Master Degree of Physical medicine, Rheumatology &Rehabilitation

Physical medicine, Rheumatology& Rehabilitation department
Faculty of medicine
Aswan University
2020-2019

Contents

A. Basic information

Program title : Master degree of Physical medicine, Rheumatology& Rehabilitation .
Nature of program : single.
Responsible department: Physical medicine, Rheumatology& Rehabilitation.
External evaluator : Prof. Nihal Ahmed fathy .

B – professional information

1- Program aims :

1/1. To enable candidates to acquire satisfactory level of clinical skills, bedside care skills, in addition to update medical knowledge as well as clinical experience and competence in the area of Phyical Medicine, Rheumatology& Rehabilitation

1/2. To introduce candidates to the basics of scientific medical research.

1/3. To enable candidates starting professional careers as specialists in Egypt and making them recognized as specialists abroad.

1/4. To enable candidates to pursue higher studies and subspecialties.

1/5. To enable candidates to understand and get the best of published scientific research and do their own.

2- Intended learning outcomes (ILOs)

for the whole program:

2/1. Knowledge and understanding:

A. Explain the essential facts and principles of relevant basic sciences including Anatomy, Physiology, physics, and basics of Physical medicine, Rheumatology and Rehabilitation.

B. Mention essential facts of clinically supportive sciences such as Internal Medicine, neurology and orthopedic related to Physical medicine, Rheumatology and Rehabilitation.

C. Demonstrate sufficient knowledge of etiology, clinical picture, diagnosis, prevention and treatment of common diseases and situations related to Physical medicine, Rheumatology and Rehabilitation.

D. Give the recent and update developments in the pathogenesis, diagnosis, prevention and treatment of common diseases related to Physical medicine, Rheumatology and Rehabilitation.

E. Mention the basic ethical and medicolegal principles that should be

applied in practice and relevant to the Physical medicine, Rheumatology and Rehabilitation.

F. Mention the basics and standards of quality assurance to ensure good clinical practice in the field of Physical medicine, Rheumatology and Rehabilitation.

G.Mention the ethical and scientific principles of medical research methodology.

H.State the impact of common health problems in the field of Physical medicine, Rheumatology and Rehabilitation on the society and how good clinical practice improves these problems.

2/2. Intellectual outcomes

A. Correlate the facts of relevant basic and clinically supportive sciences with clinical reasoning, diagnosis and management of common diseases of Physical medicine, Rheumatology and Rehabilitation.

B. Demonstrate an investigatory and analytic thinking approach (problem solving) to common clinical situations related to Physical medicine, Rheumatology and Rehabilitation.

C. Design and /or present a case or review (through seminars/journal clubs) in one or more of common clinical problems relevant to Physical medicine, Rheumatology and Rehabilitation field.

D. Formulate management plans and alternative decisions in different situations in the field of Physical medicine, Rheumatology and Rehabilitation.

2/3. Skills

2/3/1 Practical skills (Patient Care)

A. Obtain proper history and examine patients in caring and rspectful behaviors.

B. Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment for common

conditions related to Physical medicine, Rheumatology and Rehabilitation.

C. Carry out patient management plans for common conditions related to Physical medicine, Rheumatology and Rehabilitation.

D. Use information technology to support patient care decisions and patient education in common clinical situations related to Physical medicine, Rheumatology and Rehabilitation.

E. Perform competently non invasive and invasive procedures considered essential for Physical medicine, Rheumatology and Rehabilitation.

F. Provide health care services aimed at preventing health problems related to Physical medicine, Rheumatology and Rehabilitation.

G. Provide patient-focused care in common conditions related to Physical medicine, Rheumatology and Rehabilitation, while working with health care professionals, including those from other disciplines
+/99999
H. Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets (Write a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and maintaining medical records)

2/3/2 General skills

Including:
Practice-based Learning and Improvement
Interpersonal and Communication Skills
Professionalism
Systems-based Practice

Practice-Based Learning and Improvement:

A. Perform practice-based improvement activities using a systematic methodology (share in audits and risk management activities and use logbooks).

B.Appraises evidence from scientific studies.

C.Conduct epidemiological studies and surveys.

D. Perform data management including data entry and analysis and using information technology to manage information, access on-line medical information; and support their own education.

E.Facilitate learning of students and other health care professionals including their evaluation and assessment.

Interpersonal and Communication Skills:

F. Maintain therapeutic and ethically sound relationship with patients.

G. Elicit information using effective non-verbal, explanatory, questioning, and writing skills.

H. Provide information using effective non-verbal, explanatory, questioning, and writing skills.

I. Work effectively with others as a member of a health care team or other professional group.

Professionalism

J. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society.

K. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent and business practices.

L.demonstrate sensitivity and responsiveness to patients cuture, age, gender, and disabilities.

Systems – based practice:

M. work effectively in relevant health care delivery settings and systems including good administrative and time management.

N. practice cost - effective health care and resource allocation that doesnot compromise quality of care.

O. assist patients in dealing with system complexities.

3-program academic standards

Academic standards for master degree in Physical medicine, Rheumatology and rehabilitation

Aswan Faculty of Medicine developed master degree programs academic standards for different clinical specialists.
In preparing these standards, the general academic reference standards for post graduate progrms (GARS) were adopted. These standards set out the graduate attributes and academic characteristics that are expected to be achieved by the end of the program.

4. Program Structure and Contents

A. Duration of program: 3 - 5 years
B. Structure of the program:
Total contact number of credit points: 180 point (20 out of them for thesis)
Didactic 40 (22.2 %), practical 120 (66.7%), thesis 20 (11.1%), total 180
First part
Didactic 14 (35 %), practical 24 (60 %), elective course 2 CP (5%), total 40
Second part
Didactic24 (20%), practical 96 (80%), total 120
Didactic (lectures, seminars, tutorial)
According the currently applied credit points bylaws:
Total courses: 160 credit point
Compulsory courses: 98.9%
Elective course: 2 credit point =1.25%

	Credit points	% from total
Basic science courses	24	13.3%
Humanity and social courses	0	0%
Specialty courses	136	76.7%

others		
Field training	120	66.7%
Thesis	20	11.1%

C. Program Time Table

Duration of program 3 years maximally 5 years divided into

- **Part 1: (One year)**

Program-related basic science courses and ILOs
Students are allowed to sit the exams of these courses after 12 months from applying to the MSc degree.
One elective course can be set during either the 1st or 2nd parts.

- **Thesis**

For the MSc thesis;
MSc thesis subject should be officially registered within 6 months from application to the MSc degree,
Discussion and acceptance of the thesis could be set after 12 months from registering the MSc subject;
It should be discussed and accepted before passing the second part of examination)

- **Part 2 (2 years)**

Program related speciality science courses and ILOs
Students are not allowed to sit the exams of these courses before 3 years from applying to the MSc degree.
The students pass if they get 50% from the written exams and 60% from oral and clinical/practical exams of each course and 60%of summation of the written exams, oral and clinical /practical exams of each course
Total degrees 1900 marks.
700 marks for first part
1200 for second part
Written exam 40% - 70%.
Clinical/practical and oral exams 30% - 60%.

D. Curriculum Structure: (Courses):

E. Year 1

The first year of the fellowship is primarily for basic science related medical knowledge, basics of Physical medicine ,Rheumatology and rehabilitation (studied in specialized courses over 12 months in collaboration with basic sciences department, orthopedic department, neurology depqrtement and Internal medicine Department ofAswan Faculty of Medicine) and a clinical year during which the fellows gain experience with a wide variety of patients in inpatient and out-patient settings, develop proficiency in theperformance and appropriate utilization of various procedures, and develop proficiency in the utilization and interpretation of rheumtology laboratory tests . Throughout the year, emphasis is placed on developing: 1) an understanding of basic mechanisms and pathophysiology of Physical medicine ,Rheumatology and rehabilitation ; 2) the ability to efficiently formulate clinical assessments and therapeutic plans; 3) the ability to critically analyze the relevant medical literature; and 4) skills in communicating with nursing and medical staff as well as house staff.

The first year fellow spends the year rotating among four different services: 1) Rheumatology wards; 2) Rheumatology clinic;3) Rehabilitation clinic and 4) physical medicine clinic all at Aswan University Hospital. These rotations are briefly described below.

Years 2 and 3

Although the primary focus of the second and third year is the development of skills and experience in research (see below), senior fellows continue to participate in clinical activities and certain procedures. First, they maintain their longitudinal outpatient and in-patient clinic experience throughout these years. Senior fellows will also

actively participate in the regular weekly scientific seminars and collaborate with those fellows in their first year. In addition, fellows rotate through the different in- patient clinical services. This rotation complements the previous inpatient and outpatient experiences. Approximately by the end of the first year, fellows are expected to identify a research area in which the subsequent two years will be focused. Together, the trainee and supervisors develop a project for investigation that is of interest to the trainee and within the expertise of the faculty member; in certain instances, joint mentorship provided by two faculty members within the Division, or by one divisional faculty member and a collaborator from another unit, is appropriate. By the beginning of the second year, the fellow presents a conference in which he/she synthesizes existing knowledge, presents the problem for investigation, and describes the proposed plan of investigation. The faculty members and fellows in attendance provide feedback to the fellow and supervisors about the proposed project; this process of peer review provides a useful experience for the fellow and often strengthens the experimental approach. During the second and third years, the trainee carries out the proposed work in the clinical research facilities of the faculty mentor(s). The trainee also benefits from interactions with other trainees, technicians, and collaborating investigators. The trainee also participates in laboratory meetings and journal clubs specific to individual research groups. Presenting research findings at regional and national meetings and submitting work for publication are both important aspects of the investigative endeavor. The trainee will receive guidance and specific assistance in learning to

prepare data for oral and written presentation, to prepare graphics, and to organize talks and prepare slides. Throughout the research training period, it is anticipated that the fellow will assume increasing intellectual responsibility and technical independence.

Research Pathway

Selection of a research project and supervisors is subject to the approval of Physical medicine ,Rheumatology and rehabilitation Department council approval and vice-Dean of post graduate studies of the faculty as officially regulated. Fellows may elect clinical trial, meta-Analysis/systematic Review, clinical audit or epidemiological studies -based research training pathways. For all Master degree students, a research advisory committee will be selected by the fellow based on the approved regulatory rules of the faculty council. This committee will monitor the progress of research fellows and provide advice regarding research training and career development

6. Admission requirement :

Admission requirement if any:

1- General requirement:

- M.B.B.Ch. degree from any Egyptian faculties of of medicine.
-equivelant degree from medical schools abroad approved by Ministry of Higher Education.
- one year appointment within responsible department (for non Assuit university based register)

2- Specific requirement :

- fluent in English (study language)

Vaccation and study leave:

The current depatemental policy is to give working residents one week leave prior to first part and 2 weeks prior to 2nd part exams.

Fees:

As regulated by the post graduate studies rules and approved by the faculty vice dean of post graduate studies and the faculty and university council.

7- progression and completion requirents:

- Examination of the 1st part could be set as 12 month s from registring to the MSc degree.
- Examination of the 2nd part cannot be set before 3 years from registration.
- Disscution of the MSc thesis could be set after one year from officially registering the MSc subject before setting the 2nd part exams.
- The minimum duration of the program is 3 years.
- The students are offered the degree when :
  1- passing the exams of all basic science, elective and speciality courses of this program as regulated by the post graduates approved rules by the faculty council.
  2- completing all scheduled CP and log book (minimum 80%)
  3- discussion and acceptance of the MSc thesis.

Essential Course

First Part

Academic activities of basic sciences

Practice with the academic and clinical departments during the 1st year

- **Applied Anatomy**
- **Applied Physiology**
- **Applied physics and rehabilitation and medical Prosthesis**
- **Internal medicine & Neurology**
- **Orthopedic Surgery**

Applied Anatomy

Requirement:

Credit points: 3 credits point for didactic.

Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved points
Anatomy	0.5	Anatomy	5 hours -Upper limb including (anatomy of bone, muscles, nerves and joints)	16.7 %
	0.5		5 hours -Lower limb including (anatomy of bone, muscles, nerves and joints)	16.7 %
	1		10 hours -Cervical and Back including (anatomy of bone, muscles, and joints)	33.3 %
	0.5		5 hours -Facial nerve and other cranial nerves	16.7 %
	0.5		5 hours -Neuroanatomy (Tractology)	16.7 %
Student signature			Principle coordinator signature	Head of the department signature

Applied physiology

Requirement:

Credit points: 3 points for didactic

Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved points
Physiology	0.25	Physiology	2.5 hours -Physiology of nerve and muscle	8.3 %
	0.5		5 hours -Effect of muscular exercise on respiration -Effect of muscular exercise on cardiovascular system	16.7 %
	0.25		2.5 hours -Thermostatic mechanism (body temperature and it's regulation)	8.3 %
	0.25		2.5 hours -Physiology of obesity	8.3 %
	0.5		5 hours -Receptors -Pain sensation and it's control system	16.7 %
	0.5		5 hours -Upper and lower motor neuron lesions -Spinal cord lesions	16.7 %

	0.25		2.5 hours -Ascending and descending tract	8.3 %
	0.5		5 hours Stretch reflex Skeletal muscle tone and tendon jerks	16.7 %
Student signature			Principle coordinator signature	Head of the department signature

Applied physics and rehabilitation and medical prothesis

Requirement:
Credit points: 2 points for didactic

Name of the course	**Credit points**	**Responsible department**	**Attendance**	**Percentage of Achieved points**
Applied physics, Rehabilitation and Medical Prosthesis	0.5	Physical Medicine, Rheumatology and Rehabilitation	5 hours - Thermal agent: 1-Electromagnetic spectrum 2-Infrared radiation 3-Diathermy	25 %
	0.25		2.5 hours - Mechanical energy: Ultrasound	12.5 %
	0.25		2.5 hours Phototherapy: 1-Ultraviolet 2-Laser therapy	12.5 %
	1		10 hours - Electrical stimulation: -Types of electrical stimulating current: 1-Faradic current 2-Diadynamic	50 %

			current 3-Interferential current 4-Transcutaneous electrical nerve stimulation (TENS)	
Student signature			Principle coordinator signature	Head of the department signature

Internal Medicine and Neurology

Requirement:

Credit points: 3 points for didactic and 7 points for training

- Minimal rate of attendance 80% of lectures and training.

Internal Medicine

Requirement:
Credit points: 4 points for didactic and 4 for training

Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved points
Internal Medicine and Neurology	0.5	Internal Medicine	5 hours Cardiology: • Ischemic heart disease. • Rheumatic heart disease. • Rheumatic fever. • Systemic hypertension • Sub acute bacterial endocarditis • Heart Failure • Pericardial effusion	25 %
	0.5		5 hours Nephrology: • Renal failure • Nephritis • Nephrotic syndrome • Acute nephritic syndrome	25 %
	0.25		2.5 hours Haematology: • Lymphomas • Coagulation disorders • Collagen vascular and systemic diseases • Aneamias	12.5%
	0.25		2.5 hours Endocrinology: • Diabetes mellitus • Thyroid diseases • Adrenal gland diseases	12.5 %

			• Obesity	
	0.25		2.5 hours Hepatology &Gastroenterology: • Liver cirrhosis and liver cell failure • Autoimmune hepatitis. • Drug induced hepatitis • Peptic ulcer	12.5 %
	0.25		2.5 hours Chest diseases: • Pulmonary embolism • Pleural effusion • Chronic obstructive pulmonary diseases	12.5 %
Student signature			Principle coordinator signature	Head of the department signature

Requirement:
Credit points: 4 points for training

Clinical training	**Credit points**	**Responsible department**	**Attendance**	**Percentage of Achieved points**
Clinical training in Internal Medicine	1	Internal Medicine	**1 week in Cardiology Unit** **- Log of 2 cases each:** • Ischemic heart disease. • Rheumatic heart disease. • Rheumatic fever. • Systemic hypertension • Sub acute bacterial endocarditis • Heart Failure • Pericardial effusion	25 %
	1		**1 week in Nephrology Unit** **- Log of 2 cases each:** • Renal failure • Nephritis • Nephrotic syndrome • Acute nephritic syndrome	25 %
	0.5		**3 days in Haematology Unit** **- Log of 2 cases each:** • Lymphomas • Coagulation disorders • Collagen vascular and systemic diseases • Aneamias	12.5 %
	0.5		**3 days in Endcrinology Unit** **- Log of 2 cases each:** • Diabetes mellitus • Thyroid diseases • Adrenal gland diseases • Obesity	12.5%

	0.5		**3 days in Hepatology &Gastroenterology Unit** **- Log of 2 cases each:** **• Liver cirrhosis and liver cell failure** **• Autoimmune hepatitis.** **• Drug induced hepatitis** **• Peptic ulcer**	12.5 %
	0.5		3 days in Chest Unit - Log of 2 cases each: • Pulmonary embolism • Pleural effusion • Chronic obstructive pulmonary diseases	12.5 %
Student signature			Principle coordinator signature	Head of the department signature

Neurology

Requirement:
Credit points: 1 points for didactic and 3 credit points for training

Name of the course	**Credit points**	**Responsible department**	**Attendance**	**Percentage of Achieved points**
Internal Medicine and Neurology	1	Neurology	10 hours Neurology: 1. Cerebrovascular stroke. 2. Hemiplegia. 3. Paraplegia. 4. Conus medullaris and cauda equine lesions. 5. Peripheral neuropathies. 6. Muscle disease and neuromuscular disorders. 7. Ataxia 8. Cerebral palsy	100 %
Student signature			Principle coordinator signature	Head of the department signature

Clinical training	**Credit points**	**Responsible department**	**Attendance**	**Percentage of Achieved points**
Clinical	3	Neurology	**3 weeks in**	100 %

training in Neurology			**Neurology department** **- Log of 2 cases each:** 1. Cerebrovascular stroke. 2. Hemiplegia. 3. Paraplegia. 4. Conus medullaris and cauda equine lesions. 5. Peripheral neuropathies. 6. Muscle disease and neuromuscular disorders. 7. Ataxia 8. Cerebral palsy	
Student signature			Principle coordinator signature	Head of the department signature

Orthopedic surgery

Requirement:
Credit points: 3 points for didactic and 3 points for training
- Minimal rate of attendance 80% of lectures and training

Requirement:
Credit points: 3 points for didactic

Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved points
Orthopedic Surgery	0.25	Orthopedic Surgery	2.5 hours -Complications of fractures	8.3 %
	1		10 hours -Peripheral nerve injuries -Carpal and tarsal tunnel syndromes -Drop foot	33.3 %
	1		10 Hours -Low back pain. -Lumbar disc prolapsed -Spinal canal stenosis -Cervical spondylosis and common neck problems. -Brachialgia -Pott's disease of thoraco lumbar spine and pott's paraplegia	33.3 %
	0.5		5 hours Osteoarthritis -Frozen shoulder -Neuropathic joints and septic arthritis	16.7 %

	0.25		2.5 Hours -Some congenital anomalies as Talipes equinovarus, congenital dislocation of hip	8.3 %
Student signature			Principle coordinator signature	Head of the department signature

Requirement:
Credit points: 3 points for training

Clinical training	**Credit points**	**Responsible department**	**Attendance**	**Percentage of Achieved points**
Orthopedic	3	Orthopedic	**3 weeks in**	100 %

Surgery		Surgery	**orthopedic surgery department** **- Log of 2 cases each:** • Complications of fractures. • Peripheral nerve injuries • Low back pain. • Lumbar disc prolapsed. • Spinal canal stenosis. • Carpal and tarsal tunnel syndromes. • Drop foot. • Cervical spondylosis and common neck problems. • Brachialgia. • Osteoarthritis. • Frozen shoulder. • Pott's disease of thoraco lumbar spine and pott's paraplegia. • Neuropathic joints and	

			septic arthritis. • Some congenital anomalies as Talipes equinovarus, congenital dislocation of hip	
Student signature			Principle coordinator signature	Head of the department signature

Specialized course

Physical medicine, Rheumatology and Rehabilitation

Units' Titles' list	% from total Marks	Level (Year)	Core Credit points	Core Credit points	
			Didactic	Training	Total
Unit 1 "Rheumatology &Autoimmune diseases" Unit 2 "Physical Medicine, Rehabilitations, Prosthesis"	50% 50%	1,2 &3 1,2 &3	12 12	55 55	67 67
Total No. of Units:	2		24	110	134

Unit (module) 1

Rheumatology & autoimmune diseases

Requirement:

Credit points: 12 points for didactic and 55 points for training

- Minimal rate of attendance 80% of training and lectures
- Two MCQ examinations at the second and third year.

Year 1 (7 credit points for training)

Clinical training	**Credit points**	**Responsible department**	**Attendance**	**Percentage ofAchieved points**
Clinical training Rheumatology	2	Physical Medicine, Rheumatology	➢ Practice with clinical cases for at least 2 weeks in	28.6 %

department		& Rehabilitation Department	the Rheumatology department including interpretation of their different radiologic patterns and related laboratory investigations ➢ Log of Rheumatology cases as mentioned below ➢ Procedures log as mentioned below	
	2		➢ Night shift (From 2pm to 8am) 1/week for 4 weeks	28.6 %
	2		➢ Attendance of at least 2 weeks in the Outpatient clinic (5 hours /day)	28.6 %
	1		➢ Attendance of at least 30% of clinical rounds(3 hours /week for 10 week)	14.3 %
Student signature			Principle coordinator Signature	Head of the department Signature

Rheumatology and autoimmune diseases cases log of:

Cases	**Number**
Rheumatoid arthritis	**15**
Juvenile idiopathic arthritis (JIA)	**10**
Sjögren's syndrome	**5**
Adult onset still's disease	**3**

Seronegative spondylo-arthropathies (psoriatic arthritis, ankylosing spondylitis, reactive and enteropathic arthritis)	20 (5,5,5,5)
Gouty and calcium pyrophosphate dehydrate hydroxyapatite and other crystals arthropathies	**10**
Osteoarthritis and other degenerative arthritis	**10**
Systemic lupus erythematosus	**5**
Antiphospholipid syndrome	**3**
Systemic sclerosis	**5**
Other connective tissue disorders	**3**
Idiopathic inflammatory myopathies	**5**
Periodic syndrome	**2**
Infectious arthritis e.g. rheumatic fever, septic, viral arthritis	**5**
Fibromyalgia	**3**
Less common arthropathies e.g. endocrinopathies	**5**
Metabolic bone disease (osteoporosis, osteomalcia)	**3**
Vasculities	**2**

Rheumatology and autoimmune diseases Procedure log of:

Observe:	**Log of under supervision**:
• Diagnostic musculoskeletal sonography (no. 8). • Joint aspiration (no.10). • Synovial fluid analysis (no.8)	• Diagnostic musculoskeletal sonography (no. 4). • Joint aspiration (no.5). • Synovial fluid analysis (no.5).

• Local intra-articular injection (no.10). • Soft tissue injection (no.10).	• Local intra-articular injection (no.5). • Soft tissue injection (no.5).
Independently Perform:	**Order and interpret:**
• Diagnostic musculoskeletal sonography (no. 4). • Joint aspiration (no.5). • Synovial fluid analysis (no.3). • Local intra-articular injection (no.5). • Soft tissue injection (no.5).	• 10 Hand x-ray (PA). • 10 Feet x- ray (AP, Lat). • 10 Chest x-ray (PA). • 10 Sacroiliac x-ray (AP). • 20 Cervical and back x-ray (AP, Lat) • 20 Other joints x-ray (hip, knee, elbow)

Year 2

(6 credit points for didactic)

Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved

				points
Unit 1 (Rheumatology & Autoimmune diseases)	6	Physical Medicine, Rheumatology & Rehabilitation Department	Year 2	**50% of the didactics of Unit 1**
	4.5		**Topics and attendance**	**75%**
	1		5 hours by the candidates Section 1: Rheumatoid Arthritis 1. Etiology and pathogenesis of rheumatoid arthritis. 2. Clinical feature of rheumatoid arthritis. 3. Management of rheumatoid arthritis. 4. Update in rheumatoid arthritis.	
	1		5 hours by the candidates Section 2: Crystal Arthropathy 1. Gouty and hyperuricemia -Epidemiology and risk factors -Pathogenesis of hyperuricemia -Associated condition - Clinicalfeature -Diagnosis -Treatment of gout 2. Disease associated with articular deposition of calcium pyrophosphate dehydrate (CPPD) and basic calcium phosphate crystal. -Epidemiology and causes -Pathogenesis	

			-Clinical feature -Diagnosis and diagnostic test -Treatment of CPPD	
	0.5		2.5 hours by the candidates Section 3: Osteoarthritis (OA) and degenerative arthritis 1. Pathogenesis of OA 2. Clinical feature of OA 3. Management of OA	
	0.5		5 hours Section 4: metabolic bone disease (osteoporosis &osteomalacia) 1. Osteoporosis 2. Osteomalacia 3. Paget's disease	
	0.5		5 hours Section 5: vasculitides -Classification, epidemiology and management of systemic vasculitis	
	1		10 hour Section 7:- periodic syndrome. -infectious disease: rheumatic fever, septic, viral arthritis. -fibromyalgia. - arthritis accompanying systemic diseases e.g. arthritis accompanying endocrinal disorders - Other connective tissue disorders.	
	0.5		**Seminars** ➢ Attendance of at least 70% of the	**8.33%**

			clinical seminars ➢ Presentation of at least 3 times in the seminar	
	0.5		**Conference or workshop**	**8.33%**
	0.5		**Formative assessment**	**8.33%**
Student signature			Principle coordinator Signature	Head of the department Signature

Year 2

(24 credit points for training in unit 1)

Clinical training	**Credit points**	**Responsible Department**	**Attendance**	**Percent age of Achieved points**
Clinical training in Rheumatology department	12	Rheumatology department	➢ Practice with clinical cases for at least 3 months in the Rheumatology department including interpretation of their different radiologic patterns and related laboratory investigation ➢ Log of Rheumatology cases as mentioned below ➢ Procedures log as mentioned below	50 %
	5.5		➢ Night shift (From 2pm to 8am) 1/week for 11 weeks	22.9 %
	4		➢ Attendance of at least 4 weeks in the Outpatient clinic (5 hours /day)	16.7
	1		➢ Attendance of at least 30% of clinical rounds (3 hours /week for 10 week)	4.2 %
1.5	1.5		➢ Formative assessment	6.2 %
Student signature			Principle coordinator Signature	Head of the departmentt Signature

Rheumatology and autoimmune diseases cases log of:

Cases	**Number**

Rheumatoid arthritis	**15**
Juvenile idiopathic arthritis (JIA)	**10**
Sjögren's syndrome	**5**
Adult onset still's disease	**3**
Seronegative spondylo-arthropathies (psoriatic arthritis, ankylosing spond-ylitis, reactive and enteropathic arthritis)	20 (5,5,5,5)
Gouty and calcium pyrophosphate dehydrate hydroxyapatite and other crystals arthropathies	**10**
Osteoarthritis and other degenerative arthritis	**10**
Systemic lupus erythematosus	**5**
Antiphospholipid syndrome	**3**
Systemic sclerosis	**5**
Other connective tissue disorders	**3**
Idiopathic inflammatory myopathies	**5**
Periodic syndrome	**2**
Infectious arthritis e.g. rheumatic fever, septic, viral arthritis	**5**
Fibromyalgia	**3**
Less common arthropathies e.g. endocrinopathies	**5**
Metabolic bone disease (osteoporosis, osteomalcia)	**3**
Vasculities	**2**

Rheumatology and autoimmune diseases Procedure log of:

Observe:	**Log of under supervision**:
• Diagnostic musculoskeletal sonography (no. 8). • Joint aspiration (no.10). • Synovial fluid analysis (no.8) • Local intra-articular injection (no.10). • Soft tissue injection (no.10).	• Diagnostic musculoskeletal sonography (no. 4). • Joint aspiration (no.5). • Synovial fluid analysis (no.5). • Local intra-articular injection (no.5). • Soft tissue injection (no.5).
Independently Perform:	**Order and interpret:**
• Diagnostic musculoskeletal sonography (no. 4). • Joint aspiration (no.5). • Synovial fluid analysis (no.3). • Local intra-articular injection (no.5). • Soft tissue injection (no.5).	• 10 Hand x-ray (PA). • 10 Feet x- ray (AP, Lat). • 10 Chest x-ray (PA). • 10 Sacroiliac x-ray (AP). • 20 Cervical and back x-ray (AP, Lat) • 20 Other joints x-ray (hip, knee, elbow)

Year 3

(6 credit points for didactic)

Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved points
Unit 1 (Rheumatology & Autoimmune diseases)	6	Physical Medicine, Rheumatology & Rehabilitation Department	Year 3	**50% of the didactics of Unit 1**
	4.5		**Topics and attendance**	**75%**
	1		10 hours Section 1: Systemic Lupus Erythematosus 1. Pathogenesis of SLE 2. Clinical feature of SLE 3. Management of SLE 4. SLE and pregnancy 5. Update in SLE	
	1		5 hours by the candidates Section 2: Sero-Negative Spondyloarthopathy 1. Ankylosing spondylitis 2. Undifferentiated spondyloarthropathy and reactive arthritis 3. Psoriatic arthritis 4. Enteropathic arthritis	
	0.5		5 hours Section 3: Juvenile Idiopathic Arthritis (JIA) 1. Definition and classification 2. Etiology and Pathogenesis 3. Principles of treatment 4. Clinical features of subtypes of JI	
Unit 1	0.5		2.5 hours by candidates	

(Rheumatology & Autoimmune diseases)			Section 4: Inflammatory muscle diseases and other myopathies 1. Epidemiology 2. Pathogenesis and causes 3. Clinical feature 4. Classification and diagnostic criteria 5. Diagnosis of myopathy 6. Treatment and prognosis	
	0.5		2.5 hours by the candidates Section 5: Systemic Sclerosis 1. Classification of scleroderma spectrum disorder 2. Epidemiology 3. Causes, pathology and pathogenesis 4. Clinical feature 5. Diagnosis and diagnostic evaluation 6. Treatment of systemic sclerosis	
	1		10 hours Section 7:- Sjögren's syndrome - Adult onset still's disease - Antiphospholipid syndrome	
	0.5		**Seminars** ➢ Attendance of at	8.33 %

			least 70% of the clinical seminars Presentation of at least 3 times in the seminar	
	0.5		**Conference or workshop**	8.33 %
	0.5		**Formative assessment**	8.33 %
Student signature			Principle coordinator Signature	Head of the department Signature

Year 3

(24 credit points for training in unit 1)

Clinical training	Credit points	Responsible Department	Attendance	Percentage of Achieved points
Clinical training in Rheumatology department	12	Rheumatology department	➢ Practice with clinical cases for at least 3 months in the Rheumatology department including interpretation of their different radiologic patterns and related laboratory investigation ➢ Log of Rheumatology cases as mentioned below ➢ Procedures log as mentioned below	50 %
	5.5		➢ Night shift (From 2pm to 8am) 1/week for 8 weeks	16.7 %
	4		➢ Attendance of at least 5 weeks in the Outpatient clinic (5 hours /day)	20.8%
	1		➢ Attendance of at least 30% of clinical rounds (3 hours /week for 15 week)	6.25 %
1.5	1.5		➢ Formative assessment	6.25 %
Student signature			Principle coordinator Signature	Head of the departmentt Signature

Rheumatology and autoimmune diseases cases log of:

Cases	Number

Rheumatoid arthritis	**15**
Juvenile idiopathic arthritis (JIA)	**10**
Sjögren's syndrome	**5**
Adult onset still's disease	**3**
Seronegative spondylo-arthropathies (psoriatic arthritis, ankylosing spond-ylitis, reactive and enteropathic arthritis)	20 (5,5,5,5)
Gouty and calcium pyrophosphate dehydrate hydroxyapatite and other crystals arthropathies	**10**
Osteoarthritis and other degenerative arthritis	**10**
Systemic lupus erythematosus	**5**
Antiphospholipid syndrome	**3**
Systemic sclerosis	**5**
Other connective tissue disorders	**3**
Idiopathic inflammatory myopathies	**5**
Periodic syndrome	**2**
Infectious arthritis e.g. rheumatic fever, septic, viral arthritis	**5**
Fibromyalgia	**3**
Less common arthropathies e.g. endocrinopathies	**5**
Metabolic bone disease (osteoporosis, osteomalcia)	**3**
Vasculities	**2**

Rheumatology and autoimmune diseases Procedure log of:

Observe:	**Log of under supervision**:

• Diagnostic musculoskeletal sonography (no. 8). • Joint aspiration (no.10). • Synovial fluid analysis (no.8) • Local intra-articular injection (no.10). • Soft tissue injection (no.10).	• Diagnostic musculoskeletal sonography (no. 4). • Joint aspiration (no.5). • Synovial fluid analysis (no.5). • Local intra-articular injection (no.5). • Soft tissue injection (no.5).
Independently Perform:	**Order and interpret:**
• Diagnostic musculoskeletal sonography (no. 4). • Joint aspiration (no.5). • Synovial fluid analysis (no.3). • Local intra-articular injection (no.5). • Soft tissue injection (no.5).	• 10 Hand x-ray (PA). • 10 Feet x- ray (AP, Lat). • 10 Chest x-ray (PA). • 10 Sacroiliac x-ray (AP). • 20 Cervical and back x-ray (AP,Lat) • 20 Other joints x-ray (hip, knee,elbow)

Unit (module) 2

Physical therapy, Rehabilitation & prothesis

Physical therapy and Rehabilitation & Prosthesis
A - Clinical case log

Requirement:
Credit points: 12 points for didactic and 55 points for training
Minimal rate of attendance 80% of training and lectures
Two MCQ examinations at the second and third year

Year 1

(7 credit points for didactic in unit 2)

Clinical training	Credit points	Responsible department	Attendance	Percentage of Achieved points
Clinical training in Rehabilitation department	4	Physical Medicine, Rheumatology and Rehabilitation department	➢ Practice with clinical cases for at least 4 weeks in the rehabilitation department including interpretation of different x-rays for various orthopedic case ➢ Log of Rehabilitation cases as mentioned below ➢ Procedures log as mentioned below	57.14%
	3		➢ Attendance of at least 3 weeks in the Outpatient clinic (5 hours /day)	42.86%
Student signature	Principle coordinator Signature		Principle coordinator Signature	Head of the department Signature

Physical therapy and Rehabilitation & Prosthesis cases log of:

Case	Num

	ber
•Musculoskeletal disorders of the upper &lower limb. •Common neck and back problems. •Chronic pain. •Muscle pain syndrome. •Sport trauma. •Muscle and Motor neuron diseases. •Related orthopedic problems •Upper limb amputee rehabilitation. •Lower limb amputee rehabilitation. •Pulmonary rehabilitation. •Cardiac rehabilitation. •Rehabilitation of patients with rheumatic diseases. •Patients with neuropathies. •Traumatic brain injury rehabilitation •Stroke syndromes. •Cerebral palsy. •Spasticity management. •Spinal cord injuries. •Neurogenic bladder. •Burns.20	**20 5 10 5 3 3 3 3 3 3 3 3 5 10 5 10 10 10 10 3 3**

Physical therapy and Rehabilitation & Prosthesis cases log of:

Observe:	**Log of under supervision**:

•NCV for various nerve injury cases(5) •EMG for various nerve injury cases(5) •F wave , H reflex for indicated cases(5) •Botox or lidocaine injection for spastic hemiplegia (3) •Botox or lidocaine injection forCP (3) •Prescribe UL , LL prosthesis &orthosis (3) •Prescribe Walking aids (3) •Back & neck support (3)	• NCV for various nerve injury cases (5) •EMG for various nerve injury cases (5) •F wave , H reflex for indicated cases (5) •Prescribe UL , LL prosthesis & orthosis (3) •Prescribe Walking aids (3) •Back & neck support (3)
Independently Perform:	**Order and interpret:**
•NCV for various nerve injury cases(5) •EMG for various nerve injury cases(5) •F wave , H reflex for indicated cases(5) •Prescribe Back & neck support (3) •Order and evaluate x-rays for various orthopedic cases (10)	•NCV for various nerve injury cases(5) •EMG for various nerve injury cases (5) •F wave , H reflex for indicated cases (5) •Prescribe Back & neck support (3) •Order and evaluate x-rays for various orthopedic cases (10)

Year 2

(6 credit points for didactic in unit 2)

Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved points
Unit 2 " Physical therapy and Rehabilitation & Prosthesis"	6	Physical Medicine, Rheumatology and rehabilitation department	Year 2	**50% of the didactics of Unit 2**
	3. 5		**Topics and attendance of rehabilitation course**	**58.33%**
	0.5		2.5 hours by candidates Section 1: ➢Musculoskeletal disorders of the upper limb ➢Musculoskeletal disorders of the lower limb	
	0.5		5 hours Section 2: ➢Muscle and Motor neuron diseases	
	0.5		5 hours Section 3: ➢Cardiopulmonary rehabilitation	
	0.5		2.5 hours by the candidates Section 4: ➢ Rehabilitation of Patients with rheumatic diseases ➢ Rehabilitation of Patients with neuropathies	
	0.5		5 hours Section 5:- ➢Spinal cord injuries ➢Neurogenic bladder rehabilitation	

	0.5		5 hours Section 6: ➢Upper and lower limbs orthosis	
Unit 2 " Physical therapy and Rehabilitation & Prosthesis"	0.5	Physical Medicine, Rheumatology and rehabilitation department	5 hours Section 7: ➢Upper and lower limbs prostheses ➢Rehabilitation of upper and lower limb amputee	
	1		Topics of physical medicine	16.66%
	0.5		2.5 hours by candidates Section 10: ➢ Hydrotherapy and hot packs ➢ Cryotherapy	
	0.		Topics of Pediatric Rehabilitation	**8.33%**
			5 hours Section 11: ➢ Rehabilitation of pediatric health problems	
	0.5		**Seminars** ➢ Attendance of at least 70% of the clinical seminars ➢ Presentation of at least 3 times in the seminar	**8.33%**
	0.5		**Conference or workshop**	**8.33%**
Student signature			Principle coordinator Signature	Head of the department Signature

Year 2

(24 credit points for training in unit 2)

Clinical training	Credit points	Responsible department	Attendance	Percentage of Achieved points
Clinical training in rehabilitation department	12	Physical Medicine, Rheumatology and rehabilitation department	➢ Practice with clinical cases for at least 12 weeks in the Rheumatology department including interpretation of different x-rays for various orthopedic case ➢ Log of Rehabilitation cases as mentioned below ➢ Procedures log as mentioned below	50 %
	10		➢ Attendance of at least 10 weeks in the Outpatient clinic (5 hours /day)	41.66%
	2		➢ Formative assessment	8.33%
Student signature			Principle coordinator Signature	Head of the department Signature

Physical therapy and Rehabilitation & Prosthesis cases log of:

Case	Number	

•Musculoskeletal disorders of the upper &lower limb. •Common neck and back problems. •Chronic pain. •Muscle pain syndrome. •Sport trauma. •Muscle and Motor neuron diseases. •Related orthopedic problems •Upper limb amputee rehabilitation. •Lower limb amputee rehabilitation. •Pulmonary rehabilitation. •Cardiac rehabilitation. •Rehabilitation of patients with rheumatic diseases. •Patients with neuropathies. •Traumatic brain injury rehabilitation •Stroke syndromes. •Cerebral palsy. •Spasticity management. •Spinal cord injuries. •Neurogenic bladder •Burns.	20 5 10 5 3 3 3 3 3 3 3 3 3 5 10 5 10 10 10 10 3 3	

Physical therapy and Rehabilitation & Prosthesis cases log of:

Observe:	**Log of under supervision**:
•NCV for various nerve injury cases (5) •EMG for various nerve injury cases (5) •F wave , H reflex for indicated cases (5) •Botox or lidocaine injection for spastic hemiplegia (3) •Botox or lidocaine injection for CP (3) •Prescribe UL , LL prosthesis & orthosis (3) •Prescribe Walking aids (3) •Back & neck support (3)	• NCV for various nerve injury cases (5) •EMG for various nerve injury cases (5) •F wave , H reflex for indicated cases (5) •Prescribe UL , LL prosthesis & orthosis (3) •Prescribe Walking aids (3) •Back & neck support (3)
Independently Perform:	**Order and interpret:**
•NCV for various nerve injury cases (5) •EMG for various nerve injury cases (5) •F wave , H reflex for indicated cases (5) •Prescribe Back & neck support (3) •Order and evaluate x-rays for various orthopedic cases (10)	•NCV for various nerve injury cases (5) •EMG for various nerve injury cases (5) •F wave , H reflex for indicated cases (5) •Prescribe Back & neck support (3) •Order and evaluate x-rays for various orthopedic cases (10)

Year 3

(6 credit points for didactic in unit 2)

Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved points
Unit 2 " Physical therapy and Rehabilitation & Prosthesis"	6	Physical Medicine, Rheumatology and rehabilitation department	Year 3	**50% of the didactics of Unit 2**
	3.5		**Topics and attendance of rehabilitation course**	**58.33%**
	0.25		2.5 hours Section 1: ➢ Common neck and back problems	
	0.25		2.5 hours Section 2: ➢ Physiatric history and physical examination	
	0.5		2.5 hours by candidates Section 3: ➢ Chronic pain ➢ Traumatic brain injury	
	0.5		2.5 hours by candidates Section 4: ➢ Stroke syndrome	
	0.25		2.5 hours Section 5: ➢Sport trauma	
	0.5		5 hours Section 6: ➢ Cerebral palsy ➢ Spasticity management	
	0.5		2.5 hour by candidates Section 7:- ➢ Burns rehabilitation	
	0.5		2.5 by candidates	

			Section 8: ➢Spinal orthoses	
Unit 2 “ Physical therapy and ehabilitation & Prosthesis”	0.25	Physical Medicine, Rheumatology and rehabilitation department	2.5 hours Section 9: ➢ Walking aids, wheelchairs and seating systems	
	1.5		**Topics of physical medicine**	**25%**
	1.5		7.5 hours by candidates ➢Electrical stimulation ➢ Ultrasound ➢ Short wave ➢ Infrared ➢ Laser ➢ TENS ➢ Biofeed back ➢ Therapeutic exercise	
	0.5		2.5 hours by candidates Section 11: ➢ Rehabilitation of relate orthopedic problems	
	0.5		Formative assessment	8.33%
Student signature			Principle coordinator Signature	Head of the department Signature

Year 3

(24 credit points for training in unit 2)

Clinical training	Credit points	Responsible department	Attendance	Percentage of Achieved points
Clinical training in rehabilitation department	11	Physical Medicine, Rheumatology and rehabilitation department	➢ Practice with clinical cases for at least 11 weeks in the Rheumatology department including interpretation of different x-rays for various orthopedic case ➢ Log of Rehabilitation cases as mentioned below ➢ Procedures log as mentioned below	45.83 %
	11.5		➢ Attendance of at least 12 weeks in the Outpatient clinic (5 hours /day)	47.9%
	1.5		➢ Formative assessment	6.25%
Student signature			Principle coordinator Signature	Head of the department Signature

Physical therapy and Rehabilitation & Prosthesis cases log of:

Case	Number	
•Musculoskeletal disorders of the upper &lower limb.	20	
•Common neck and back problems.	5	
•Chronic pain.	10	
•Muscle pain syndrome.	5	
•Sport trauma.	3	
•Muscle and Motor neuron diseases.	3	
•Related orthopedic problems	3	
•Upper limb amputee rehabilitation.	3	
•Lower limb amputee rehabilitation.	3	
•Pulmonary rehabilitation.	3	
•Cardiac rehabilitation.	3	
•Rehabilitation of patients with rheumatic diseases.	3	
•Patients with neuropathies.	5	
•Traumatic brain injury rehabilitation	10	
•Stroke syndromes.	5	
•Cerebral palsy.	10	
•Spasticity management.	10	
•Spinal cord injuries.	10	
•Neurogenic bladder	10	
•Burns.	3	
	3	

Physical therapy and Rehabilitation & Prosthesis cases log of:

Observe:	**Log of under supervision**:
•NCV for various nerve injury cases (5) •EMG for various nerve injury cases (5) •F wave , H reflex for indicated cases (5) •Botox or lidocaine injection for spastic hemiplegia (3) •Botox or lidocaine injection for CP (3) •Prescribe UL , LL prosthesis & orthosis (3) •Prescribe Walking aids (3) •Back & neck support (3)	• NCV for various nerve injury cases (5) •EMG for various nerve injury cases (5) •F wave , H reflex for indicated cases (5) •Prescribe UL , LL prosthesis & orthosis (3) •Prescribe Walking aids (3) •Back & neck support (3)
Independently Perform:	**Order and interpret:**
•NCV for various nerve injury cases (5) •EMG for various nerve injury cases (5) •F wave , H reflex for indicated cases (5) •Prescribe Back & neck support (3) •Order and evaluate x-rays for various orthopedic cases (10)	•NCV for various nerve injury cases (5) •EMG for various nerve injury cases (5) •F wave , H reflex for indicated cases (5) •Prescribe Back & neck support (3) •Order and evaluate x-rays for various orthopedic cases (10)

Elective course

Requirements

Credit points: 2 credit point.

- Minimal rate of attendance 80% of lectures and 80% of training

One of these courses

- Medical statistics.
- Evidence based medicine.
- Medicolegal Aspects and Ethics in Medical Practice and Scientific Research
- Quality assurance of medical education.
- Quality assurance of clinical practice.
-Hospital management

Declaration

Course Structure Mirror	Responsible (Course) Coordinator Name:	Signature	Date
Essential Courses (1st part)			
Course 1 **Applied Anatomy & Physiology**			
Course 2 **Applied Physics and Rehabilitation & medical prosthesis.**			
Course 3 **Internal medicine &Neurology**			
Course 4 **Orthopedic surgery**			
Specialized Courses (2nd part)			
Unit (Module)1 **Rheumatology and autoimmune diseases**			
Unit (Module)2 Physical therapy and Rehabilitation and Prosthesis			
- Elective Course(s) Certificate (s) Dates:			
- Master Degree Thesis Acceptance Date:			
- Fulfillment of required			

contact credit points prior to final examination			
Rheumatology &Rehabilitation M Sc Degree Principle Coordinator:			
Date approved by Rheumatology &Rehabilitation Department Council:			

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