



Cairo University
Faculty of Medicine
Department of Rheumatology and Rehabilitation

**Course Specification of MD degree
In Rheumatology & Rehabilitation
(Code): RHEUM 920 (Ta,Tb,Tc)**

- **Department offering the course: Rheumatology and Rehabilitation**
- **academic year: 2015-2016**
- **Date of specification approval: July 2016**
- **Credit points: 16 points**

A) Basic Information:

- **Allocated marks: 800 marks**
- **Course duration: 72 weeks of teaching**
- **Teaching hours: 5 hours/week = 336 total teaching hours**

B) Professional Information:

1- Overall Aim of the Course:

- To provides advanced knowledge, intellectual and clinical skills needed to enable the candidates to competently diagnose and manage Rheumatology, Clinical immunology and Rehabilitation medicine problems.
- To apply national and international standards of patient care, using evidence based medicine competently in practice together with the ability to respond to the changing health needs of the Egyptian community

2- Intended Learning Outcomes (ILOs):

a. Knowledge and Understanding

By the end of the course, students should be able to:

Module (1) Rheumatology & Clinical Immunology:

- Describe the anatomy, physiology and biology of the normal joint.
- Define extended scientific knowledge related to rheumatic diseases and human musculoskeletal system and evaluate the concept of autoimmune disease in the light of the normal functions of the immune system.
- Identify and discuss common and rare rheumatic diseases and immunological and medical problems causing disabilities.
- Identification of different Pediatric and Adolescent Rheumatology and Clinical Immunology disorders and their management modalities.
- Identification of different Rheumatological and Clinical Immunology disorders in the elderly and their management modalities.
- Distinguish and describe the specific pathology of different rheumatological and immunological disorders.
- Define and clarify the psychological basis of rheumatological disorders and disabilities.
- Define the causes and explain practical approaches to monoarthritis and polyarthritis.
- Define and explain advanced concepts of immunological laboratory tests and procedures related to inflammatory and non-inflammatory rheumatological and clinical immunology problems.
- Discuss the clinical pharmacology of different treatment modalities including indications, dosages, contraindications and precautions as well as the recent advances of biologic therapies.
- Describe different management modalities for difficult problems including rheumatic disorders, bone diseases and patients with disabilities.
- Describe the principles of advanced interventional procedures related to rheumatological disorders.
- Describe etiology, diagnosis and treatment of Rheumatoid Arthritis
- Describe etiology, diagnosis and treatment of Spondyloarthropathies

- Describe etiology, diagnosis & treatment of Systemic lupus erythematosus & related syndromes
- Describe etiology, diagnosis and treatment of Vasculitic syndromes
- Describe etiology, diagnosis and treatment of Scleroderma & Mixed connective tissue diseases
- Describe etiology, diagnosis and treatment of Structure, function and disease of muscles
- Describe etiology, diagnosis and treatment of Rheumatic diseases of childhood
- Describe etiology, diagnosis and treatment of Crystal-associated synovitis
- Describe etiology, diagnosis and treatment of Osteoarthritis, polyarthritides & heritable disorders
- Describe etiology, diagnosis and treatment of Arthritis related to infection
- Describe etiology, diagnosis and treatment of Arthritis accompanying systemic disorders
- Describe etiology, diagnosis and treatment of Disorders of bone and structural protein
- Describe etiology, diagnosis and treatment of Tumors involving joints
- Describe indications and principles of Reconstructive surgery for rheumatic disease

Module (2) Musculoskeletal Medicine and Regional Diseases:

- Define extended scientific knowledge underpinning the human musculoskeletal system including the anatomy, physiology, biochemistry, pathology, pharmacology and biomechanics, regional diseases and describe pathological changes of the musculoskeletal and neurological systems and the regional diseases.
- Describe etiology, diagnosis and treatment of musculoskeletal pain.
- Describe measurement and evaluation of musculoskeletal function
- Identify and discuss common musculoskeletal and regional diseases causing disabilities.
- Distinguish the specific pathology of different musculoskeletal and regional disorders.

- Identify the psychological basis of musculoskeletal and regional diseases and disabilities.
- Identify advanced concepts of laboratory and radiological investigations related to musculoskeletal and regional diseases.
- State the indications, techniques and limitations of Electrodiagnosis.
- Describe normal gait and be able to analyze and identify the causes and treatment of abnormal gait patterns.
- Describe different management modalities for common and uncommon problems including musculoskeletal and regional diseases.
- Recognize the principles of advanced interventional procedures related to regional and musculoskeletal disorders.
- Discuss the etiological, clinical and therapeutic basis of sports medicine.

Module (3) Physical Medicine and Rehabilitation:

- Identify speech, language and auditory disorders and describe the rehabilitation principles.
- Describe the rehabilitation of swallowing impairment.
- Appreciate the psychological basis, assessment and management of patients requiring Rehabilitation or are disabled.
- Describe the principles for evaluation and prescription of occupational and vocational therapy.
- Describe the basis, indications, contraindications, precautions and procedures of electrotherapy.
- Describe the indications, procedures and types of therapeutic exercises
- Describe the indications of different types of orthoses, wheel chairs, assistive devices, walking aids and foot wear modifications.
- Recognize the Rehabilitation of geriatric and/ or immobilized patients regarding of the Activities of Daily Living (ADL)
- Describe the Rehabilitation of stroke, cerebral palsy, spinal cord lesion patient and spasticity.
- Describe the Rehabilitation of arthritis and allied conditions.

- Describe the Rehabilitation and After care of fracture and perioperative care of patients undergoing joint replacement surgery.
- Identify the Rehabilitation of the bladder and bowel impairments.
- Describe the Rehabilitation of the cardiovascular, respiratory and vascular systems.
- Describe the causes, types and management of amputation, describe the Rehabilitation of the amputee and describe the indications and types of prostheses.
- Recognize the Rehabilitation of problems of sexuality in physical disability
- Describe the Rehabilitation of cancer and burn patients.

Professional Skills : (b, c, d, and e):

b. Practical and Clinical Skills

By the end of the course, students should be able to:

- Appropriate history taking & clinical examination and differential diagnosis for rheumatological, clinical immunology and rehabilitation disorders.
- Design an appropriate diagnostic plan for evaluation of rheumatological, clinical immunology and rehabilitation disorders.
- Interpretation of the results of different investigations related to the different rheumatological, musculoskeletal, immunological and rehabilitation disorders.

Practical procedures:

- Joint aspiration, lavage and/or injection.
- Soft tissue and regional injection.
- Examination of synovial fluid by polarized microscopy.
- Electromyography and nerve conduction studies.
- Diagnostic musculoskeletal ultrasound examination.

c. Professional Attitude and Behavioral Skills

Set up the appropriate treatment plans for common and rare rheumatological and rehabilitation disorders taking into consideration the individual needs and cost.

d. Communication Skills

By the end of the course, students should be able to:

- Awareness of the need to communicate with patients and their families, and to involve them fully in planning management.
- Adequately and clearly explaining to the patient and/or his/her relatives the nature of the illness, diagnostic and therapeutic plans, possible complications and outcomes.
- Discuss the progression of the patient's condition, therapeutic outcomes and professional mistakes, if any, openly in a way that promotes patient trust and confidence.
- Able to achieve optimal patient care and the same time appreciating the cost effectiveness to allow maximum benefit from available resources.

e. Intellectual Skills

By the end of the course, students should be able to:

Module (1) Rheumatology & Clinical Immunology:

1. Comprehend the complex nature of Rheumatology and Clinical immunology diseases before giving the appropriate decision
2. Interpret and correlate different clinical manifestations and investigations of Rheumatology and clinical immunology including laboratory, radiological and biopsy findings.
3. Grading of patients activity according to disease activity indices.
4. Recommend the appropriate management plan of Rheumatology and clinical immunology cases.

5. Present strategies to avoid disease flares and activity in Rheumatology patients.
6. Offer preventive measures for patients at high risk of complications.

Module (2) Musculoskeletal Medicine and Regional Diseases:

1. Select appropriate laboratory and radiological investigations for different Musculoskeletal Medicine and Regional disorders according to a goal-based approach.
2. Interpret the results of different investigations or interventions for Musculoskeletal Medicine and Regional disorders.
3. Offer medical and interventional solutions for Musculoskeletal and Regional Diseases.
4. Suggest treatment plans for Musculoskeletal Medicine and Regional disorders.

Module (3) Physical Medicine and Rehabilitation:

1. Tailor the rehabilitation treatment plans according to patient's expectations, scientific and financial aspects.
2. Recommend rehabilitation medicine solutions for patients with disability and involve the patient's family in the strategy.
3. Offer proper rehabilitation treatment plans and follow up for patients.
4. Implementation of total quality management related to Rehabilitation plans.
5. Interpret the results of different rehabilitation programs and follow up for patients with disabilities.

f. General and Transferable Skills

By the end of the course, students should be able to:

- Awareness of the need to communicate with patients and their families, and to involve them fully in planning management.

- Adequately and clearly explaining to the patient and/or his/her relatives the nature of the illness, diagnostic and therapeutic plans, possible complications and outcomes.
- Appropriate handling during difficult situations such as conveying bad news or dealing with patients' anger.
- Discuss the progression of the patient's condition, therapeutic outcomes and professional mistakes, if any, openly in a way that promotes patient trust and confidence.
- Able to achieve optimal patient care and the same time appreciating the cost effectiveness to allow maximum benefit from available resources.

3- Course contents:

Subject	Lectures (hrs)	Practical & Clinical (hrs)	Total (hrs)	% of Total
1- Rheumatology & Clinical Immunology <u>(21 topic)</u>	62	70	132	39
2- Musculoskeletal Medicine and Regional diseases <u>(10 topic)</u>	40	54	94	28
3- Physical Medicine and Rehabilitation <u>(17 topic)</u>	42	68	110	33
Total	144 h	192	336	100

III-A) TOPICS:

Students will receive presentations on the following subjects:

Module (1): Rheumatology & Clinical Immunology (21 topics)

1. Biology of the normal joint
2. Immune and Inflammatory responses
3. Evaluation of the patient
4. Musculoskeletal pain and evaluation
5. Diagnostic tests and procedures
6. Special issues
7. Clinical pharmacology
8. Rheumatoid arthritis
9. Spondyloarthropathies
10. Systemic lupus erythematosus and related syndromes
11. Vasculitic syndromes
12. Scleroderma and Mixed connective tissue diseases
13. Structure, function and disease of muscles
14. Rheumatic diseases of childhood
15. Crystal-associated synovitis
16. Osteoarthritis, chondrocalcinosis and heritable disorders.
17. Arthritis related to infection
18. Arthritis accompanying systemic disorders
19. Disorders of bone and structural protein
20. Tumors involving joints
21. Reconstructive surgery for rheumatic disease

Module (2): Musculoskeletal Medicine and Regional diseases
10 topics:

1. Musculoskeletal pain etiology, diagnosis and treatment.
2. Measurement and evaluation of musculoskeletal function
3. Musculoskeletal and regional diseases; causes and pathology.
4. Psychological basis of musculoskeletal and regional diseases.
5. Laboratory and radiological investigations related to musculoskeletal and regional diseases.
6. Electrodiagnosis: indications, techniques and limitations.
7. Normal gait and abnormal gait patterns.
8. Management modalities for musculoskeletal and regional diseases.
9. Basic principles of interventional procedures related to regional and musculoskeletal disorders
10. Sports medicine. etiological, clinical and therapeutic basis

Module (3): Physical Medicine and Rehabilitation 17 topics

1. Evaluation of the patient
2. Speech , language and auditory disorders, Rehabilitation of swallowing impairment
3. Psychological assessment and management
4. Occupational & Vocational therapy (evaluation & management)
5. Electrotherapy
6. Therapeutic exercises
7. Wheel chair and assistive devices
8. Rehabilitation of geriatric patients, immobilization patients regarding ADL

9. Orthoses (upper limb, spinal, lower limb), foot wear modifications
10. Rehabilitation of stroke, CP and spinal cord lesion patient & Spasticity
11. Rehabilitation of arthritis and allied conditions
12. After care of fracture
13. Rehabilitation of the bladder and bowel impairments
14. Rehabilitation of the cardiovascular, respiratory and vascular systems
15. Amputee and Prosthesis (upper limb and lower limb)
16. Rehabilitation of problems of sexuality in physical disability
17. Rehabilitation of cancer and burn patient

III-B) Tutorial / Small Group Discussions

A. 1- Clinical skills

1) Appropriate History taking.

2) Musculoskeletal examination. The candidate should be able to identify:

- i. Shoulder pathology:
 - a. Rotator cuff lesions.
 - b. Glenohumeral/capsular pathology.
 - c. Muscle wasting, proximal myopathy .
 - d. S/C joint pathology – synovitis.
 - e. A/C joint pathology – synovitis.
 - f. Shoulder pain due to pain referred from viscera or neck.
- ii. Elbow pathology:
 - a. Olecranon bursitis.
 - b. Elbow joint pathology.
 - c. Radio-ulnar joint pathology.

- d. Medial or lateral epicondylitis.
 - e. Ulnar nerve entrapment.
- iii. Hand & wrist pathology:
- a. Radiocarpal joint pathology.
 - b. Distal radio-ulnar joint pathology.
 - c. MCP or IP joint pathology.
 - d. Hand deformities.
 - e. Muscle wasting.
 - f. Flexor or extensor tenosynovitis or tendon nodules.
 - g. Rupture or attenuation of flexor or extensor tendons of fingers or thumb.
 - h. De Quervain's tenosynovitis.
 - i. Carpal tunnel syndrome.
- iv. Hip/pelvic pathology:
- a. Trochanteric, iliopsoas, gluteal bursitis.
 - b. Hip joint pathology including dysplasia.
 - c. Real & apparent leg length inequality.
 - d. SI joint pathology.
 - e. Muscle wasting, proximal myopathy, Trendelenberg sign.
 - f. Deformities of the hip, Thomas' test.
 - g. Pathology of symphysis pubis.
 - h. Hip pain due to pain referred from lumbar region.
 - i. Lesions of tendons and entheses.
- v. Knee pathology:
- a. Knee joint pathology, including internal derangements.
 - b. Deformities.
 - c. Muscle wasting, myopathy.
 - d. Prepatellar, anserine bursitis.
 - e. Popliteal cyst.
 - f. Damage to collateral ligaments.
 - g. Knee pain due to pain referred from hip or lumbar spine.
 - h. Lesions of tendons and entheses.
 - i. Osgood-Schlatter's disease.
 - j. Adolescent anterior knee pain/Patello-femoral syndrome.

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

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

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

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

4) Candidate should be able to manage the following rheumatologic & immunologic cases:

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

- b. Osteoarthritis and related conditions including:
 - i. Osteoarthritis of large joints.
 - ii. Generalized osteoarthritis.
 - iii. Diffuse idiopathic skeletal hyperostosis.
 - iv. Neuropathic arthritis.

- c. Crystal associated arthropathies including:
 - i. Gout.
 - ii. Pseudogout.
 - iii. Apatite deposition disease.
 - iv. Oxalate metabolism disorders.

- d. Rheumatoid arthritis including:
 - i. Articular manifestations.

- ii. Systemic manifestations: including respiratory, ocular, neurological, haematological, and dermatological manifestations.
 - iii. Complications: including cervical myelopathy, amyloidosis, vasculitis and septic arthritis.
- e. Spondyloarthropathies including:
- i. Ankylosing spondylitis.
 - ii. Psoriatic arthritis.
 - iii. Enteropathic arthropathies.
 - iv. Reactive arthritis.
 - v. Whipple's disease.
- f. Autoimmune connective tissue diseases:
- i. Systemic lupus erythematosus.
 - ii. Antiphospholipid syndrome.
 - iii. Systemic sclerosis.
 - iv. Sjögren's syndrome.
 - v. Dermatomyositis/polymyositis.
 - vi. Overlap syndromes.
 - vii. Mixed connective tissue disease.
 - viii. Relapsing polychondritis.
 - ix. Vasculitides: including:
 1. Giant cell arteritis and polymyalgia rheumatica.
 2. Wegener's granulomatosis.
 3. Polyarteritis nodosa and microscopic polyangiitis.
 4. Churg Strauss vasculitis.
 5. Behçet's disease.
 6. Takayasu's arteritis.
 7. Cutaneous vasculitis.
 8. Panniculitis.
 9. Henoch Schonlein purpura.
 10. Cryoglobulinaemia.
- g. Bone disorders including:
- i. Osteoporosis.
 - ii. Rickets and osteomalacia.
 - iii. Bone & joint dysplasias.
 - iv. Renal bone disease.

- v. Regional disorders: Paget's disease, hypertrophic pulmonary osteoarthropathy, osteonecrosis, Perthe's disease.
 - vi. Osteochondritis dissecans, transient regional osteoporosis.
- h. Metabolic, endocrine and other disorders including:
- i. Endocrine disorders affecting bone, joint or muscle (e.g. diabetes, thyroid, pituitary, parathyroid disorders).
 - ii. Metabolic disorders affecting joints (e.g. alkaptonuria, haemochromatosis).
 - iii. Heritable collagen disorders.
 - iv. Rheumatic manifestations of haemoglobinopathies.
 - v. Rheumatic manifestations of haemophilia and other disorders of haemostasis.
- i. Infection and arthritis:
- i. Septic arthritis.
 - ii. Osteomyelitis.
 - iii. Post-infectious rheumatological conditions, including rheumatic fever, post-meningococcal arthritis.
 - iv. Lyme disease.
 - v. Mycobacterial, fungal & parasitic arthropathies
 - vi. Viral arthritis.
 - vii. Rheumatic manifestations related to Human Immunodeficiency Virus and Acquired immunodeficiency syndrome.
 - viii. Rheumatic manifestations related to Hepatitis C.
- j. Neoplastic disease including:
- i. Paraneoplastic musculoskeletal syndromes.
 - ii. Primary and secondary neoplastic conditions of connective tissue.
 - iii. Tumours of bone.
 - iv. Pigmented villonodular synovitis.
- k. Miscellaneous disorders including:
- i. Sarcoidosis.
 - ii. Eosinophilic fasciitis.

- iii. Familial Mediterranean Fever.
- iv. Hypogammaglobulinaemia & arthritis.
- v. Amyloidosis.
- vi. Sweets syndrome (neutrophilic dermatoses).

l. Juvenile Idiopathic Arthritis: in relation to young adult and adult patients.

m. Rheumatological disorders in the elderly.

5) Candidate should be able to evaluate and manage different types of disabilities and guide an efficient program for rehabilitation of the following disorders:

- a. Stroke and brain injury rehabilitation.
- b. Spinal cord rehabilitation. Traumatic & non-traumatic spinal cord lesions including multiple sclerosis, transverse myelitis, tumors & post surgical degenerative spine disease
- c. Rehabilitation of prolonged bed rest complications.
- d. Bone and joint rehabilitation.
- e. Amputee rehabilitation.
- f. Upper and lower limb prosthesis.
- g. Spinal, upper and lower limb orthosis.
- h. Cardiac and pulmonary rehabilitation
- i. Pediatric rehabilitation. Residents gain clinical skills and knowledge in diagnosis and rehabilitation management of a variety of conditions to include spinal cord and brain injury, cerebral palsy, spina bifida, scoliosis, hip dysplasia, and numerous other neuromuscular and musculoskeletal diseases.
- j. Geriatric rehabilitation.
- k. Electrotherapy modalities.
- l. Occupational rehabilitation.

III-C) PRACTICAL CLASSES:

1. Joint aspiration, lavage and/or injection.
2. Soft tissue and regional injection.

3. Examination of synovial fluid by Polarized microscopy.
4. Electromyography and nerve conduction studies.
5. Diagnostic musculoskeletal ultrasound.

4- Teaching and learning methods:

1. Lectures
2. Seminar
3. Journal club
4. Grand round
5. Inpatient's staff round
6. Annual scientific meetings

TEACHING PLAN:

Lectures: Division of students into 2 groups

5 lectures /week, Time from 12 to 2pm .

Tutorials:

Practical classes

Time plan:

Item	Time schedule	Hours / week
1- Lectures	<u> 2 </u> times/week; one hour each between to	4h/w
2- Small group teaching / tutorials	<u> 2 times </u> / <u> </u> week	6
3- Practical & Clinical	<u> 1 times </u> / <u> </u> week	4

5- Students Assessment methods:

5-A) ATTENDANCE CRITERIA: Faculty bylaws

5-B) Assessment TOOLS:

Tool	Purpose (ILOs)
Written examination	To assess knowledge , intellectual skills,
Oral examination	To assess Knowledge , intellectual, and clinical skills
Practical examination	To assess clinical , professional and transferrable skills

5-C) TIME SCHEDULE: Faculty bylaws

Written and oral exams will be held twice yearly, in April and October.

5-D) GRADING SYSTEM:

Name of the course/ code	Written exam (3 Hours)	Oral exam	Clinical & Practical exam	Total marks
MD degree Rheumatology & Rehabilitation (Code): RHEUM 920 (Ta,Tb,Tc	400	150	250	800

FORMATIVE ASSESSMENT:

No Formative assessment

.5-E) Examinations description:

Summative end course exam:

The examination includes 2 written exams ,3 hours for each includes essay and MCQ questions, in addition to an oral examination.

Examination	Description
Final exam:	
a- Written (2)	e.g. select (MCQs) & Supply (Short & long essay) questions e.g. identify
b- Oral	2 examiners
c. Clinical	2 examiners
d. Practical	2 examiners
Total	800

- The minimum passing & Passing grades (Faculty bylaws).

6- List of references:

6- A)Course notes: will be provided by staff members

6-B) Essential textbooks:

- Kelley's Textbook of Rheumatology: Firestein GS, Budd RC, Harris ED, McInnes IB, Ruddy S and Sargent JS (eds.), 8th edition, 2009
- Primer on the Rheumatic Diseases: Klippel JH, Stone JH, Crofford LJ and White PH (eds.) 13th edition, 2008
- Physical Medicine and Rehabilitation: Braddom RL (ed.), 3rd edition, 2007

6-C) Recommended books for further readings:.

- Oxford Textbook of Rheumatology: Isenberg DA, Maddison PJ, Woo P, Glass D and Breedveld FC. (eds.), 3rd edition, 2004
- Physical Medicine and Rehabilitation: Principles and Practice. DeLisa JA, Gans BM and Walsh NE. (eds.), 4th edition, 2004

6-D) Periodicals: Selected articles from international journals will be provided to students

Web sites:

- a- Area of Rheumatology and clinical immunology:
European Board of Rheumatology and the American College of Rheumatology High Impact Rheumatology Curriculum
(<http://www.rheumatology.org/educ/hir/ppt.asp>)
- b- Area of Rehabilitation medicine:

7- Facilities required for teaching and learning:

Facilities used for teaching this course include:

- Basic materials: Overhead projections, slides, computer, data show.
- Lecture halls
- Small group classes
- Information technology / AV aids
- Models

Course Coordinators:

Professor Dr. Samia Zaki Hassan

Dr. Tamer A. Gheita

Dr. Hanan Darweesh

Head of Department

Prof. Dr. Eman El Serougy