



COURSE SPECIFICATION

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate MSc 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 (second, third and fourth semester)
(5) Date of approval by the Department's council	5/11/2014
(6) Date of last approval of programme specification by Faculty council	
(7) Course title:	Internal medicine
(8) Course code:	MED510
(9) Total teaching hours:	210 theoretical 90 practical
(10) Credit hours	17 credits

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

MSc candidates must be able to provide a high standard patient care that is compassionate and effective for the treatment of internal medical conditions and the promotion of health.

They must treat their patient's conditions with practices that are safe , scientifically based, effective, efficient, timely, cost effective as well as evidence -based.

Master graduates are expected to demonstrate the ability of :

- 1- showing competency in applying the principles , methodology and various tools of scientific research in internal medicine.
- 2- applying and use of analytical design in internal medicine specialties.
- 3-applying and integration of general knowledge with the knowledge related to the practice of internal medicine and health care .
- 4- showing awareness with the present problems ,difficult conditions as well as recent updates in internal medicine.
- 5- detection of professional problems through analytical design and findings possible solutions in these situations.
- 6- showing competency of the professional skills required by the specialist of internal medicine and use of various suitable new technologies in the practice of medicine.
- 7- effective communication and the ability of acting as a member and a leader of healthcare team in various situations .
- 8- the ability of making decisions in different situations including emergencies.
- 9- use and benefit of available resources to get the highest standards of clinical practice.
- 10- showing awareness of their role in community development and protection of the environment in the context of national and international changes.
- 11- acting with integrity, honesty and commitment with the roles and ethics of medical profession.
- 12- self development both academically and professionally and showing ability of continuous learning.

(2) Intended Learning Outcomes (ILOs):

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

A- Knowledge and Understanding:

A1- Recognize the Definition, causes, pathogenesis, diagnosis and treatment of the following Gastroenterology , Hepatobiliary & pancreatic disorders including Oesophageal disorders, Stomach: H pylori peptic ulcer Gastritis, Upper and lower GIT bleeding, Small intestine: Malabsorption, Inflammatory bowel disease, Constipation – Diarrhea, Functional bowel disorders, Acute abdomen /Peritoneal diseases, Jaundice, Acute hepatitis, Chronic hepatitis: viral – autoimmune, Drug induced- NAFLD, Liver cirrhosis & its Complications, Liver cell failure/Liver transplantation, Drugs & the liver Gall bladder: stones, inflammation pancreatitis.

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

A3. Recognize the Definition, causes, pathogenesis, diagnosis and treatment of the following Infectious diseases including, Viral infections, Bacterial infections: Brucellosis, Typhoid, Parasitic diseases /Fungal infections, STDS /HIV, Emerging viral infections.

A4. Recall the Definition, causes, pathogenesis, diagnosis and treatment of the following General internal medicine topics including, History taking and examination, Ethics and communication, Chest pain / Dyspnea / Polyuria, Syncope, PUO, Laboratory interpretation , Imaging techniques and interpretation,

A5. Recall Evidence based medicine, Steps of EBM.

A6. Recognize the Definition, causes, pathogenesis, diagnosis and treatment of the following Endocrinology Diabetes ,Metabolism, And Nutrition aspects including, Reproduction and puberty & disorders, Growth axis: short stature /Tall stature, Growth hormone abnormalities, Acromegaly, gigantism /Hypopituitarism, Thyroid : Hypo/hyperthyroidism / Goitre, Suprarenal gland: Cushing, Hypoadrenalism/ Pheochromocytoma, Thirst axis: DI / SIADH, Parathyroid disorders Metabolic bone disease, Endocrinology of blood pressure, Neuroendocrine tumours /MEN, Diabetes and its Complications, Hypoglycemia, Obesity and metabolic syndrome, Lipid disorders, Assessment of nutrition/ malnutrition.

A7. Recall the Definition, causes, pathogenesis, diagnosis and treatment of the following Rheumatology and immunology diseases including, OA- RA, Inflammatory arthritis, Seronegative arthropathy /Crystal arthritis, Connective tissue disorders: SLE, Systemic vasculitis, Uric acid disorders, Principles of autoimmune disorders, Immune deficiency disorders.

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

A9. Recall the Basics of geriatric medicine (common disorders).

A10. Recognize the Definition, causes, pathogenesis, diagnosis and treatment of the following Cardiology diseases including, IHD , Acute coronary syndromes , Arrhythmias, Heart failure, HTN, , rheumatic fever /Valvular heart disease, Infective endocarditis, Cardiac muscle disease, Pericardial disease.

A11. Recognize the Definition, causes, pathogenesis, diagnosis and treatment of the following Renal medicine& electrolytes topics including, Investigation of renal functions, , glomerular disorders, Nephrotic syndrome, Kidney in systemic disorders, UTI /Calculi, Drugs & the kidney, Acute renal failure /Chronic renal failure, Water & electrolytes, Acid base disorders, Renal replacement therapy.

A12. Recognize the Definition, causes, pathogenesis, diagnosis and treatment of the following Respiratory & critical care medicine topics including, Pneumonia, Suppurative lung disease, Asthma / COPD, Respiratory failure /ARDS, TB, Pleural effusion, Intersitial lung disease /Sarcoidosis, Basics of Mechanical ventilation.

A13. Recognize the Definition, causes, pathogenesis, diagnosis and treatment of the following Emergency medicine & Critical care aspects including, Shock, Pulmonary embolism, Cardiac arrest and brain death, Advanced life support (ALS).

B- Intellectual skills:

B1 identify strengths, deficiencies, and limits in one's knowledge and expertise and be able to be updated and face challenges.

B 2 solve specific clinical problems despite limited information and resources .

B 3 integrate knowledge and understanding of internal medicine and other medical specialties and interpret basic clinical tests and images as well as obscure findings to solve clinical problems .

B4 analyze efficiently case scenarios and refer to the most appropriate diagnosis and possible differential diagnosis.

B5 making clinical decisions in different situations including emergencies.

B 6 systematically analyze practice using *quality improvement methods* , and implement changes with the goal of practice improvement and set learning and improvement goals.

B 7 locate , appraise , and assimilate evidence from scientific studies related to their patient's health problems , i.e. adopt an evidence based approach .

B 8 use information technology to optimize learning and write an essay about a specific medical problem.

C- Professional/practical skills

C 1 demonstrate competency in history taking and clinical examination skills in different internal medicine specialties.

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 specialists including advanced life support CVP , and Sengstaken tube insertion, difficult cases ECG interpretation, stress ECG, echocardiography, endoscopy , Liver biopsy, renal biopsy and lumbar puncture, according to their specialization.

C6 provide basic preventive care and counseling.

D- Communication & Transferable skills

D 1 communicate effectively with physicians , other health professionals and health related agencies.

D 2 communicate effectively with patients , families, and the public as appropriate , across a broad range of socioeconomic and cultural backgrounds.

D 3 demonstrate the ability to interact with diverse patient population including but not limited to diversity in gender ,age , culture , race ,religion, disabilities .

D 4 demonstrate compassion , integrity and respect of others and respect for patient privacy and autonomy and demonstrate responsiveness to patient needs that exceeds self interest.

D5 use of information technology in the clinical practice.

D 6 use of different resources to gain knowledge and information.

D8 effective time management and continuous self learning.

(3) Course content:

The internal medicine course is divided into 3 modules to be studies all over 3 semesters :

Module I and II = 6 credit hours each

Module III= 5 credit hours + an elective course fulfilling 1 credit hour

Subjects	Lectures	Seminars	Clinical/ Practical	credit hours
<u>Module I:</u> <u>Gastroenterology,</u> <u>Hepatobiliary &pancreatic disorders:</u> Oesophgeal disorders Stomach: H pylori peptic ulcer Gastritis Upper and lower GIT bleeding Small intestine: Malabsorption Inflammatory bowel disease Constipation -Diarrhea Functional bowl disorders Acute abdomen /Peritoneal diseases Jaundice	3	2	1	6 hours

<p>Acute hepatitis Chronic hepatitis: viral - autoimmune Drug induced- NAFLD Liver cirrhosis & its Complications Liver cell failure/Liver transplantation Drugs & the liver Gall bladder: stones, inflammation pancreatitis , <u>Hematology & oncology:</u> Anemias: types, classification, diagnosis Bone marrow failure /Hemolytic anemia Myeloproliferative disorders Splenomegaly Blood transfusion White cell disorders Hemostasis and thrombosis Principles of cancer chemotherapy Leukemias /Lymphomas /Myeloma <u>Infectious diseases</u> Viral infections Bacterial infections:Brucellosis Typhoid Parasitic diseases /Fungal infections STDS /HIV Emerging viral infections <u>General internal medicine</u> History taking and examination Ethics and communication Chest pain / Dyspnea / Polyuria Syncope PUO Laboratory interpretation Imaging techniques and interpretation <u>Evidence based medicine</u> Steps of EBM</p>				
<u>Total teaching hours</u>	45	30	30	
<u>Module II</u> <u>Endocrinology Diabetes ,Metabolism</u> <u>And Nutrition</u> Reproduction and puberty & disorders Growth axis: short stature /Tall stature Growth hormone abnormalities	3	2	1	6 credit hour

<p>Acromegaly, gigantism Hypopituitarism Thyroid : Hypo/hyperthyroidism / Goitre Suprarenal gland: Cushing Hypoadrenalism/ Pheochromocytoma Thirst axis: DI / SIADH Parathyroid disorders Metabolic bone disease Endocrinology of blood pressure Neuroendocrine tumours /MEN Diabetes and its Complications Hypoglycemia Obesity and metabolic syndrome Lipid disorders Assessment of nutrition/ malnutrition <u>Rheumatology and immunology</u> OA- RA Inflammatory arthritis Seronegative arthropathy /Crystal arthritis Connective tissue disorders: SLE Systemic vasculitis Uric acid disorders Principles of autoimmune disorders Immune deficiency disorders <u>Neurology & psychiatry</u> Mental state assessment Psychiatric aspects of physical diseases Depression and anxiety Eating disorders Coma / Cerebrovascular strokes Epilepsy Movement disorders Paraneoplastic syndromes Brain tumours Headache, migraine Peripheral nerve lesions Muscle disease <u>Geriatrics</u> Basics of geriatric medicine</p>				
<u>Total teaching hours</u>	45	30	30	

<u>Module III</u> <u>Cardiology</u> IHD Acute coronary syndromes Arrhythmias Heart failure HTN Rheumatic fever /Valvular heart disease Infective endocarditis Cardiac muscle disease Pericardial disease <u>Renal medicine & electrolytes</u> Investigation of renal functions Glomerular disorders Nephrotic syndrome Kidney in systemic disorders UTI /Calculi Drugs & the kidney Acute renal failure /Chronic renal failure Water & electrolytes Acid base disorders Renal replacement therapy <u>Respiratory & critical care medicine</u> Pneumonia Suppurative lung disease Asthma / COPD Respiratory failure /ARDS TB Pleural effusion Interstitial lung disease /Sarcoidosis Basics of Mechanical ventilation <u>Emergency medicine & Critical care:</u> Shock Pulmonary embolism Cardiac arrest and brain death Advanced life support (ALS)	3	1	1	5 credit hours
<u>Total teaching hours</u>	45	15	30	

Elective course:

The candidate will choose one of the following courses (1 credit hour each):

- Renal dialysis
- Diabetic foot

Endoscopies

Evidence based medicine

Advanced immunology

To be studied with module III.

(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: Workshops and training courses for procedural skills.

4.6: 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:

5.1 Written exam for assessment of (ILOs number; A 4-9 , B 1-9)

5.2: Case Scenario (commentary).. for assessment of (ILOs number; a4-8,b1-9).

5.3: Clinical exam for assessment of (ILOs number; a1,a2, 3 ,b1,b2,3 , c 1-3, ,d 1-4)

5.4: Oral exam. for assessment of (ILOs number; a4-7, b1-4 , d,1-6)

5.5. Practical exam for assessment of procedural skills (ILOs number;c3,c5,d,1-6)

Assessment schedule:

I. Continuous assessment:

After completion of each module an MCQ exam is conducted , and the sum of the 3 exams represents 20 % of the final written exam.

II, Second part exam :

Assessment 1: Written exam (structured short essay questions).

Assessment 2: Clinical exam

(a long case and 4 short cases as an OSCE 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:...two papers 150 marks each = 300 marks (50%)

Clinical exam:... 100 marks

Oral exam:..... 100 marks

Practical exam 100 marks

Other assessment without marks :

Presentation and open discussion of the MSc essay or thesis .

Log book for assessment of the attendance and activities throughout the course.

(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
- MSc Dissertation Supervisor

Course coordinator:

Prof Salah Elgamal.....

Prof Omayma Saleh.....

Prof Dina Shaheen

Head of the department:

Prof Salah Elgamal

Date: