The project allows trainees to explore a particular issue in rheumatological diseases.

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

(2) Intended Learning Outcomes (ILOs):

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

A- Knowledge and Understanding

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

A 1- 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 and the immune system of human and its response.

A 3-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 and others in need for rehabilitation.

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

A6- 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.

A 7- Describe basic principles of rehabilitation medicine, impairments, disability and handicapping including pediatric and older patients' rehabilitation.

A8- Recognize principles of assessment, evaluation and management of patients in a Rehabilitation setting.

A 9- Understand mechanical, manual and functional rehabilitation approaches.

A 10- 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

A 11- Understand exercise guidelines, benefits and hazards and understand physiologic effect of exercise on soft tissues.

A12- Recognize the benefits of rehabilitation on the patient's quality of life, and its role on improving the patient's illness impact on global health.

A13- Identify recent advances and areas under research in the field of physical medicine, rheumatology and rehabilitation.

A14- Identify basics of health and patient's safety and safety procedures during practice.

A15- Identify proper patient care and patient's rights to obtain the optimum health care and effective treatment of rheumatic diseases.

A16- Identify basics of ethics, medicolegal aspects, malpractice and common medical errors in rheumatology & rehabilitation medicine.

A 17- Recognize principles and basic concepts of quality in professional practise including planning, improvement of performance and control of practising outcomes.

A 18- Express knowledge of effects and hazards of professional practice in rheumatology field and rehabilitation medicine on environment and identify mutual influence between professional practice and its impacts on the environment.

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

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 rheumatological and musculoskeletal problems.

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

B5- 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.

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

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

B10 -Formulate appropriate management plans with proper therapy choice for individual patients presenting with musculoskeletal diseases, autoimmune rheumatological disorders.

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

B12- Solve patients problems according to the available data collected from patient's evaluation and suggest investigations related to the patient's condition.

B13- Compose exercise/therapy prescription with specific diagnosis and recommended emphasis of treatment.

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 treatment methods including alternative and complementary medicine 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.

B19- Resolve specialized problems with non-availability of some data.

B 20- Consider effects of personal, social and cultural factors in the disease process and patient management.

B21- Apply ethical issues and resolve ethical dilemmas in relation to clinical practice.

B22- Demonstrate appropriate professional attitudes and behaviors in different practice situations.

B23- Give deep awareness of ongoing problems and theories in the field of rheumatology and rehabilitation and determine problems and find solutions to them.

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

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

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

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

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

B29- Analyze literature, generate hypothesis, design and criticize protocol, organize and present data. Locate, appraise, and assimilate evidence from scientific studies related to patients' health problems.

B30- Improve performance in the field of rheumatology and rehabilitation.

B31- 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.

B31.a: Discover strengths, deficiencies, and limits in one's knowledge and expertise.

B31.b: Set learning and improvement goals.

B31.c: Systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement.

B31.d: Incorporate formative evaluation feedback into daily practice.

B31.f: Use information technology to optimize learning.

C- Professional/practical skills

C 1- Apply the anatomical and physiological facts during musculoskeletal examination and interpreting bone and joint imaging and bone density measurements in order to reach a proper diagnosis.

C 2 - Select effectively and perform professionally the appropriate aspiration or injection technique for diagnosis and treatment of a selected articular or musculoskeletal problem

C3- 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.

C4- Use recent technology in immunological field for serving professional practice. Evaluate and develop immunological methods and tools existing in rheumatology and rehabilitation.

C 5 - 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.

C6- Master the basic and modern professional skills in the area of rheumatology, rehabilitation and physical medicine.

C7-Develop methods, tools and new ways of professional practice and use appropriate technological means to serve the professional practice

C8- Write and evaluate professionally medical reports, clinical sheets including all collected data relevant to the patient's condition and physiotherapy treatment regimen sheets.

C9 - Employ efficiently physiotherapy modalities in the context of professional managing rheumatic and musculoskeletal disorders.

C 10- Apply appropriate assessment & measurement tools to evaluate functional status or outcomes of type of treatment used.

C 11- Apply sound ethical principles in practice (e.g., informed consent, confidentiality, veracity, provision or withholding of care).

C12- Demonstrate : (1) compassion, integrity, and respect for others; (2) responsiveness to patient needs that supersedes self-interest; (3) respect for patient privacy and autonomy; (4) accountability to patients, society and the profession; and, (5)sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.

C13- Work effectively in various health care delivery settings and systems relevant to their clinical specialty.

C14- 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- Communication & Transferable skills

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

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

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

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

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

D 6- Communicate ideas and arguments effectively.

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

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

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

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

D 11- Manage and lead scientific meetings

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

D13- Organize workload in order to meet deadlines.

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

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

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

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

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

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

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

D21- Demonstrate responsiveness to patient needs that supersedes self-interest

(3) Academic standards:

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

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

1- University of 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.arthritis.pitt.edu/clinrestrprg.htm

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

(4) Curriculum structure and contents:

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

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.

●4.b.2: Teaching hours/week:

First part:

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

Second part:

	Credit hours	Lectures and/or tutorials	Clinical	Total
First semester:	5 hours/week.	73/15weeks	4	77
Second semester:	6 hours/week	60/15weeks	60	120
Third semester:	8 hours/week	98/15weeks	44	142
Fourth semester:	6 hours/week	90/15weeks	-	90
Total:	25 hours	321/60weeks	108	429

(referred to the table below)

(5) 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	------	------	----	1	30	**A** 1 **B**1,2 **C** 1 **D** 1,4
Applied Physiology	**REH 603**	2	------	------	----	1	30	**A** 2,5 **B** 3,5 **C** 1,5 **D** 1,4
Basic Immunology	**REH 630**	1	------			1	15	**A** 3,4 **B** 3,4,5,6,9 **C** 3,4 **D** 1-4, 10, 20

Advanced studies in the medical field: * a- Scientific research methodology b- Medical statistics c- Use of computer in medical education		3				3	14hrs/5 weeks	**A** 19 **B** 28, 29, 31f **D** 2,3,4,5, 11,12,13,15

* 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)**		173 lectures or tutorials hours and 44 clinical hours /60 weeks	A 1-4,6,13-19 B 1-7,9,10, 12,16-27, 29,30,31 C 1-4,6,7,8, 10-14 All D
1- General concepts & scientific basis of rheumatic diseases.		**3 hrs /week**			**3 hrs**	45hrs/15wk	**A 1,2,3,13,18** **B 20-24,29,30** **C 12,13**
2- Mechanisms and clinical aspects of rheumatic diseases.		**2 hrs /week**			**2 hrs**	30hrs/15wk	**A 3,13** **B 1-4,23,29** **D 1-5,15,16**
3- Investigations, assessment and evaluation of the patient with rheumatic disorders.		**2 or 4 hrs / week**		**4hrs/ week For 11 weeks**	6hrs for 11 week & 4 hrs for 4 weeks	82hrs/15wk	**A 4,13-16,18** **B 1-7,9,12,18, 20-25, 29-31** **C 1-4,6-8, 10-14** **All D**
4- Management of rheumatic diseases.		**4 hrs /week**			**4 hrs**	60hrs/15wk	**A 6,13-18** **B 2-4,10,12,16-27,29-31** **C 2-4,6,7,8,11-14** **All D**
Rehabilitation medicine:	**REH 616 PMR**			clinical and practical training courses **(REH 616 PMRP) (REH 616 PMRC)**		133 lectures or tutorials hours and 64 clinical hours /60	**A 2,4-19** **B 1,2,4-27, 29,30,31** **C 1,4-14** **All D**

						weeks	
1- Principles of evaluation in rehabilitation medicine.		1 hr/wk for 2 wks and 2 hrs /week for 13 wks		2hrs/ week For 2 weeks	3 hrs/ wk for 2 wks and 2 hrs /wk for 13 wks	32 hrs/ 15wks	A 2,7, 9,12-18
2- Diagnostic procedures including electrodiagnosis & electrophysiological studies and management methods including the use of physical modalities in rehabilitation medicine.		2hrs/ week		4hrs/ week	6hrs/ week	90 hrs / 15 weeks	A 4,5,6, 8-18 B 1,2,4-13, 16-27, 30,31 C 1,4-14 All D
3- Major rehabilitation problems and rehabilitation of specific disorders.		4hrs/ week			4hrs/ week	60 hrs/ 15 weeks	A 4,5,6, 8-18 B 1,2,4-14, 16-27, 30,31 C 1,4-14 All D
4-Indications, prescription and evaluation of orthosis and prothesis.		1hour/ week			1hr/ week	15 hrs/ 15 weeks	A 14-17 B 1,2,12,15,17, 20,21,22 C 8,10-14
Optional courses:		1hour/ week				15 lectures or tutorials /15wks	
1. Pediatric rehabilitation	REH 616 PR	1hour/ week			1hour/ week	15hrs/ 15wks	A 3,4,7-18 B 1-4,7,8,10,11, 13,15,16,17, 19-22 C 1,2,6,8-14 D 1,4,6,7,8,14, 17-21
2. Geriatric rehabilitation.	REH 616 GR						A 3,4,7-18 B 1-4,7,8,10,11, 13,15,16,17, 19-22 C 1,2,6,8-14 D 1,4,6,7,8,14, 17-21
3. Rehabilitation of sport	REH 616 RSI						A 1,2,4,5,9-12, 14-18

injuries							**B**1,2,6,7,8,10-15, 17,18,20,21,22 **C**1,2,5,6, 8-14 **D1,4,6,7,8,14, 17-21**
4. Clinical immunology (advanced course)	**REH 616 ACI**						**A 2,4,13** **B 3-6,9,30** **C3,4,7,14** **D1-4,10,20**
Thesis						15 credit	**A 13,19** **B 5,28,29** **C4** **D1-5,11-13,15**
Log book activities						15 credit	**A 14-18** **B1-4, 6-27, 30, 31** **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	B 22	B 23
Applied anatomy	x																			x	x																						
Applied physiology		x			x																	x		x																		
Basic immunology			x	x																		x	x	x	x			x														
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
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	x	x	x	x	x	x	x	x	x
Pediatric rehabilitation			x	x			x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x			x	x		x	x			x		x	x	x	x	x	x	x	
Geriatric rehabilitation			x	x			x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x			x	x		x	x			x		x	x	x	x	x	x	x	
Rehabilitation of sport injuries	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	
Clinical immunology (advanced course)		x		x									x									x	x	x	x			x														
Advanced studies in the medical field																			x																								

Course Title/Code	Programme ILOs																																									
	B 24	B 25	B 26	B 27	B 28	B 29	B 30	B 31	C1	C2	C3	C4	C5	C6	C7	C8	C9	C 10	C 11	C 12	C 13	C 14	D 1	D 2	D 3	D 4	D 5	D 6	D 7	D 8	D 9	D 10	D 11	D 12	D 13	D 14	D 15	D 16	D 17	D 18	D 19	D 20	D 21
Applied anatomy									x														x			x																	
Applied physiology									x				x										x			x																	
Basic immunology											x	x											x	x	x	x						x										x	
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	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	x	x	x	x	x	x	x	x	x	x
Pediatric rehabilitation									x	x				x		x	x	x	x	x	x	x	x			x		x	x	x						x			x	x	x	x	x
Geriatric rehabilitation									x	x				x		x	x	x	x	x	x	x	x			x		x	x	x						x			x	x	x	x	x
Rehabilitation of sport injuries									x	x			x	x		x	x	x	x	x	x	x	x			x		x	x	x						x			x	x	x	x	x
Clinical immunology (advanced course)							x				x	x			x							x	x	x	x	x						x										x	
Advanced studies in the medical field					x	x																		x	x	x	x						x	x								x	

(6) Programme admission requirements:

●General requirements:

According to the faculty postgraduate bylaws Appendix IV.

●Specific requirements (if applicable):

No specific requirements

(7) Regulations for progression and programme completion:

● Student must complete minimum of 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 6 months 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

Tools		Mark	Percentage of the total mark
Written exam:			
- Applied anatomy	3 papers with time allowed 3 hours	100	33.3%
- Applied physiology		100	33.3%
- Clinical immunology		100	33.3%
Oral exam: ---			
Practical exam: -----			
Total marks: 300			

Second part

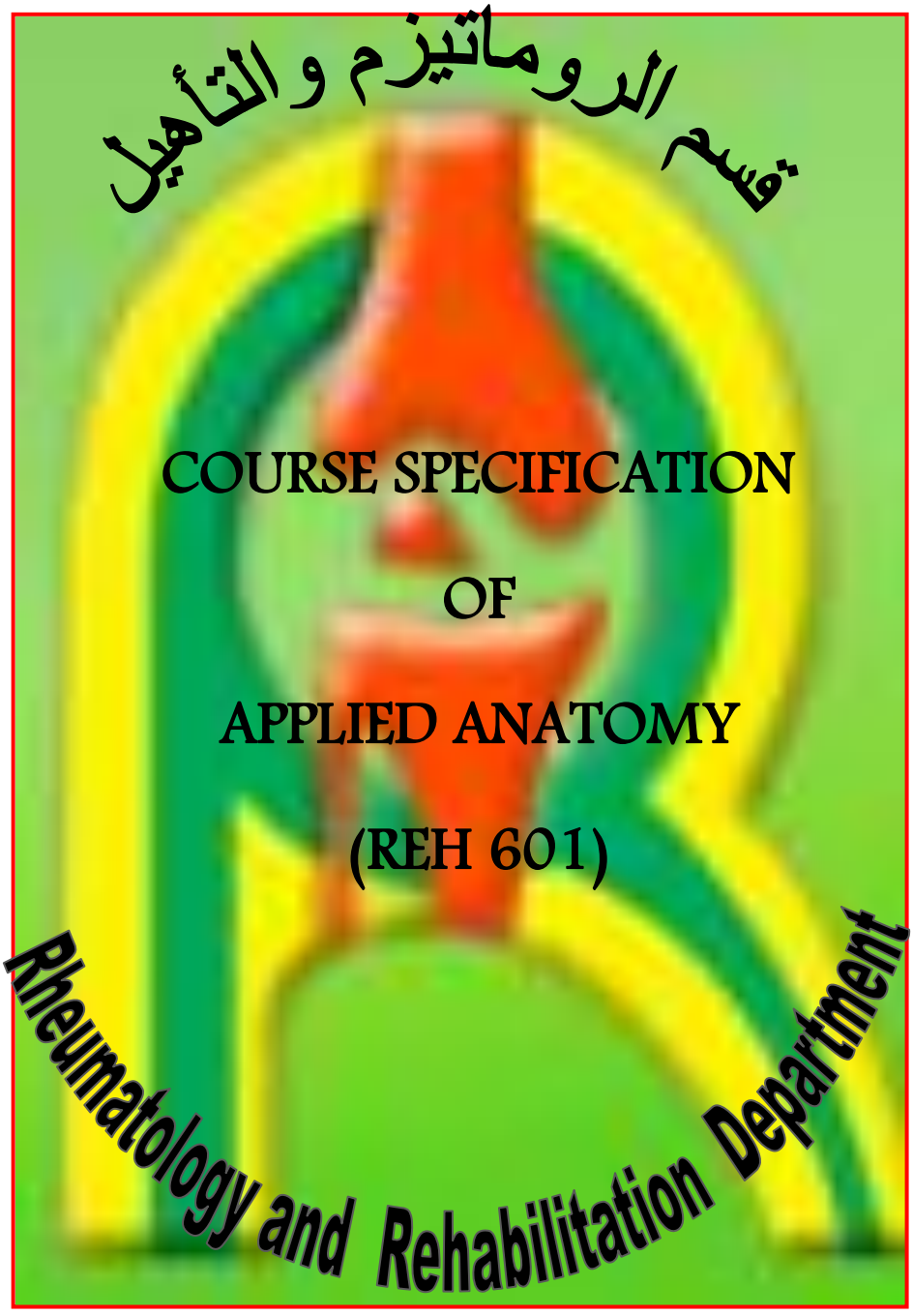
Tools	Mark	Percentage of the total mark
Written exam		
- Rheumatology (one paper with time allowed 3 hours)	130	14.44%
- Rehabilitation (one paper with time allowed 3 hours)	130	14.44%
- Optional module (one paper with time allowed 1.5 hours)	80	8.89%
- Commentary (one paper with time allowed 1.5 hours)	60	6.67%
Oral exam		
- Rheumatology	100	11.11%
- Rehabilitation	100	11.11%
Practical exam		
- Rheumatology	100	11.11%
- Rehabilitation	100	11.11%
- Orthosis, prosthesis & EMG & NCS	100	11.11%
Total marks: 900		

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

Evaluator	Tools*	Signature
Internal evaluator **(s)**	**Focus group discussion Meetings**	
External Evaluator **(s)** **Prof.Dr. Abdel-Samad El-Hewala**	**Reviewing according to external evaluator checklist report.**	
Senior student **(s)**	**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	15-8-2010
(6) Date of last approval of programme specification by Faculty council	17-8-2010
(7) Course title:	Applied anatomy
(8) Course code:	REH 601
(9) Total teaching hours:	30 hrs/ 15 weeks

(B) Professional information

(1) Course Aims:

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

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

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

3- To provide a rigorous, exciting, and productive training experience -together with the basic and applied knowledge about anatomy of musculoskeletal system- for those individuals interested in developing careers as independent physician-scientists.

(2) Intended Learning Outcomes (ILOs):

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

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

A- Knowledge and Understanding

A 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.

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 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.

C- Professional/practical skills

C 1- Apply the anatomical and physiological facts during musculoskeletal examination and interpreting bone and joint imaging and bone density measurements in order to reach a proper diagnosis.

D- Communication & Transferable skills

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

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

`

(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 and stability	2 hrs/wk for one week				2 hrs/ one week
▪ 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. ……(A1, B1,2, C1) …

5.2: Log book……for assessment of……(C1, D1,4)

Assessment schedule:

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

Assessment 2:…… ……

Percentage of each Assessment to the total mark:

Written exam: ……100 %……

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 Dr Salah Hawas

Date: 9/8/2010


قسم الروماتيزم والتأهيل
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	15-8-2010
(6) Date of last approval of programme specification by Faculty council	17-8-2010
(7) Course title:	Applied physiology
(8) Course code:	REH 603
(9) 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 awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care (www.acgme.org) / (acgme competencies).

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

3- To provide a rigorous, exciting, and productive training experience -together with the basic and advanced knowledge about physiology of musculoskeletal system- for those individuals interested in developing careers as independent physician-scientists.

(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

A2-Identify theories and fundamentals related to the physiology of musculoskeletal system and the immune system of human and its response.

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

B- Intellectual skills

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

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.

C- Professional/practical skills

C 1- Apply the anatomical and physiological facts during musculoskeletal examination and interpreting bone and joint imaging and bone density measurements in order to reach a proper diagnosis.

C 5 - 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.

D- Communication & Transferable skills

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

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

(3) Course content:

Subjects	Lectures	Clinical	Laboratory	Field	Total Teaching Hours 30 hrs/ 15 weeks
▪ Ca++ metabolism	1hr/wk For one wk				1hr/ one wk
▪ PH regulation	1hr/wk For one wk				1hr/ one wk
▪ Control of muscle activity	2hrs/wk For one wk				2hrs/one wk
▪ Pain, sensation & analgesic system	2hrs/wk For one wk				2hrs/one wk
▪ Biological homeostasis , circadian rhythm	2hrs/wk For one wk				2hrs/one wk
▪ All muscles, nerves (except smooth muscles)	2hrs/ wk for 2 wks				4hrs/2 wks
▪ Regulation of heart rate, control of blood pressure, COP	2hrs/wk For one wk				2hrs/one wk
▪ Effect of training & de-conditioning on cardiovascular system	2hrs/wk For one wk				2hrs/one wk
▪ Work of breathing	1hr/wk For one wk				1hr/one wk
▪ Pulmonary ventilation	1hr/wk				1hr/one wk

	For one wk				
▪ Assessment pulmonary function	1hr/wk For one wk				1hr/one wk
▪ Hypoxia	1hr/wk For one wk				1hr/one wk
▪ Neuro-peptides	2hrs/wk For one wk				2hrs/one wk
▪ Gastric secretion	2hrs/wk For one wk				2hrs/one wk
▪ Energy balance	2hrs/wk For one wk				2hrs/one wk
▪ Obesity	2hrs/wk For one wk				2hrs/one wk
▪ Physical fitness	2hrs/wk For one wk				2hrs/one wk

(4) Teaching methods:

4.1: …Lectures. ……

4.2: ……

(5) Assessment methods:

5.1: Final written exam for assessment of. ……(A2,5, B3,5, C1,5) …

5.2: Log book……..……for assessment of……(C1,5, D1,4)

Assessment schedule:

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

Assessment 2:…… ……week/month:……

Percentage of each Assessment to the total mark:

Written exam: …… …… 100 %……

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

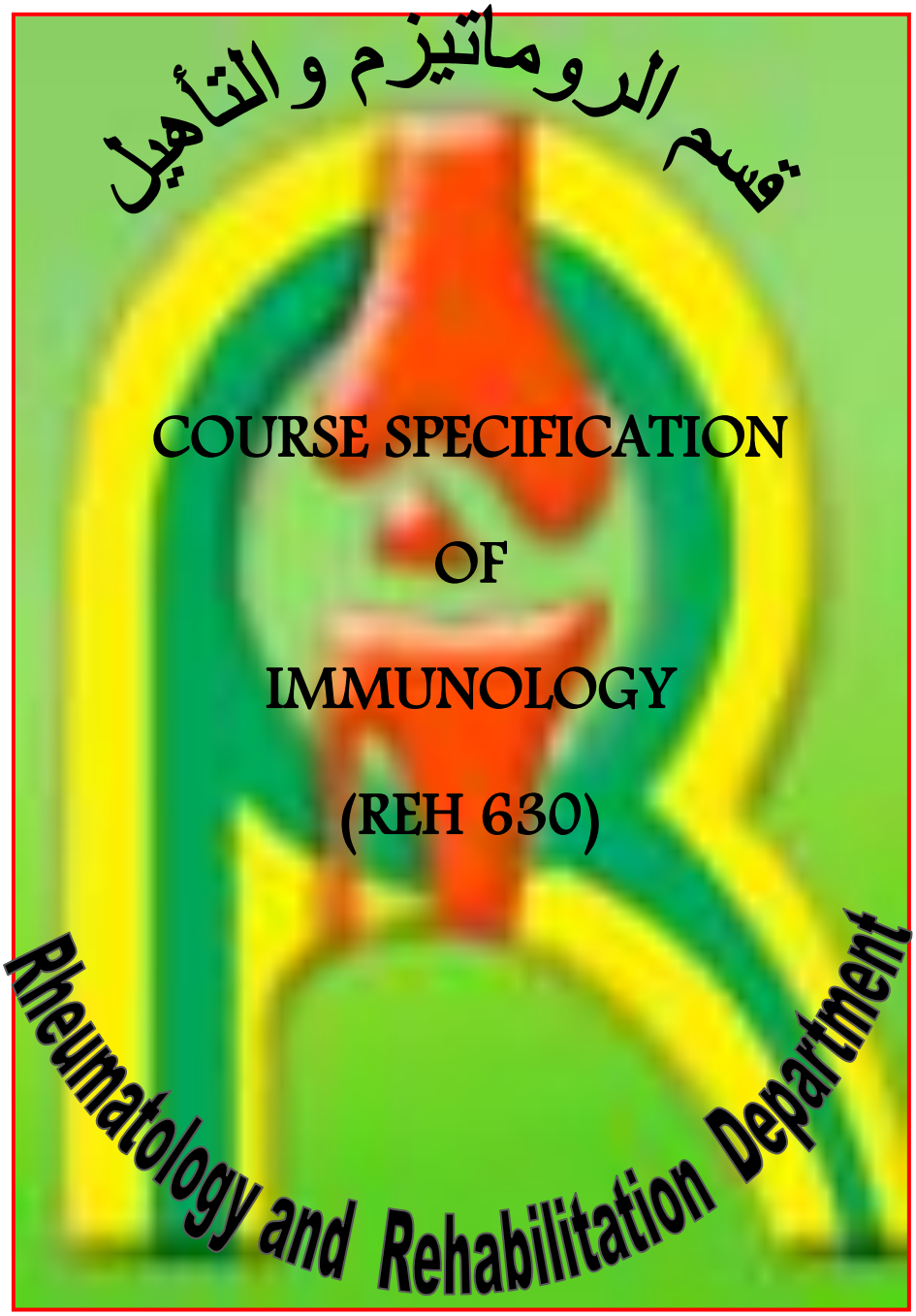
-Laser pointer and white board

-Comfortable and well prepared classroom

Course coordinator: Dr Shereen Aly Machaly

Head of the department: Prof. Dr Salah Hawas

Date: 10/8/2010


قسم الروماتيزم و التأهيل
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	15-8-2010
(6) Date of last approval of programme specification by Faculty council	17-8-2010
(7) Course title:	Immunology
(8) Course code:	REH 630
(9) Total teaching hours:	15 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 awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care (www.acgme.org) / (acgme competencies).

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

3- To provide a rigorous, exciting, and productive training experience -together with the basic and advanced immunological knowledge- for those individuals interested in developing careers as independent physician-scientists.

(2) Intended Learning Outcomes (ILOs):

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

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

A- Knowledge and Understanding

A 3-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 and others in need for rehabilitation.

B- Intellectual skills

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

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

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.

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

C- Professional/practical skills

C3- 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.

C4- Use recent technology in immunological field for serving professional practice. Evaluate and develop immunological methods and tools existing in rheumatology and rehabilitation.

D- Communication & Transferable skills

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

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

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

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

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

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

(3) Course content:

Subjects	Lectures	Clinical	Laboratory	Field	Total Teaching Hours (15hrs/ 15 weeks)
▪ Innate immunity	1hr/wk for one week				1hr
▪ Lymphocytes & lymphoid tissues	1hr/wk for one week				1hr
▪ Immune response	1 hr/wk for one week				1 hr
▪ Antigen presentation & Major histocomptability complex	1hr/wk for one week				1hr
▪ Immunoglobulins & Immunoglobulin genes	1 hr/wk for one week				1 hr
▪ Cytokines	1 hr/wk for one week				1 hr
▪ Chemokines	1hr/wk for one week				1hr
▪ Complement & Kinin	1hr/wk for one week				1hr
▪ Inflammation	1 hr/wk for one week				1 hr
▪ Apoptosis	1hr/wk for one week				1hr
▪ Autoimmune diseases	2hrs/wks for 2 wks				4 hrs / 2wks
▪ Immunodeficiency disorders	1hr/wk for one week				1hr
▪ Recent trends in immune therapy	2hrs/wks for 2 wks				4 hrs/ 2 wks

(4) Teaching methods:

4.1: lectures

(5) Assessment methods:

5.1. Final written exam for assessment of . ……(A 3,4, B 3,4,5,6,9, C3,4) …

5.2: Log book……..….. for assessment of…….(C3,4, D1,2,3,4,10,20)…

Assessment schedule:

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

Percentage of each Assessment to the total mark: …….Written exam: 100 %

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

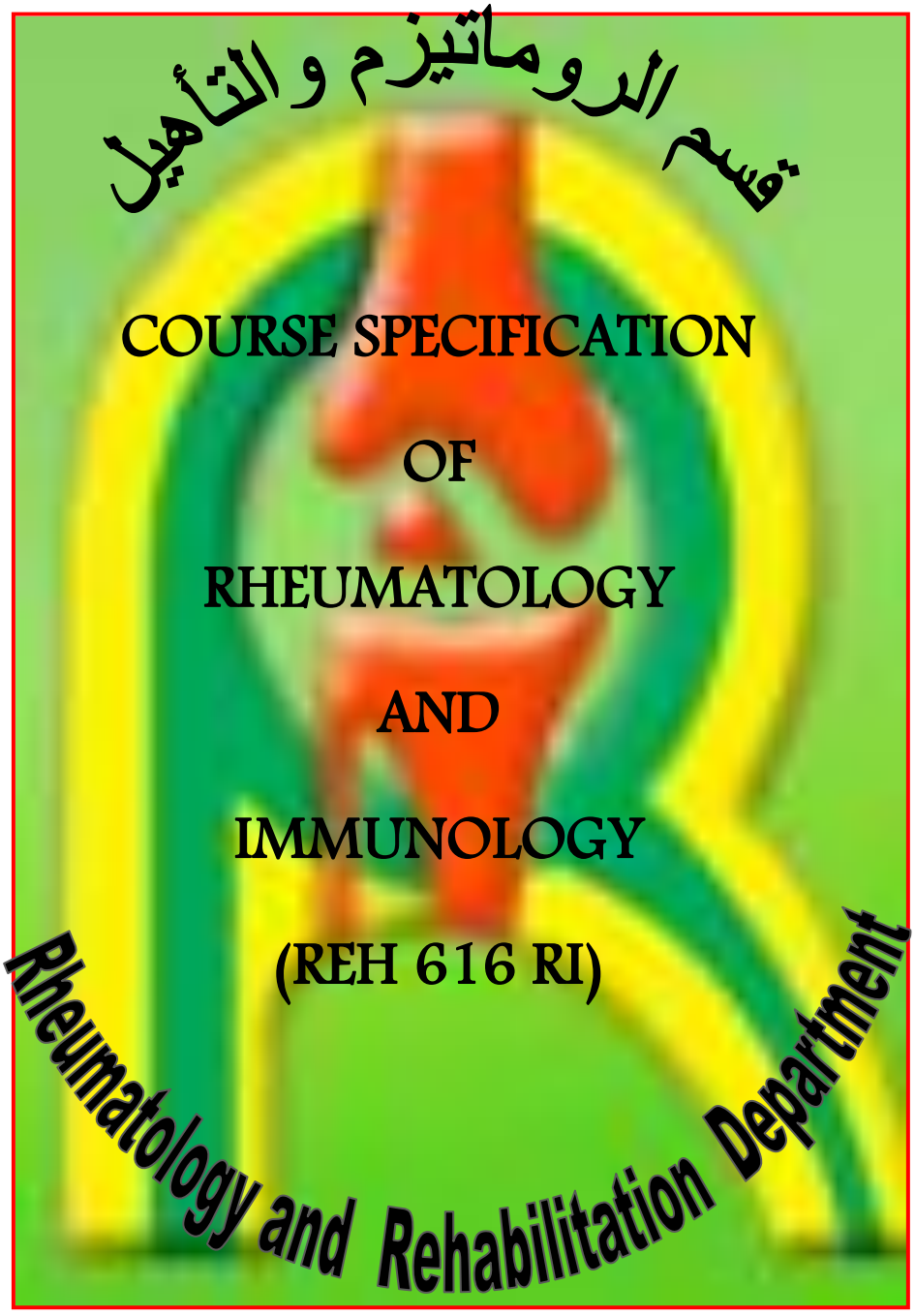
-Laser pointer and blackboard

-Comfortable and well prepared classroom

Course coordinator: Dr Shereen Aly Machaly

Head of the department: Prof Dr Salah Hawas

Date: 8/8/2010


قسم الروماتيزم والتأهيل
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	15/8/2010
(6) Date of last approval of programme specification by Faculty council	17/8/2010
(7) Course title:	Rheumatology & Immunology
(8) Course code:	**REH 616 RI**
(9) Total teaching hours:	173 lectures or tutorials hours and 44 clinical hours /60 weeks (13 credit hours in 4 semesters)

(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 awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care (www.acgme.org) / (acgme competencies).

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

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

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

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

(2) Intended Learning Outcomes (ILOs):

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

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

A- Knowledge and Understanding

A 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 and the immune system of human and its response.

A 3-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 and others in need for rehabilitation.

A6- 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.

A13- Identify recent advances and areas under research in the field of physical medicine, rheumatology and rehabilitation.

A14- Identify basics of health and patient's safety and safety procedures during practice.

A15- Identify proper patient care and patient's rights to obtain the optimum health care and effective treatment of rheumatic diseases.

A16- Identify basics of ethics, medicolegal aspects, malpractice and common medical errors in rheumatology & rehabilitation medicine.

A 17- Recognize principles and basic concepts of quality in professional practise including planning, improvement of performance and control of practising outcomes.

A 18- Express knowledge of effects and hazards of professional practice in rheumatology field and rehabilitation medicine on environment and identify mutual influence between professional practice and its impacts on the environment.

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

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 rheumatological and musculoskeletal problems.

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

B5- 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 9- Select from different diagnostic alternatives and interpret various diagnostic procedures to reach a final diagnosis.

B10 -Formulate appropriate management plans with proper therapy choice for individual patients presenting with musculoskeletal diseases, autoimmune rheumatological disorders.

B12- Solve patients problems according to the available data collected from patient's evaluation and suggest investigations related to the patient's condition.

B16- Compare use of various treatment methods including alternative and complementary medicine 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.

B19- Resolve specialized problems with non-availability of some data.

B 20- Consider effects of personal, social and cultural factors in the disease process and patient management.

B21- Apply ethical issues and resolve ethical dilemmas in relation to clinical practice.

B22- Demonstrate appropriate professional attitudes and behaviors in different practice situations.

B23- Give deep awareness of ongoing problems and theories in the field of rheumatology and rehabilitation and determine problems and find solutions to them.

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

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

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

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

B29- 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.

B30-Improve performance in the field of rheumatology and rehabilitation.

B31- Investigate and evaluate care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning.

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

B30.b: Set learning and improvement goals.

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

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

B30.f: Use information technology to optimize learning.

C- Professional/practical skills

C 1- Apply the anatomical and physiological facts during musculoskeletal examination and interpreting bone and joint imaging and bone density measurements in order to reach a proper diagnosis.

C 2 - Select effectively and perform professionally the appropriate aspiration or injection technique for diagnosis and treatment of a selected articular or musculoskeletal problem

C3- 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.

C4- Use recent technology in immunological field for serving professional practice. Evaluate and develop immunological methods and tools existing in rheumatology and rehabilitation.

C6- Master the basic and modern professional skills in the area of rheumatology, rehabilitation and physical medicine.

C7-Develop methods, tools and new ways of professional practice and use appropriate technological means to serve the professional practice

C8- Write and evaluate professionally medical reports, clinical sheets including all collected data relevant to the patient's condition and physiotherapy treatment regimen sheets.

C 10- Apply appropriate assessment & measurement tools to evaluate functional status or outcomes of type of treatment used.

C 11- Apply sound ethical principles in practice (e.g., informed consent, confidentiality, veracity, provision or withholding of care).

C12- Demonstrate : (1) compassion, integrity, and respect for others; (2) responsiveness to patient needs that supersedes self-interest; (3) respect for patient privacy and autonomy; (4) accountability to patients, society and the profession; and, (5)sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.

C13- Work effectively in various health care delivery settings and systems relevant to their clinical specialty.

C14- 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- Communication & Transferable skills

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

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

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

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

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

D 6- Communicate ideas and arguments effectively.

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

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

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

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

D 11- Manage and lead scientific meetings

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

D13- Organize workload in order to meet deadlines.

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

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

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

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

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

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

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

D21- Demonstrate responsiveness to patient needs that supersedes self-interest

(3) Course content:

Subjects	Lectures/or tutorials	Clinical	Laboratory	Field	Total Teaching Hours
1- General concepts & scientific basis of rheumatic diseases :-	**3hrs/week For 15 weeks**				**45 hrs/15 weeks**
▪ *Structure, function of joints, C.T. and muscles.*	3hrs/week For 2 wks				6 hrs/2 weeks
▪ *Immune &inflammatory response.*	3hrs/week For 3 wks				9 hrs/3 weeks
▪ *Genetics & gene therapy of rheumatic diseases.*	3hrs/week For 3 wks				9 hrs/3 weeks
▪ *Neuro-endocrinal aspects of the immune system & inflammation.*	3hrs/week For 3 wks				9 hrs/3 weeks
▪ *The role of; free radicals, endothelium, adhesion molecules, cytokines and apoptosis in the etiopathogenesis of rheumatic diseases.*	3hrs/week For 4 wks				12 hrs/4 weeks
3- Investigations, assessment and evaluation of the patient with rheumatic disorders :-	**4hrs/week For 15 weeks**				**60 hrs/15 weeks** (38 hrs lectures/or tutorials and 44 hrs clinical)
▪ *History, examination, differential diagnosis of different types of arthritis & extra-articular manifestations of rheumatic*	2 hrs/week For 3 wks	4hrs/week For 3 wks			12 hrs/3 weeks (6 hrs lectures/or tutorials and 12 hrs clinical)

diseases.					
▪ *Diagnostic tests, procedures and laboratory markers (hematological, biochemical and immunological) in rheumatic diseases.*	4 hrs/week For 4 wks				16 hrs/4 weeks
▪ *Aspiration analysis and injection of joints & soft tissues.*	2hrs/week For 4 wks	4hrs/week For 4 wks			16 hrs/4 weeks (8 hrs lectures/or tutorials and 16 hrs clinical)
▪ *Imaging of musculoskeletal system.*	2hrs/week For 4 wks	4hrs/week For 4 wks			16 hrs/4 weeks (8 hrs lectures/or tutorials and 16 hrs clinical)
2- Mechanisms and clinical aspects of rheumatic diseases.	**2hrs/week For 15 wks**				**30 hrs/15 weeks**
▪ *Rheumatoid arthritis*	1hr/week For one wk				1 hr/week for one week
▪ *Sjogren's syndrome.* ▪ *Palindromic rheumatism.*	1hr/week For one wk				1 hr/week for one week
▪ *Systemic lupus & related syndromes*	1hr/week For one wk				1 hr/week for one week
▪ *Systemic sclerosis, dermatopolymyositis.*	1hr/week For one wk				1 hr/week for one week
▪ *Vasculitic syndromes*	1hr/week For one wk				1 hr/week for one week
▪ *Behcet disease.*	1hr/week For one wk				1 hr/week for one week
▪ *Spondyloarthropathies.*	1hr/week For one wk				1 hr/week for one week
▪ *Inflammatory diseases of muscles and other myopathies.*	1hr/week For one wk				1 hr/week for one week
▪ *Rheumatic diseases of childhood.*	1hr/week For one wk				1 hr/week for one week
▪ *Syndromes of impaired immune function; HIV, complement deficiency*	1hr/week For one wk				1 hr/week for one week
▪ *Crystal deposition arthropathies; gout & pseudogout.*	1hr/week For one wk				1 hr/week for one week
▪ *Osteoarthritis.*	1hr/week For one wk				1 hr/week for one week
▪ *Infection & arhthritis.*	1hr/week For one wk				1 hr/week for one week

▪ *Disordors of bone, cartilage & structural proteins.* ▪ *Polychondritis, bone and joint dysplasia.*	1hr/week For one wk				1 hr/week for one week
▪ *Metabolic bone diseases.*	1hr/week For one wk				1 hr/week for one week
▪ *Osteoprosis, osteomalacia.*	1hr/week For one wk				1 hr/week for one week
▪ *Osteonecrosis, amylodosis, sarcoidosis.*	1hr/week For one wk				1 hr/week for one week
▪ *Infiltrative disorder associated with rheumaric diseases.*	1hr/week For one wk				1 hr/week for one week
▪ *Arthritis as a manifestation of other systemic diseases; haematological, endocrine and malignant disorders associated arthropathies.*	1hr/week For one wk				1 hr/week for one week
▪ *Tumours involving joints, muscles & related structures.*	1hr/week For one wk				1 hr/week for one week
▪ *Fibromyalgia syndrome & psychogenic rheumatism.*	1hr/week For one wk				1 hr/week for one week
▪ *Systemic manifestations of rheumatic diseases.*	1hr/week For one wk				1 hr/week for one week
▪ *Renal bone diseases (osteodystrophy), hypertrophic osteoarthropathy.* ▪ *Reflex sympathetic dystrophy.*	1hr/week For one wk				1 hr/week for one week
▪ *Low back pain.*	1hr/week For one wk				1 hr/week for one week
▪ *Regional joint and soft tissue pain.*	1hr/week For one wk				1 hr/week for one week
▪ *Entrapment neuropathy and related disorders.*	1hr/week For one wk				1 hr/week for one week
▪ *Epidemiology, incidence, mortality & morbidity in rheumatic diseases*	1hr/week For one wk				1 hr/week for one week
▪ *Special issues in rheumatology;* *- nutrition and rheumatic diseases.* *-Some aspects of rheumatic disease in elderly.* *-Pregnancy & lactation with rheumatic diseases.*	1hr/week For 3 wks				1 hr/week for 3 week

4- Management of rheumatic diseases:-	**4hrs/week For 15 wks**				**60 hrs/15 weeks**
▪ *Non steroidal anti-inflammatory drugs.*	4hrs/week For 2 wks				8 hrs/2 weeks
▪ *Glucocorticoids.*	4hrs/week For one wk				4 hrs/one week
▪ *Disease modifying anti-rheumatic drugs.*	4hrs/week For 2 wks				8 hrs/2 weeks
▪ *Immunoregulatory agents.*	4hrs/week For 2 wks				8 hrs/2 weeks
▪ *Anti-hyperuricemic drugs.*	4hrs/week For one wk				4 hrs/one week
▪ *Biologic agents in treatment of rheumatic diseases.*	4hrs/week For 2 wks				8 hrs/2 weeks
▪ *Bone-strengthening agents.*	4hrs/week For 2 wks				8 hrs/2 weeks
▪ *Rehabilitation of patients with rheumatic diseases*	4hrs/week For one wk				4 hrs/one week
▪ *Intra-articular therapy.*	4hrs/week For one wk				4 hrs/one week
▪ *Indications of surgery in rheumatic diseases.*	4hrs/week For one wk				4 hrs/one week

(4) Teaching methods:

4.1:……Lectures……

4.2:……Tutorials……

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

4.4:……Clinical training……..

(5) Assessment methods:

5.1: Written exam…….. for assessment of…… (A1-4,6,13, B1-7, 9,10,23, D 3)

5.2: Written commentary…. for assessment of…..(A 3,4,6,13, B1,3-7,9,10,12,17-19 , D3)

5.3: Oral exam……. for assessment of…….(A1-4,6,13, B1-7,9,10,12,16-20,23, D1,3,4,6)

5.4: Clinical exam…. for assessment of…(A1-4,6,13-18, B1-7,9,10,12,16-23, all C, D1,3,4,6)

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)……. for assessment of……(A 13,19, B 5,28,29, C4, D1-5,11-13,15)

5.6: Log book…. for assessment of ……(A 14-18, B 1-4, 6-27, 30, 31, all C & D)

Assessment schedule:

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

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

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

Assessment 4: …at the end of…….36th month:……

Assessment 5: …after 24 month from the day of thesis registration according to the faculty bylaws.

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

Percentage of each Assessment to the total mark :

Written exam:……130/390……%: (33.34)……

Written commentary…. .60/390……%: (15.38)……

Clinical exam:……100/390…… ……%:: (25.64)……

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.

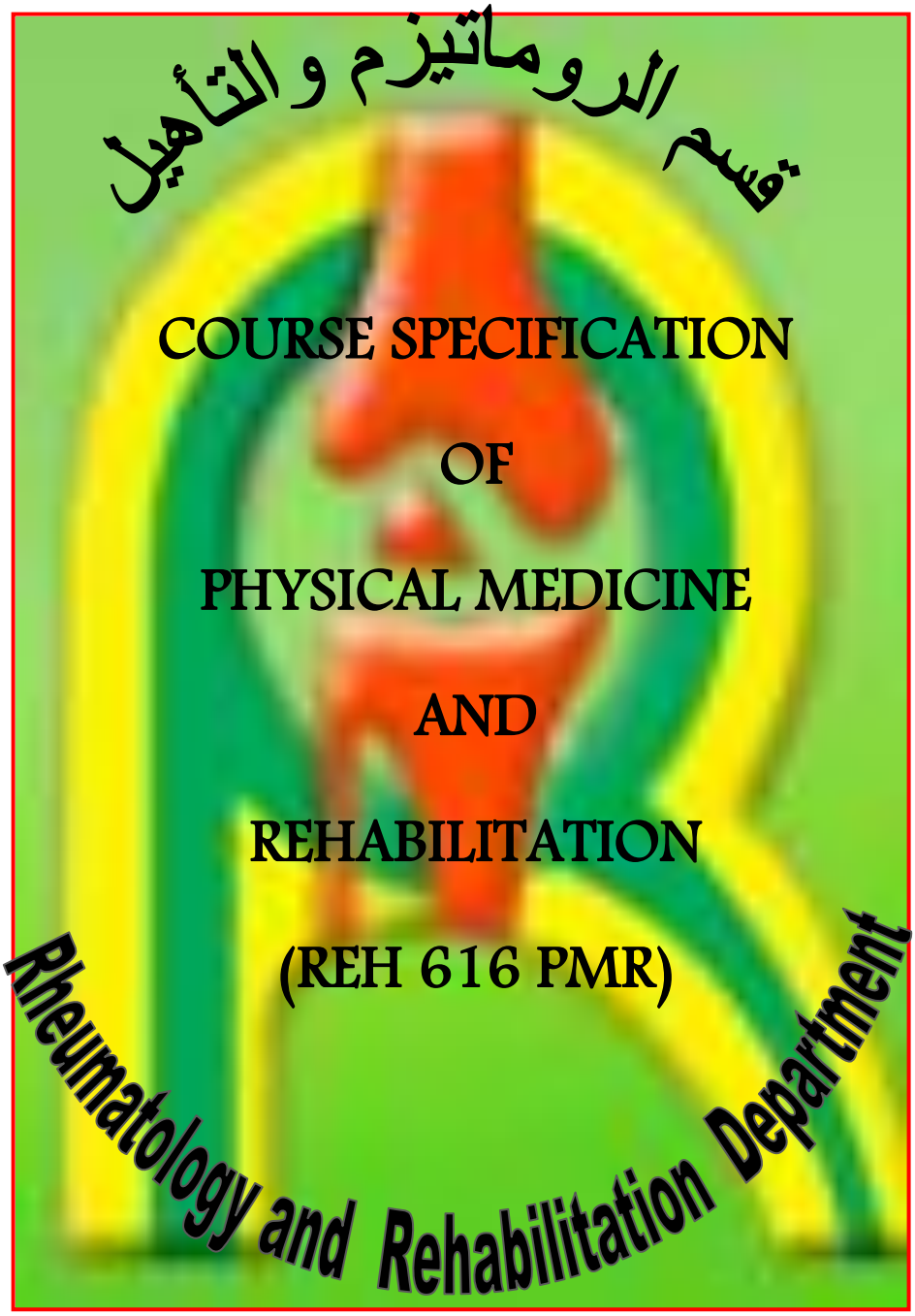
2- Outpatient clinic for collection of clinical cases

3- Pharmacy for pharmacological treatment of patients

Course coordinator: Dr Shereen Aly Machaly

Head of the department: Prof Dr. Salah Hawas

Date: 8/8/2010


قسم الروماتيزم والتأهيل
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	15/8/2010
(6) Date of last approval of programme specification by Faculty council	17/8/2010
(7) Course title:	Physical Medicine & Rehabilitation
(8) Course code:	REH 616 PMR
(9) Total teaching hours:	133 lectures or tutorials hours and 64 clinical hours /60 weeks (11 credit hours in 4 semesters)

(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 awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care (www.acgme.org) / (acgme competencies).

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

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

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

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

(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

A2-Identify theories and fundamentals related to the physiology of musculoskeletal system and the immune system of human and its response.

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 and others in need for rehabilitation.

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

A6- 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.

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

A8- Recognize principles of assessment, evaluation and management of patients in a Rehabilitation setting.

A 9- Understand mechanical, manual and functional rehabilitation approaches.

A 10- 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

A 11- Understand exercise guidelines, benefits and hazards and understand physiologic effect of exercise on soft tissues.

A12- Recognize the benefits of rehabilitation on the patient's quality of life, and its role on improving the patient's illness impact on global health.

A13- Identify recent advances and areas under research in the field of physical medicine, rheumatology and rehabilitation.

A14- Identify basics of health and patient's safety and safety procedures during practice.

A15- Identify proper patient care and patient's rights to obtain the optimum health care and effective treatment of rheumatic diseases.

A16- Identify basics of ethics, medicolegal aspects, malpractice and common medical errors in rheumatology & rehabilitation medicine.

A 17- Recognize principles and basic concepts of quality in professional practise including planning, improvement of performance and control of practising outcomes.

A 18- Express knowledge of effects and hazards of professional practice in rheumatology field and rehabilitation medicine on environment and identify mutual influence between professional practice and its impacts on the environment.

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

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 rheumatological and musculoskeletal problems.

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

B5- 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.

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

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

B10 -Formulate appropriate management plans with proper therapy choice for individual patients presenting with musculoskeletal diseases, autoimmune rheumatological disorders.

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

B12- Solve patients problems according to the available data collected from patient's evaluation and suggest investigations related to the patient's condition.

B13- Compose exercise/therapy prescription with specific diagnosis and recommended emphasis of treatment.

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 treatment methods including alternative and complementary medicine 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.

B19- Resolve specialized problems with non-availability of some data.

B 20- Consider effects of personal, social and cultural factors in the disease process and patient management.

B21- Apply ethical issues and resolve ethical dilemmas in relation to clinical practice.

B22- Demonstrate appropriate professional attitudes and behaviors in different practice situations.

B23- Give deep awareness of ongoing problems and theories in the field of rheumatology and rehabilitation and determine problems and find solutions to them.

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

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

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

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

B29- 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.

B30-Improve performance in the field of rheumatology and rehabilitation.

B31- Investigate and evaluate care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning.

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

B30.b: Set learning and improvement goals.

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

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

B30.f: Use information technology to optimize learning.

C- Professional/practical skills

C 1- Apply the anatomical and physiological facts during musculoskeletal examination and interpreting bone and joint imaging and bone density measurements in order to reach a proper diagnosis.

C4- Use recent technology in immunological field for serving professional practice. Evaluate and develop immunological methods and tools existing in rheumatology and rehabilitation.

C 5 - 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.

C6- Master the basic and modern professional skills in the area of rheumatology, rehabilitation and physical medicine.

C7-Develop methods, tools and new ways of professional practice and use appropriate technological means to serve the professional practice

C8- Write and evaluate professionally medical reports, clinical sheets including all collected data relevant to the patient's condition and physiotherapy treatment regimen sheets.

C9 - Employ efficiently physiotherapy modalities in the context of professional managing rheumatic and musculoskeletal disorders.

C 10- Apply appropriate assessment & measurement tools to evaluate functional status or outcomes of type of treatment used.

C 11- Apply sound ethical principles in practice (e.g., informed consent, confidentiality, veracity, provision or withholding of care).

C12- Demonstrate : (1) compassion, integrity, and respect for others; (2) responsiveness to patient needs that supersedes self-interest; (3) respect for patient privacy and autonomy; (4) accountability to patients, society and the profession; and, (5)sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.

C13- Work effectively in various health care delivery settings and systems relevant to their clinical specialty.

C14- 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- Communication & Transferable skills

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

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

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

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

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

D 6- Communicate ideas and arguments effectively.

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

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

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

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

D 11- Manage and lead scientific meetings

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

D13- Organize workload in order to meet deadlines.

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

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

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

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

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

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

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

D21- Demonstrate responsiveness to patient needs that supersedes self-interest.

(3) Course content:

Subjects	Lectures	Clinical	Laboratory	Field	Total Teaching Hours
1-Principles of evaluation in rehabilitation medicine :-	**2hrs/week For 15 weeks**				**30 hrs/15 weeks** (28 hrs lectures/or tutorials and 4 clinical hours)
Clinical evaluation and principles of assessment of patients in a Rehabilitation setting.	1hr/week For 2 wks	2hrs/week For 2 wks			4 hrs/2 weeks (2 hrs lectures/or tutorials and 4 clinical hours)
▪ *Vocational evaluation.*	2hrs/week For 2 wks				4 hrs/2 weeks
▪ *Psychological aspects of rehabilitation.*	2hrs/week For 2 wks				4 hrs/2 weeks
▪ *Disability, functional independence & handicapping*	2hrs/week For 2 wks				4 hrs/2 weeks

evaluation.					
▪ *Functional outcome assessment, self care evaluation and management.*	2hrs/week For 2 wks				4 hrs/2 weeks
Speech, language, swallowing, auditory and communication disorders assessment.	2hrs/week For 2 wks				4 hrs/2 weeks
▪ *Principles of mechanical, manual and functional rehabilitation approaches.*	2hrs/week For 3 wks				6 hrs/2 weeks
2- Diagnostic procedures including electrodiagnosis & electrophysiological studies and management methods including the use of physical modalities in rehabilitation medicine :-	**2 hrs/week For 15 weeks**	**4hrs/week For 15 weeks**			**60 hrs/15 weeks** (30 hrs lectures/ or tutorials and 60 clinical hours)
▪ *Electrodiagnosis and electrophysiological studies of muscles in normal and pathological conditions.* ▪ *Nerve conduction studies.* ▪ *Neuromuscular junction studies.*	2 hrs/week For 7 wks	4hrs/week For 7 wks			28 hrs/7 weeks (14 hrs lectures/ or tutorials and 28 clinical hours)
▪ *Different physical modalities used in rehabilitation:* *-Heat therapy* *-Cold therapy* *- Hydrotherapy* *-Laser & electromagnetic therapy* *- Electro-stimulation* *- Traction, manipulations, therapeutic exercise and massage*	2hrs/week For 8 wks	4 hrs/week For 8 wks			32 hrs/8 weeks (16 hrs lectures/ or tutorials and 32 clinical hours)
3- Major rehabilitation problems and rehabilitation of specific disorders:-	**4hrs/week For 15 wks**				**60 hrs/15 weeks**
▪ *Rehabilitation of patients with arthritis and connective tissue diseases.*	2hrs/week For one wk				2 hrs/week for one week
▪ *Treatment of patients with pain.*	2hrs/week For one wk				2 hrs/week for one week
▪ *Rehabilitation of patients with*	2hrs/week				2 hrs/week for one week

stroke, spinal cord injuries, multiple sclerosis.	For one wk				
▪ *Neurogenic bladder and bowel.*	2hrs/week For one wk				2 hrs/week for one week
▪ *Spasticity and associated abnormalities of muscle tone.*	2hrs/week For one wk				2 hrs/week for one week
▪ *Rehabilitation of neurological and musculoskeletal conditions.* ▪ *Movement disorders.*	2hrs/week For one wk				2 hrs/week for one week
▪ *Rehabilitation of degenerative diseases of the spine and peripheral joints.*	2hrs/week For one wk				2 hrs/week for one week
▪ *Rehabilitation of orthopedic and traumatic conditions.* ▪ *Rehabilitation of sport injuries.*	2hrs/week For one wk				2 hrs/week for one week
▪ *Rehabilitation of scoliosis.*	2hrs/week For one wk				2 hrs/week for one week
▪ *Pediatric rehabilitation*	2hrs/week For one wk				2 hrs/week for one week
▪ *Geriatric rehabilitation.*	2shr/week For one wk				2 hrs/week for one week
▪ *Rehabilitation of amputee.*	2hrs/week For one wk				2 hrs/week for one week
▪ *Rehabilitation after joint replacement therapy*	2hrs/week For one wk				2 hrs/week for one week
▪ *Training of functional independence.*	2hrs/week For one wk				2 hrs/week for one week
▪ *Gait training.*	2hrs/week For one wk				2 hrs/week for one week
▪*Rehabilitation of cancer patients.*	2hrs/week For one wk				2 hrs/week for one week
▪ *Rehabilitation of osteoporosis.*	2hrs/week For one wk				2 hrs/week for one week
▪ *Rehabilitation of cardiac patients*	2hrs/week For one wk				2 hrs/week for one week
▪ *Rehabilitation of patients with pulmonary diseases.*	2hrs/week For one wk				2 hrs/week for one week
▪ *Rehabilitation of patients with vascular diseases and diabetic foot.*	2hrs/week For one wk				2 hrs/week for one week
▪ *Immobilization syndrome & bed ulcers.*	2hrs/week For one wk				2 hrs/week for one week

▪ *Rehabilitation of patients with burn.*	2shr/week For one wk				2 hrs/week for one week
▪ *Rehabilitation of communication disorders*	2hrs/week For one wk				2 hrs/week for one week
▪ *Rehabilitation of the blind.*	2hrs/week For one wk				2 hrs/week for one week
▪ *Vestibular rehabilitation.*	2hrs/week For one wk				2 hrs/week for one week
▪ *Rehabilitation of gynecological & obstetric disorders.*	2hrs/week For one wk				2 hrs/week for one week
▪ *Sexual dysfunction*	2hrs/week For one wk				2 hrs/week for one week
▪ *Nutrition*	2hrs/week For one wk				2 hrs/week for one week
▪ *Vocational rehabilitation*	2hrs/week For one wk				2 hrs/week for one week
▪ *Industrial rehabilitation.* ▪ *Occupational rehabilitation.*	2hrs/week For one wk				2 hrs/week for one week
4- Indications, prescription and evaluation of orthosis and prothesis.:-	**1hr/week For 15 wks**				**15 hrs/15 weeks**
▪ *Upper limb orthosis & prosthesis*	1hr/week For 4 wks				4 hrs/4 weeks
▪ *Lower limb orthosis & prosthesis.*	1hr/week For 4 wks				4 hrs/4 weeks
▪ *Spinal orthosis (cervical, lumbar, thoraco-lumbar)*	1hr/week For 4 wks				4 hrs/4 weeks
▪ *Walking aids*	1hr/week For 2 wks				2 hrs/2 week
▪ *Transfers and wheelchairs*	1hr/week For one wk				1 hr/one week

(4) Teaching methods:

4.1:……Lectures……

4.2:……Tutorials……

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

4.4:……Clinical training……..

(5) Assessment methods:

5.1: Written exam.. ……. for assessment of……. (A 2,4-13, B1,4,5,8-16,23, D 3)

5.2: Oral exam…….. for assessment of…….(A 2,4-13 , B1,4,5,8-16,23, D3)

5.3: Clinical exam……. for assessment of……(A 2,4-18,, B1,2,4-23, all C, D1,3,4,6)

5.4: Practical exam in orthosis & prosthesis and electromyography

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)……. for assessment of……(A 13,19, B 5,28,29, C4, D1-5,11-13,15)

5.6: Log book…….. for assessment of …(A 14-18, B 1-4, 6-27, 30, 31, all C & D)

Assessment schedule:

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

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

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

Assessment 4: …at the end of…….36th month:……

Assessment 5: …after 24 month from the day of thesis registration according to the faculty bylaws.

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

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

Written exam:……130/430……(30.25.%):……

Clinical exam:……100/430…… …(23.25)%::……

Oral exam:……100/430…… (23.25.%::……

Practical exam in orthosis & prosthesis and electromyography: 100/430 (23.25%:)…

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…… ……

Facilities and resources mandatory for course completion:

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

-Data show projector and screen

- Laser pointer and white board

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

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

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

4-Rehabilitation measures & physiotherapy equipments for rehabilitating patients

Course coordinator: Dr Shereen Aly Machaly

Head of the department: Prof Dr. Salah Hawas

Date: 10/8/2010


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	15-8-2010
(6) Date of last approval of programme specification by Faculty council	17-8-2010
(7) Course title:	(Optional Course) Pediatric Rehabilitation
(8) Course code:	REH 616 PR
(9) Total teaching hours:	15 hours

(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 clinical education necessary to promote and thoroughly develop fellow's skills related to patient evaluation, management, data collection and interpretation in a wide variety of pediatric rehabilitation patients.
3. Train 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 to become a teacher and researcher in the field of pediatric rehabilitation.

(2) Intended Learning Outcomes (ILOs):

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

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

A- Knowledge and Understanding

A 3-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 and others in need for rehabilitation.

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

A 8- Recognize principles of assessment, evaluation and management of patients in a Rehabilitation setting.

A 9- Understand mechanical, manual and functional rehabilitation approaches.

A 10- 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

A 11- Understand exercise guidelines, benefits and hazards and understand physiologic effect of exercise on soft tissues.

A12- Recognize the benefits of rehabilitation on the patient's quality of life, and its role on improving the patient's illness impact on global health.

A13- Identify recent advances and areas under research in the field of physical medicine, rheumatology and rehabilitation.

A14- Identify basics of health and patient's safety and safety procedures during practice.

A15- Identify proper patient care and patient's rights to obtain the optimum health care and effective treatment of rheumatic diseases.

A16- Identify basics of ethics, medicolegal aspects, malpractice and common medical errors in rheumatology & rehabilitation medicine.

A 17- Recognize principles and basic concepts of quality in professional practise including planning, improvement of performance and control of practising outcomes.

A 18- Express knowledge of effects and hazards of professional practice in rheumatology field and rehabilitation medicine on environment and identify mutual influence between professional practice and its impacts on the environment.

B- Intellectual skills

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 rheumatological and musculoskeletal problems.

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

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.

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

B10 -Formulate appropriate management plans with proper therapy choice for individual patients presenting with musculoskeletal diseases, autoimmune rheumatological disorders.

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

B13- Compose exercise/therapy prescription with specific diagnosis and recommended emphasis of treatment.

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

B16- Compare use of various treatment methods including alternative and complementary medicine 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.

B19- Resolve specialized problems with non-availability of some data.

B 20- Consider effects of personal, social and cultural factors in the disease process and patient management.

B21- Apply ethical issues and resolve ethical dilemmas in relation to clinical practice.

B22- Demonstrate appropriate professional attitudes and behaviors in different practice situations.

C- Professional/practical skills

C 1- Apply the anatomical and physiological facts during musculoskeletal examination and interpreting bone and joint imaging and bone density measurements in order to reach a proper diagnosis.

C 2 - Select effectively and perform professionally the appropriate aspiration or injection technique for diagnosis and treatment of a selected articular or musculoskeletal problem

C6- Master the basic and modern professional skills in the area of rheumatology, rehabilitation and physical medicine.

C8- Write and evaluate professionally medical reports, clinical sheets including all collected data relevant to the patient's condition and physiotherapy treatment regimen sheets.

C9 - Employ efficiently physiotherapy modalities in the context of professional managing rheumatic and musculoskeletal disorders.

C 10- Apply appropriate assessment & measurement tools to evaluate functional status or outcomes of type of treatment used.

C 11- Apply sound ethical principles in practice (e.g., informed consent, confidentiality, veracity, provision or withholding of care).

C12- Demonstrate : (1) compassion, integrity, and respect for others; (2) responsiveness to patient needs that supersedes self-interest; (3) respect for patient privacy and autonomy; (4) accountability to patients, society and the profession; and, (5)sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.

C13- Work effectively in various health care delivery settings and systems relevant to their clinical specialty.

C14- 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- Communication & Transferable skills

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

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

D 6- Communicate ideas and arguments effectively.

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

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

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

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

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

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

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

D21- Demonstrate responsiveness to patient needs that supersedes self-interest.

(3) Course content:

Subjects	Lectures/or tutorials	Clinical	Laboratory	Field	Total Teaching Hours 15 hours/15 weeks
Rehabilitation of congenital and acquired disabilities.	1hr/week for one week				1hr/ one week
Pediatric traumatic brain injury rehab.	1hr/week for one week				1hr/ one week
Pediatric spinal cord injury rehab.	1hr/week for one week				1hr/ one week
Rehabilitation of stroke in children	1hr/week for one week				1hr/ one week
Abnormal gait in children	1hr/week for one week				1hr/ one week
Rehabilitation of neuromuscular disease	1hr/week for one week				1hr/ one week
Cerebral Palsy , spasticity management	1hr/week for one week				1hr/ one week
Rehabilitation of different forms of spinal bifida	1hr/week for one week				1hr/ one week
Therapeutic exercise, electrical stimulation,	1hr/week for one week				1hr/ one week

Bracing, equipment, with anticipatory guidance in children	1hr/week for one week				1hr/ one week
Rehabilitation of pediatric amputee, Pre-prosthetic and prosthetic devices	1hr/week for one week				1hr/ one week
Pediatric burn wound care	1hr/week for one week				1hr/ one week
Rehabilitation of juvenile rheumatoid arthritis	1hr/week for one week				1hr/ one week
Musculoskeletal pain syndromes involving the back, knee anterior leg, ankle/foot and upper extremity in pediatric patients.	1hr/week for one week				1hr/ one week
Pulmonary rehabilitation	1hr/week for one week				1hr/ one week

(4) Teaching methods:

4.1: Lectures

4.2: Scientific seminars

4.3: Clinical training

(5) Assessment methods:

5.1: Final written exam for assessment of ……(A3,4,7-13, B 3,4,8,10,11,13,15-17, D 1,4)

5.2: Log book for assessment of ……(A 14-18, B1-4,7,8,10,11,13,15-17,19-22, C 1,2,6,8-14, D1,4,6-8,14,17-21)

Percentage of each Assessment to the total mark:

Written exam:. 80 marks (100% of assessment)

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- Outpatient clinic for collection of clinical cases

3- Pharmacy for pharmacological treatment of patients

4-Rehabilitation measures & physiotherapy equipments for rehabilitating patients

Course coordinator: Dr Shereen Aly Machaly

Head of the department: Prof. Dr Salah Hawas

Date:


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	15-8-2010
(6) Date of last approval of programme specification by Faculty council	17-8-2010
(7) Course title:	(Optional Course) Geriatric Rehabilitation
(8) Course code:	REH 616 GR
(9) Total teaching hours:	15 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 to practice 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 pediatric 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.
4) Provide experience in undertaking and analyzing research
5) Emphasize the importance of research as a basis for evidence-based practice

(2) Intended Learning Outcomes (ILOs):

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

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

A- Knowledge and Understanding

A 3-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 and others in need for rehabilitation.

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

A 8- Recognize principles of assessment, evaluation and management of patients in a Rehabilitation setting.

A 9- Understand mechanical, manual and functional rehabilitation approaches.

A 10- 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

A 11- Understand exercise guidelines, benefits and hazards and understand physiologic effect of exercise on soft tissues.

A12- Recognize the benefits of rehabilitation on the patient's quality of life, and its role on improving the patient's illness impact on global health.

A13- Identify recent advances and areas under research in the field of physical medicine, rheumatology and rehabilitation.

A14- Identify basics of health and patient's safety and safety procedures during practice.

A15- Identify proper patient care and patient's rights to obtain the optimum health care and effective treatment of rheumatic diseases.

A16- Identify basics of ethics, medicolegal aspects, malpractice and common medical errors in rheumatology & rehabilitation medicine.

A 17- Recognize principles and basic concepts of quality in professional practise including planning, improvement of performance and control of practising outcomes.

A 18- Express knowledge of effects and hazards of professional practice in rheumatology field and rehabilitation medicine on environment and identify mutual influence between professional practice and its impacts on the environment.

B- Intellectual skills

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 rheumatological and musculoskeletal problems.

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

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.

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

B10 -Formulate appropriate management plans with proper therapy choice for individual patients presenting with musculoskeletal diseases, autoimmune rheumatological disorders.

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

B13- Compose exercise/therapy prescription with specific diagnosis and recommended emphasis of treatment.

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

B16- Compare use of various treatment methods including alternative and complementary medicine 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.

B19- Resolve specialized problems with non-availability of some data.

B 20- Consider effects of personal, social and cultural factors in the disease process and patient management.

B21- Apply ethical issues and resolve ethical dilemmas in relation to clinical practice.

B22- Demonstrate appropriate professional attitudes and behaviors in different practice situations.

C- Professional/practical skills

C 1- Apply the anatomical and physiological facts during musculoskeletal examination and interpreting bone and joint imaging and bone density measurements in order to reach a proper diagnosis.

C 2 - Select effectively and perform professionally the appropriate aspiration or injection technique for diagnosis and treatment of a selected articular or musculoskeletal problem

C6- Master the basic and modern professional skills in the area of rheumatology, rehabilitation and physical medicine.

C8- Write and evaluate professionally medical reports, clinical sheets including all collected data relevant to the patient's condition and physiotherapy treatment regimen sheets.

C9 - Employ efficiently physiotherapy modalities in the context of professional managing rheumatic and musculoskeletal disorders.

C 10- Apply appropriate assessment & measurement tools to evaluate functional status or outcomes of type of treatment used.

C 11- Apply sound ethical principles in practice (e.g., informed consent, confidentiality, veracity, provision or withholding of care).

C12- Demonstrate : (1) compassion, integrity, and respect for others; (2) responsiveness to patient needs that supersedes self-interest; (3) respect for patient privacy and autonomy; (4) accountability to patients, society and the profession; and, (5)sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.

C13- Work effectively in various health care delivery settings and systems relevant to their clinical specialty.

C14- 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- Communication & Transferable skills

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

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

D 6- Communicate ideas and arguments effectively.

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

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

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

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

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

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

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

D21- Demonstrate responsiveness to patient needs that supersedes self-interest.

(3) Course content:

Subjects	Lectures/or tutorials	Clinical	Laboratory	Field	Total Teaching Hours 15 hours/15 weeks
▪ Principles of practice in geriatric rehabilitation	1hr/week for one week				1hr/ one week
▪ Theories of aging ▪ Age-related changes in anatomy, physiology, and function	1hr/week for one week				1hr/ one week
▪ Nutritional Considerations with Aging ▪ Drugs and Function in the Elderly	1hr/week for one week				1hr/ one week
▪ The role of the physical therapy in care of geriatrics	1hr/week for one week				1hr/ one week
▪ Auditory Impairment ▪ Management of auditory impairment	1hr/week for one				1hr/ one week

	week				
▪ Visual Impairment ▪ Management of visual impairment	1hr/week for one week				1hr/ one week
▪ Risk factors for falling ▪ Prevention of falls	1hr/week for one week				1hr/ one week
▪ Rehabilitation after a fall	1hr/week for one week				1hr/ one week
▪ Rehabilitation after hip, knee replacement	1hr/week for one week				1hr/ one week
▪ Osteoporosis ▪ Diagnostic workup for osteoporosis ▪ Consequences of osteoporosis	1hr/week for one week				1hr/ one week
▪ Prevention of osteoporosis ▪ Treatment of osteoporosis	1hr/week for one week				1hr/ one week
▪ Some pathological conditions common in elderly: - Cardiovascular disease - Cancer	1hr/week for one week				1hr/ one week
- Arthritis, osteoarthritis, spondylosis -Aging with life-long disabilities	1hr/week for one week				1hr/ one week
▪ Psychosocial theories and considerations of aging ▪ Screening for depression, ▪ Cognitive impairment; delirium, dementia ▪ Alzheimer's disease	1hr/week for one week				1hr/ one week
▪ Risk factors for malnutrition ▪ Assessment of malnutrition ▪ Treatment of malnutrition	1hr/week for one week				1hr/ one week

(4) Teaching methods:

4.1: Lectures

4.2: clinical seminars

4.3: Clinical training

(5) Assessment methods:

5.1: Final written exam for assessment of ……(A3,4,7-13, B 3,4,8,10,11,13,15-17, D 1,4)

5.2: Log book for assessment of ……(A 14-18, B1-4,7,8,10,11,13,15-17,19-22, C 1,2,6,8-14, D1,4,6-8,14,17-21)

Percentage of each Assessment to the total mark:

Written exam:. 80 marks

(6) 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…….

(7) Facilities and resources mandatory for course completion:

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

-Data show projector and screen

- Laser pointer and white board

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

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

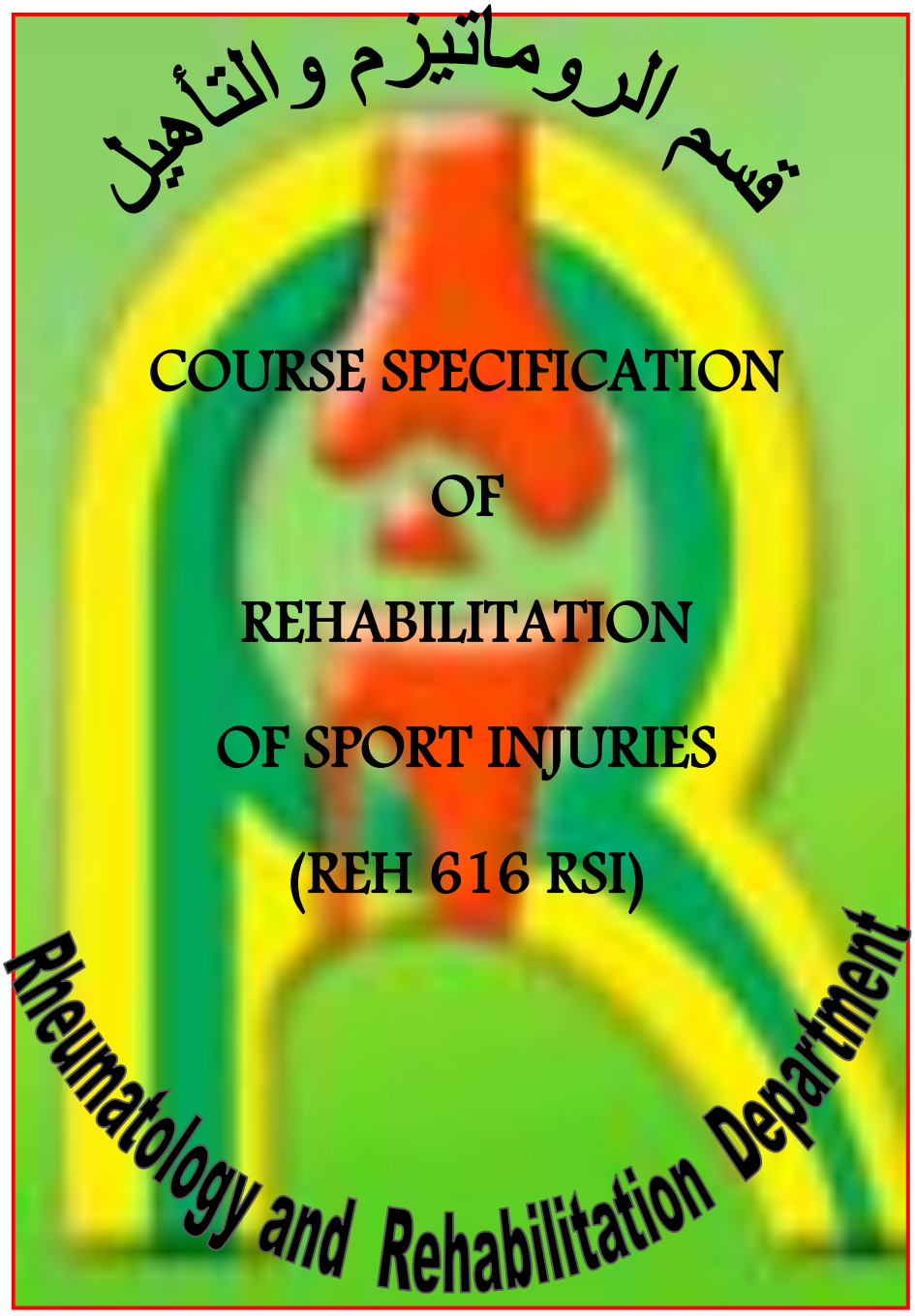
3- **Pharmacy** for pharmacological treatment of patients

4-Rehabilitation measures & physiotherapy equipments for rehabilitating patients

Course coordinator: Dr Shereen Aly Machaly

Head of the department: Prof. Dr Salah Hawas

Date:


قسم الروماتيزم والتأهيل
COURSE SPECIFICATION
OF
REHABILITATION
OF SPORT INJURIES
(REH 616 RSI)
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	15-8-2010
(6) Date of last approval of programme specification by Faculty council	17-8-2010
(7) Course title:	(Optional Course) Sport Injuries
(8) Course code:	REH 616 RSI
(9) Total teaching hours:	15 hours/ 15 weeks

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

4. Provide fellows with a broad knowledge base of medical issues surrounding exercise and athletic competition.
5. To train fellows in the field of sports medicine to become academic leaders in the care of sports related problems in children, adolescents and adults.
6. Provide the clinical 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):

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

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

A- Knowledge and Understanding

A 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 and the immune system of human and its response.

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 and others in need for rehabilitation.

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

A 9- Understand mechanical, manual and functional rehabilitation approaches.

A 10- 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

A 11- Understand exercise guidelines, benefits and hazards and understand physiologic effect of exercise on soft tissues.

A12- Recognize the benefits of rehabilitation on the patient's quality of life, and its role on improving the patient's illness impact on global health.

A14- Identify basics of health and patient's safety and safety procedures during practice.

A15- Identify proper patient care and patient's rights to obtain the optimum health care and effective treatment of rheumatic diseases.

A16- Identify basics of ethics, medicolegal aspects, malpractice and common medical errors in rheumatology & rehabilitation medicine.

A 17- Recognize principles and basic concepts of quality in professional practise including planning, improvement of performance and control of practising outcomes.

A 18- Express knowledge of effects and hazards of professional practice in rheumatology field and rehabilitation medicine on environment and identify mutual influence between professional practice and its impacts on the environment.

B- Intellectual skills

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.

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.

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

B10 -Formulate appropriate management plans with proper therapy choice for individual patients presenting with musculoskeletal diseases, autoimmune rheumatological disorders.

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

B12- Solve patients problems according to the available data collected from patient's evaluation and suggest investigations related to the patient's condition.

B13- Compose exercise/therapy prescription with specific diagnosis and recommended emphasis of treatment.

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.

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.

B 20- Consider effects of personal, social and cultural factors in the disease process and patient management.

B21- Apply ethical issues and resolve ethical dilemmas in relation to clinical practice.

B22- Demonstrate appropriate professional attitudes and behaviors in different practice situations.

C- Professional/practical skills

C 1- Apply the anatomical and physiological facts during musculoskeletal examination and interpreting bone and joint imaging and bone density measurements in order to reach a proper diagnosis.

C 2 - Select effectively and perform professionally the appropriate aspiration or injection technique for diagnosis and treatment of a selected articular or musculoskeletal problem.

C 5 - 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.

C6- Master the basic and modern professional skills in the area of rheumatology, rehabilitation and physical medicine.

C8- Write and evaluate professionally medical reports, clinical sheets including all collected data relevant to the patient's condition and physiotherapy treatment regimen sheets.

C9 - Employ efficiently physiotherapy modalities in the context of professional managing rheumatic and musculoskeletal disorders.

C 10- Apply appropriate assessment & measurement tools to evaluate functional status or outcomes of type of treatment used.

C 11- Apply sound ethical principles in practice (e.g., informed consent, confidentiality, veracity, provision or withholding of care).

C12- Demonstrate : (1) compassion, integrity, and respect for others; (2) responsiveness to patient needs that supersedes self-interest; (3) respect for patient privacy and autonomy; (4) accountability to patients, society and the profession; and, (5)sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.

C13- Work effectively in various health care delivery settings and systems relevant to their clinical specialty.

C14- 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- Communication & Transferable skills

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

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

D 6- Communicate ideas and arguments effectively.

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

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

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

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

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

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

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

D21- Demonstrate responsiveness to patient needs that supersedes self-interest.

(3) Course content:

Subjects	Lectures / or tutorials	Clinical	Laboratory	Field	Total Teaching Hours (15 hours/15 weeks)
Foot Injuries Foot pain, Plantar fasciitis, Bruised heel Blisters , Bunions , Plantar fascia strain, Metatarsal fracture, Mortons neuroma , Metatarsalgia , Turf toe , Athletes foot , Heel pain	1hr/week for one week				1hr/ one week
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 exercises	1hr/week for 2 weeks				2hrs/ 2 weeks
Knee Injuries Knee Pain, Patella pain syndrome, ACL injury, Iliotibial band syndrome , Jumper's knee, Osgood schlatters disease, Posterior cruciate ligament injury, Medial cartilage meniscus injury, Medial ligament injury, Osteoarthritis , Housemaids knee, Articular cartilage injury, Quadriceps tendon inflammation, Bakers cyst, Knee exercises	1hr/week for 2 weeks				2hrs/ 2 weeks
Lower Back Pain Lower back pain, Lumbago, Scoliosis, Sciatica, SI joint , Facet joint pain , Muscle	1hr/week for one week				1hr/ one week

strains , Slipped disc , Back exercises					
Upper Back & Neck Pain Neck pain , Whiplash , Cervical posture syndromes , Scheuermanns disease	1hr/week for one week				1hr/ one week
Head Injuries	1hr/week for one week				1hr/ one week
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	1hr/week for one week				1hr/ one week
Elbow Injuries Elbow pain, Tennis elbow , Golfer's elbow, Triceps tendon rupture , Hyperextension injury , Students elbow	1 hr/week for 2 weeks				2hrs/ 2 weeks
Wrist & Hand Injuries Wrist & hand pain, Wrist bursitis , Carpal tunnel syndrome , Repetitive strain injuries, Fractured scaphoid , Metacarpal fracture, Sprained thumb , De Quervains tenosynovitis , Wrist exercises	1hr/week for 2 weeks				2hrs/ 2 weeks
▪ **Sports Massage** ▪ **Strapping & Taping**	1hr/week for one week				1hr/ one week
▪ **Stretching** ▪ **Strengthening**	1hr/week for one week				1hr/ one week

(4) Teaching methods:

4.1: Lectures

4.2: Scientific seminars

4.3: Clinical training

(5) Assessment methods:

5.1. Final written exam for assessment of …(A 1,2,4,5,9,10,11, B 1,6,7, 8,10-15, D1,4)

5.2: Log book….. for assessment of…….(A12,14-18, B 1,2,6,7, 17,18,20-22, all C & D)…

Percentage of each Assessment to the total mark:

Written exam:. 80 marks (100%)

(6) 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…….

(7) Facilities and resources mandatory for course completion:

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

-Data show projector and screen

- Laser pointer and white board

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

2- Outpatient clinic for collection of clinical cases

3- Pharmacy for pharmacological treatment of patients

4-Rehabilitation measures & physiotherapy equipments for rehabilitating patients

Course coordinator: Dr Shereen Aly Machaly

Head of the department: Prof. Dr Salah Hawas

Date:


قسم الروماتيزم و التأهيل
COURSE SPECIFICATION
OF
CLINICAL IMMUNOLOGY
(ADVANCED COURSE)
(REH 616 ACI)
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	15-8-2010
(6) Date of last approval of programme specification by Faculty council	17-8-2010
(7) Course title:	(Optional Course) Advanced Clinical Immunology
(8) Course code:	REH 616 ACI
(9) Total teaching hours:	15 hours/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 awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care (www.acgme.org) / (acgme competencies).

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

3- To provide a rigorous, exciting, and productive training experience -together with the updated and advanced immunological knowledge- for those individuals interested in developing careers as independent physician-scientists.

(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

A2-Identify theories and fundamentals related to the physiology of musculoskeletal system and the immune system of human and its response.

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 and others in need for rehabilitation.

A13- Identify recent advances and areas under research in the field of physical medicine, rheumatology and rehabilitation.

B- Intellectual skills

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

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

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.

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

B30-Improve performance in the field of rheumatology and rehabilitation.

C- Professional/practical skills

C3- 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.

C4- Use recent technology in immunological field for serving professional practice. Evaluate and develop immunological methods and tools existing in rheumatology and rehabilitation.

C7-Develop methods, tools and new ways of professional practice and use appropriate technological means to serve the professional practice

C14- 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- Communication & Transferable skills

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

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

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

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

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

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

(3) Course content:

Subjects	Lectures/or tutorials	Clinical	Laboratory	Field	Total Teaching Hours 15 hours/15 weeks
Basics of genetics	1 hr/week for 2 weeks				2 hrs/ 2 weeks
Genetic basis of autoimmune diseases.	1 hr/week for 4 weeks				4 hrs/ 4 weeks
Genetic basis of immune-deficiency diseases.	1 hr/week for 2 weeks				2 hrs/ 2 weeks
Immunotherapy	1 hr/week for 4 weeks				4 hrs/ 4 weeks
Bone marrow transplantation	1 hr/week for 2 weeks				2 hrs/ 2 weeks
Blood Banks	1 hr/week for one weeks				1 hrs/ one weeks

(4) Teaching methods:

4.1: Lectures

(5) Assessment methods:

5.1: Final exam for assessment of .....(A 2,4,13, B 3,4,5,6,9, D 1,3,4)

5.2: Log book for assessment of .....(B 3,4,6,9,30, C 3,4,7,14, D 1-4,10,20)

Percentage of each Assessment to the total mark:

Written exam:. 80 marks (100% of assessment)

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. Dr Salah Hawas

Date: