COURSE SPECIFICATION
Faculty of Medicine- Mansoura University
(A) Administrative information

(1) Programme offering the course:	Postgraduate MD program of general (internal) medicine
(2) Department offering the programme:	Internal medicine department
(3) Department responsible for teaching the course:	Internal medicine department
(4) Part of the programme:	Second part (Third, fourth, fifth and sixth semesters)
(5) Date of approval by the Department`s council	26/7/2016
(6) Date of last approval of programme specification by Faculty council	9/8/2016
(7) Course title:	Internal medicine
(8) Course code:	MED610
(9) Total teaching hours:	345 theoretical 450 practical
(10) Credit hours	23 credits lectures 15 practical

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

The Department of Internal Medicine will provide an educational experience for MD candidates offering graduated supervised responsibility for patient care in the area of general internal medicine. During the course each student will gain an awareness of the knowledge, skills, values and attitudes that internists strive to acquire and maintain throughout their professional lives.

Students will have graduated supervised responsibility for patient care, learning to integrate clinical knowledge with practical experience.

During the course the students will gain competencies in the following six domains:

- **Medical Knowledge**
- **Patient Care**
- **Interpersonal and Communication Skills**
- **Professionalism**
- **Practice Based Learning and Improvement**
- **Systems-Based Practice.**

(2) Intended Learning Outcomes (ILOs):

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

A1. Recognize the definition, causes, pathogenesis, diagnosis & treatment of the following Gastroenterology , Hepatobiliary & pancreatic disorders including, Oesophgeal disorders, Stomach: H pylori- peptic ulcer, Gastritis – Gastropathy- Tumours, Upper and lower GIT bleeding, Small intestine:Malabsorption/ Tumours, Inflammatory bowel disease, Constipation – Diarrhea, Diverticulosis /Tumours of colon,Functional bowl disorders, Acute abdomen / Pritoneal diseases, Jaundice, Acute hepatitis, Chronic hepatitis: viral – autoimmune, Drug induced-NAFLD, Liver cirrhosis & its Complications, Liver cell failure /Liver transplantation, Liver abscesses and other infections, Budd Chiari & Veno-occlusive dis, Drugs & the liver, Gall bladder: stones, inflammation, Tumours, Pancreas: pancreatitis, cancer, GIT and liver diseases of obscure nature.

A2. Recall the definition, causes, pathogenesis, diagnosis & treatment of the following Hematology and oncology topics including, Hematology, Anemias: types, classification,diagnosis, Bone marrow failure, Hemolytic anemia, Myeloproliferative disorders, Splenomegaly, Blood transfusion, White cell disorders, Hemostasis and thrombosis, **Oncology,** Principles of cancer, chemotherapy, Leukemias / Lymphomas /Myeloma.

A3. Demonstrate sufficient knowledge of the basics,definition, causes, pathogenesis, diagnosis & treatment of the following Endocrinology, Diabetes , Metabolism, And clinical Nutrition aspects including, Introduction /Hypothalamic disorders, Reproduction and pubery & disorders, Growth axis: short stature /Tall stature, Growth hormone abnormalities, Acromegay, gigantism-Hypopituitrism, Thyroid : Hypo-hyperthyroidism / Goitre, Suprarenal gland: Cushing, Hypoadrenalism / Pheochromocytoma, Thirst axis: DI / SIADH, Calcium metabolism: Parathyroid disorders, Metabolic bone disease, Endocrinology of blood pressure, Neuro-endocrine tumours / MEN, Diabetes and its Complications, Hypoglycemia, Obesity and metabolic syndrome, Inborn errors of metabolism, Lipid metabolism and disorders

A4. Recognize the definition, causes, pathogenesis, diagnosis & treatment of the following Rheumatology and immunology disorders including, Common regional musculoskeletal disorders, OA- RA- Crystal arthritis, Inflammatory arthritis, Seronegative arthropathy, Connective tissue disorders: SLE, Systemic vasulitis, Rheumatologic disorders in systemic diseases, Uric acid disorders, Principles of autoimmune disorders, Immune deficiency disorders, Hypersensitivity

A5. Recall the definition, causes, pathogenesis, diagnosis & treatment of the following Cardiovascular medicine topics including, IHD, Acute coronary syndromes, Arrythmias, Heart failure, HTN, Rheumatic fever, Valvular heart disease, Infective endocarditis, Cardiac muscle disease, Pericardial disease

A6. Recognize the definition, causes, pathogenesis, diagnosis & treatment of the following Respiratory medicine &Critical care aspects including, Pneumonia, Suppurative lung disease, Lung tumours, Asthma /COPD, Resiratory failure /ARDS, TB, Pleural effusion, Intersitial lung disease, Sarcoidosis /Alveolitis, Basics of Mechanical ventilation.

A7. Recognize the definition, causes, pathogenesis, diagnosis & treatment of the following Renal medicine& electrolytes topics including, Investigation of renal functions, Glomerular disorders, Nephrotic syndrome, Kidney in systemic disorders, , UTI, Interstitial renal disease, HTN & vascular disorders & the kidney Calculi, Drugs & the kidney, Acute renal failure, Chronic renal failure, Water & electrolytes, Acid base disorders, Renal replacement therapy.

A8. Recognize the definition, causes, pathogenesis, diagnosis & treatment of the following Neurology & psychiatry topics including, Mental state assessment, Psychiatric aspects of physical diseases, Depression and anxiety/Eating disorders, Sensory pathway / Motor system, Coma / Cerebrovascular strokes, Epilepsy, Movement disorders / Muscle disease, Paraneoplastic syndromes/brain tumours, Headache, migraine, Cranial nerves /Peripheral nerve lesions.

A9. Recognize the Basic of geriatric medicine (Common problems in the elderly).

A10. Recognize the definition, causes, pathogenesis, diagnosis & treatment of the following Infectious diseases aspects including, Viral infections, Bacterial infections: Brucellosis /Typhoid Parasitic diseases, Fungal infections, STDS /HIV, Emerging viral infections.

A11. Recognize the definition, causes, pathogenesis, diagnosis & treatment of the following General internal medicine topics including, History taking and examination, Ethics and communication, Chest pain / Dyspnea / Polyuria, Syncope, PUO, Fatigue, Laboratory interpretation, Imaging techniques and interpretation , Evidence based medicine, Steps of EBM and some critical appraisal skills.

A12. Recognize the definition, causes, pathogenesis, diagnosis & treatment of the following Emergency medicine aspects including, Shock, Pulmonary embolism, Cardiac arrest and brain death, Advanced life support (ALS), Workshop by ERC.

B- Intellectual skills:

B1. solve professional problems according to available data and set learning and improvement goals in patient care.

B2. analyze efficiently case scenarios and refer to the most appropriate diagnosis and possible differential diagnosis and interpret basic clinical tests and images as well as obscure findings.

B3. locate , appraise , and assimilate evidence from scientific studies related to their patient's health problems , i.e. adopt an *evidence based approach* .

B4. evaluate risks involved in clinical practice.

C- Professional/practical skills

C1. show competency in basic and updated clinical examination skills.

C2. perform and interpret laboratory and radiological findings in diagnosis and treatment of internal medical diseases.

C3. demonstrate competency in performing diagnostic and therapeutic procedures required by the medical consultants including advanced life support CVP, and Sengstaken tube insertion, difficult cases ECG interpretation, stress ECG, echocardiography, endoscopies, Liver biopsy, renal biopsy and lumber puncture, according to their specialization.

D- Communication & Transferable skills

D1. demonstrate the ability to interact with diverse patient population including but not limited to diversity in gender ,age , culture , race ,religion, disabilities.

D2. communicate effectively with physicians , other health professionals and health related agencies.

D3. communicate effectively with patients , families, and the public as appropriate , across a broad range of socioeconomic and cultural backgrounds

D4. teach and evaluate the performance of others including junior residents, house officers, nurses as well as patients and their relatives.

D5. be prepared for continuous self learning and self evaluation.

D6. use different resources for gaining information and knowledge.

D7. run scientific meetings and show the ability of time management.

(3) Course content:

The course fulfils 23 credit hours through 4 modules concentrating on the state of art and updates in each topic.
It is divided into 4 modules:

Module I, II and III = 6credit hours each.
Module IV= 5credit hours

Subjects	Lectures 3/week	Seminars 3/week	Credit Hours 6 credit hours
Module I: ***Gastroenterology ,*** ***Hepatobiliary &pancreatic disorders*** Esophageal disorders Stomach: H pylori- peptic ulcer Gastritis – Gastropathy- Tumours Upper and lower GIT bleeding Small intestine: Malabsorption/ Tumours Inflammatory bowel disease Constipation - Diarrhea Diverticulosis /Tumours of colon Functional bowl disorders Acute abdomen / Peritoneal diseases	**30 h**	**30h**	

Jaundice Acute hepatitis Chronic hepatitis: viral - autoimmune Drug induced- NAFLD Liver cirrhosis & its Complications Liver cell failure /Liver transplantation Liver abscesses and other infections Budd Chiari & Veno-occlusive dis Drugs & the liver Gall bladder: stones, inflammation Tumours Pancreas: pancreatitis , cancer GIT and liver diseases of obscure nature ***Hematology and oncology*** **Hematology:** Anemias: types , classification, diagnosis Bone marrow failure Hemolytic anemia Myeloproliferative disorders Splenomegaly Blood transfusion White cell disorders Hemostasis and thrombosis **Oncology:** Principles of cancer chemotherapy Leukemias / Lymphomas /Myeloma	**15h**	**15h**	
Total teaching hours	**45**	**45**	

Module II: ***Endocrinology*** ***Diabetes , Metabolism*** ***And clinical Nutrition:*** Introduction /Hypothalamic disorders Reproduction and puberty & disorders Growth axis: short stature /Tall stature Growth hormone abnormalities Acromegaly, gigantism-Hypopituitrism Thyroid : Hypo-hyperthyroidism/Goitre Suprarenal gland: Cushing Hypoadrenalism/ Pheochromocytoma Thirst axis: DI / SIADH Calcium metabolism: Parathyroid disorders Metabolic bone disease Endocrinology of blood pressure Neuro-endocrine tumours / MEN Diabetes and its Complications Hypoglycemia Obesity and metabolic syndrome Inborn errors of metabolism Lipid metabolism and disorders ***Rheumatology and immunology*** Common regional musculoskeletal disorders. OA- RA- Crystal arthritis Inflammatory arthritis Seronegative arthropathy Connective tissue disorders: SLE Systemic vasculitis Rheumatologic disorders in systemic diseases Uric acid disorders Principles of autoimmune disorders Immune deficiency disorders Hypersensitivity	**3/week** **30h** **15h**	**3/week** **30h** **15h**	**6 credit hours**
Total teaching hours	**45**	**45**	

Module III: ***Cardiovascular medicine:*** IHD Acute coronary syndromes Arrhythmias Heart failure HTN Rheumatic fever Valvular heart disease Infective endocarditis Cardiac muscle disease Pericardial disease ***Respiratory medicine &Critical care*** Pneumonia Suppurative lung disease Lung tumours Asthma /COPD Respiratory failure /ARDS TB Pleural effusion Interstitial lung disease Sarcoidosis /Alveolitis **Basics of Mechanical ventilation** ***Renal medicine& electrolytes*** Investigation of renal functions Glomerular disorders Nephrotic syndrome Kidney in systemic disorders UTI Interstitial renal disease HTN & vascular disorders & the kidney Calculi Drugs & the kidney Acute renal failure Chronic renal failure Water & electrolytes Acid base disorders Renal replacement therapy	**3/week** **15h** **15h** **15h**	**3/week** **15h** **15h** **15h**	**6 credit hours**
Total teaching hours	**45**	**45**	
Module IV: ***Neurology & psychiatry*** Mental state assessment Psychiatric aspects of physical diseases	**3/week** **10h**	**2/week** **5h**	**5 credit hours**

Depression and anxiety/Eating disorders Sensory pathway / Motor system Coma / Cerebrovascular strokes Epilepsy Movement disorders / Muscle disease Paraneoplastic syndromes/brain tumours Headache, migraine Cranial nerves /Peripheral nerve lesions			
Geriatrics Basic of geriatric medicine(Common problems in the elderly)	**5h**	**5h**	
Infectious diseases Viral infections Bacterial infections: Brucellosis /Typhoid Parasitic diseases Fungal infections STDS /HIV Emerging viral infections	**10h**	**10h**	
General internal medicine History taking and examination Ethics and communication Chest pain / Dyspnea / Polyuria Syncope PUO Fatigue Laboratory interpretation Imaging techniques and interpretation Evidence based medicine Steps of EBM and some critical appraisal skills	**10h**	**5h**	
Emergency medicine Shock Pulmonary embolism Cardiac arrest and brain death Advanced life support (ALS) Workshop by ERC	**10h**	**5h**	
Total teaching hours	**45**	**30**	

Practical procedures & Clinical skills (fulfilled as logbook activities)	Clinical teaching hours Total (450 hour)
• History taking • General examination • Local examination • Special clinical examination • Advanced life support • ECG interpretation • Per oral feeding tube insertion • Sangestaken tube • Central venous access • paracentesis • Endotracheal intubation • Endoscopy • Liver biopsy • Renal biopsy • Lumber puncture	50h 50h 50h 50h 50h 25h 25h 25h 25h 25h 25h 20h 10h 10h 10h

(4) Teaching methods:

4.1: Lectures with power point presentations and discussions.
4.2: Interactive bedside teaching with clinical case presentations of difficult and interesting cases and group discussions.
4.3: Problem solving case scenarios (commentary).
4.4: Seminars and presentation of an essay by the postgraduate students.
4.5. Journal clubs for critical appraisal of journal articles.
4.6. Workshops and training courses for procedural skills.
4.7. Attendance of activities in the department including thesis discussion, conferences, clinical rounds, outpatient clinics , procedures …with both senior staff and junior staff …..

(5) Assessment methods:

5.1Written exam for assessment of knowledge and intellectual ILOS
5.2: Case Scenario (commentary).. for assessment of knowledge and intellectual ILOS

5.3: OSCE Clinical exam for assessment of knowledge and intellectual, practical and transferable ILOS
5.4: Structured Oral exam. for assessment of knowledge and intellectual ILOS
5.5. Practical exam for assessment of knowledge and intellectual, practical and transferable ILOS

Assessment schedule:

I. Continuous assessment after completion of each module :

4 MCQ exams during semesters 3-6 , the results of the 4 exams comprise 20% of the final written exam according to the Bylaws**.**

II. Final exam :

Assessment 1: Written exam (essay questions and commentary).
Assessment 2:OSCE Clinical exam
Assessment 3: Oral exam
Assessment 4: Practical (procedural skills: ECG, radiology interpretation)

Percentage of each Assessment to the total mark (600 marks):

Written exam:…240 marks
MCQ exam …60 marks .
Clinical exam: 100 marks
Oral exam:……100 marks
Practical exam 100 marks
The clinical, practical, and oral exams (50%).

Other assessment without marks:

Formative assessment for research methodology course,
Presentation and open discussion of the MD thesis.
Log book for assessment of the attendance and activities throughout the whole program.

(6) References of the course:

Cecil Textbook of Medicine
Harrison Textbook of medicine
Macleod Clinical Medicine
Kumar and Clark: Clinical medicine (last edition)
Internet based resources (websites e.g. Pubmed, MDconsult , emedicine , tripdatabase ,……etc
Journals e.g. NEJM, BMJ, JAMA, Lancet,…..etc

(7) Facilities and resources mandatory for course completion:

Candidates and their learning are supported in a number of ways:
■ Induction course introducing study skills
■ Candidates logbook
■Programme Specification and Handbooks
■ Extensive library and other learning resources
■ Computer laboratories with a wide range of software
■ Intranet with a wide range of learning support material

■MD Dissertation Supervisor

Course coordinator:

Prof Salah Elgamal……

Prof Maha Maher

Head of the department:

Prof Salah El Gamal

Date: 17-5-2016