



كلية الطب
وحدة ضمان الجودة



Faculty of Medicine
Quality Assurance Unit

**MEDICAL DOCTORATE (M.D.) DEGREE
PROGRAM AND COURSES
SPECIFICATIONS FOR **INTERNAL
MEDICINE****

(According to currently applied Credit points bylaws)

***Department of Internal
Medicine***

Faculty of Medicine

Assiut University

2016-2017

| Contents | |
|--|-------------|
| Item | Page |
| Program Specification For internal medicine year 2016-2017 | |
| A. Basic Information | 4 |
| <u>B. Professional Information</u> | 5 |
| <ol style="list-style-type: none"> 1. Program aims 2. Intended learning outcomes (ILOs) for the whole program 3. Program academic standards 4. Program external references 5. Program structure and contents (courses) 6- Courses contents (Annex 1) 7. Admission requirements 8. Progression and completion requirements 9. Program assessment methods and rules 10. Program evaluation 11. Declaration | |
| - Annex 1, Courses/ specifications | 22 |
| Basic science courses | 23 |
| Course 1: Medical statistics. | 23 |
| Course 2: Research methodology | 29 |
| Course 3: Medicolegal Aspects & Ethics in Medical Practice and Scientific Research | 35 |
| Course 4 Pathology | 41 |
| Course 5 Physiology | 47 |
| <u>Course 6 Internal medicine</u> | 52 |
| 1)Module.1Gastroenterology | |
| 2)Module. 2 Cardiology | |
| 3)Module .3 Nephrology | |
| 4)Module. 4 Endocrinology | |
| 5)Module. 5 Rheumatology | |
| 6) Module. 6 Hematology. | |
| 7) Module. 7 critical care. | |
| 8) Module. 8 Neurology | |
| 9) Module. 9 Chest | |
| - Annex 2, Program external references | 110 |

| | |
|---|-----|
| - Annex 3, Teaching methods | 115 |
| - Annex 4, Assessment methods | 119 |
| - Annex 5, Program evaluation tools | 123 |
| - Annex 6 Matrixes: I-General Academic reference standards(GARS) for postgraduates versus Program ARS 1-Graduate attributes 2-Academic Standards II-Program ARS versus program ILOs III- Program Matrix. | 125 |
| - Annex 7, Additional information. | 146 |



Medical Doctorate (M.D.) degree of Internal medicine

A. Basic Information

- ✚ **Program Title:** Medicine Doctorate degree of Internal medicine
- ✚ **Nature of the program:** Single.
- ✚ **Responsible Department:** Department of Internal medicine - Faculty of Medicine- Assiut University.
- ✚ **Program Academic Director (Head of the Department)**
Pr. Dr: Lobna Eltony
- ✚ **Coordinator (s):**
 - **Principle coordinator:** Prof.Noor Eldeen AbdelAzeem.
 - **Assistant coordinators** Prof. Howaida Nafady.
Dr: Ghada Hassan and Prof Omar Herdan
- ✚ **Internal evaluators:** Prof. Hala Imam
- ✚ **External evaluator:** Prof. D Ali Mahmoud Kassem
- ✚ **Date of Approval by the Faculty of Medicine Council of Assiut University:** 23-9-2014
- ✚ **Date of most recent approval of program specification by the Faculty of Medicine Council of Assiut University:** 22-10-2017
- ✚ **Total number of courses:** 6 courses + 2 elective courses
- ✚ **Date last reviewed:** 20 / 9/ 2017.
- ✚ **Date of most recent approval of program specification by the Faculty of Medicine Council of Assiut University.**

B. Professional Information

1- Program aims

1/1 To enable candidates to master high level of patients care by teaching high level of clinical skills, bedside care skills, in addition to update medical knowledge as well as clinical experience and competence in the area of gastroenterology, Cardiovascular , rheumatology, endocrine, hematology, nephrology, chest, neurology and geriatric medicine in addition to intensive and intermediate care and units , besides dealing with emergent cases in emergency unit and enabling the candidates of making appropriate referrals to a sub-specialist.

1/2. Provide specialists with fundamental knowledge intensive care unit as regards; dealing in details with critically ill patients, ICU equipments, techniques, indications, contraindications and training skills of different intensive care techniques.

1/3 To introduce candidates to the basics and advances of scientific medical research.

1.4. To enable candidates to have professional careers as a consultant in Egypt and recognized abroad.

1.5.To enable candidates to pursue higher studies and subspecialties.

1.6.To enable candidates to understand in details 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. Demonstrate in-depth knowledge and understanding of theories, basics and updated biomedical, clinical epidemiological and socio – behavioral science relevant to internal medicine as well as the evidence – based application of this knowledge to patient care.
- B. Explain basics, methodology, tools and ethics of scientific medical, clinical research.
- C. Mention ethical, medico logical principles and bylaws relevant to his practice in the field of internal medicine.
- D. Mention principles and **measurements** of quality assurance and quality improvement in medical education and in clinical practice of internal medicine.
- E. Mention health care system, public health and health policy, issues relevant to this speciality and principles and methods of system – based improvement of patient care in common health problems of the field of internal medicine

2/2 Intellectual outcomes:

- A. Apply the basic and clinically supportive sciences which are appropriate to Internal.
- B. Demonstrate an investigatory and analytic thinking “problem – solving “approaches to clinical situation related to Internal medicine.
- C. Plan research projects.
- D. Write scientific papers.
- E. Participate in clinical risk management as a part of clinical governance .
- F. Plan for quality improvement in the field of medical education and clinical practice in internal medicine.

G. Create / innovate plans, systems, and other issues for improvement of performance in his practice related to internal medicine.

H. Present and defend his / her data in front of a panel of experts.

I. Formulate management plans and alternative decisions in different situations in the field of the internal medicine.

2/3 Skills:

2/3/1 Practical and professional skills (Patient Care)

A. Provide extensive level of patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

p.s. Extensive level means in-depth understanding from basic science to evidence – based clinical application and possession of skills to manage independently all problems in field of practice.

B. Provide extensive level of patient care for patients with all common diagnoses and for uncomplicated procedures related to internal medicine.

C. Provide extensive level of patient care for non-routine, complicated patients and under increasingly difficult circumstances, while demonstrating compassionate, appropriate and effective care.

D. Perform diagnostic and therapeutic procedures considered essential in the field of internal medicine.

E. Handles unexpected complications, while demonstrating compassion and sensitivity to patient needs and concerns.

F. Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families in internal medicine related situations.

G. Gather essential and accurate information about patients of internal medicine related conditions.

H. Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence and clinical judgment for internal medicine related conditions.

I. Develop and carry out patient management plans for internal medicine related conditions.

J. Counsel and educate patients and their families about internal medicine related conditions.

K. Use information technology to support patient care decisions and patient education in all internal medicine related clinical situations.

L. Perform competently all medical and invasive procedures considered essential for internal medicine related conditions / area of practices.

M. Provide health care services aimed at preventing internal medicine related health problems.

N. Lead health care professionals, including those from other disciplines, to provide patient-focused care in internal medicine related conditions.

O. Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets (Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible 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. Demonstrate continuous evaluation of different types of care provision to patients in the different area of internal medicine
- B. Appraise scientific evidence.
- C. Continuously improve patient care based on constant self-evaluation and life-long learning.
- D. Participate in clinical audit and research projects.
- E. Practice skills of evidence-based Medicine (EBM).
- F. Educate and evaluate students, residents and other health professionals.
- G. Design logbooks.
- H. Design clinical guidelines and standard protocols of management.
- I. Appraise evidence from scientific studies related to the patients' health problems.
- J. Apply knowledge of study designs and statistical methods to the appraisal of clinical studies.
- K. Use information technology to manage information, access on-line medical information; for the important topics.

Interpersonal and Communication Skills

L. Master interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals, including:-

- Present a case.
- Write a consultation note.
- Inform patients of a diagnosis and therapeutic plan completing and maintaining comprehensive.
- Timely and legible medical records.
- Teamwork skills.

M. Create and sustain a therapeutic and ethically sound relationship with patients.

N. Elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.

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

Professionalism

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

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

R. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities

Systems-Based Practice

S. Work effectively in health care delivery settings and systems related to internal medicine including good administrative and time management.

T. Practice cost-effective health care and resource allocation that does not compromise quality of care.

U. Advocate for quality patient care and assist patients in dealing with system complexities.

V. Design, monitor and evaluate specification of under and post graduate course and programs.

W. Act as a chair man for scientific meetings including time management.

3- Program Academic Reference Standards (ARS) (Annex 2)

Academic standards for Medical Doctorate (MD) degree in Internal Medicine

Assiut Faculty of Medicine developed MD degree programs' academic standards for different clinical specialties.

In preparing these standards, the General Academic Reference Standards for post graduate programs (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.

These standards were approved by the faculty council on 20/3/2010. These standards were revised and approved without changes by the Faculty Council on 23-9-2014.

4- Program External References (Benchmarks)

1. ACGME (Accreditation Council for Graduate Medical Education).

http://www.acgme.org/acWebsite/navPages/nav_Public.asp

2. American Board of Internal Medicine. <http://www.abim.org/>

| Item | internal medicine Diseases program | American Board of Internal Medicine |
|--------------------------|---|--|
| Goals | Matched | Matched |
| ILOS | Matched | Matched |
| Duration | 4 -6 years | 3 years |
| Requirement | different | Different |
| Program structure | different | Different |

5- Program Structure

A. Duration of program: 4-6 years

B. Structure of the program:

Total number of credit point = 420 CP

Master degree: 180 credit point

Didactic #: 37 (23.1%), practical 123 (76.9%), total 160 CP

Thesis and researches: 80 CP (33.3%)

First part

Didactic 10 CP (100 %), practical 0(0 %).total 10 CP

Second part

Didactic 24 , (16.3 %) practical 123 (83.7 %) total 147

According the currently applied bylaws:

Total courses:160 credit point

Compulsory courses: 157 credit point (98.1%)

Elective courses: 3 credit point (1.9%)

| | Credit points | % from total |
|-----------------------------|---------------|--------------|
| Basic science courses | 10 | 4.1% |
| Humanity and social courses | 3 | 1.2% |
| Speciality courses | 147 | 61.3% |
| Others (Computer, ...) | | 0 |
| Field training | 123 | 51.3% |
| Thesis | 40 | 16.7% |
| 2 published researches | 40 | 16.7% |

C- Program Time Table

Duration of program 4 years (could be extended at maximum to 6 years) divided into

Part 1

Program-related basic science courses

- Medical statistic
- Research methodology
- Medicolegal Aspects and Ethics in Medical Practice and Scientific Research

Students are allowed to sit the exams of these courses after 6 months from applying to the M D degree.

Students are allowed to sit the exams of the remaining basic science courses after 12 months from applying to the MD degree.

- Thesis and 2 published researches

For the M D thesis;

MD thesis subject should be officially registered within 1 year from application to the MD degree,

Discussion and acceptance of the thesis should not be set before 24 months from registering the M D subject;

It could be discussed and accepted either before or after passing the second part of examination

- Part 2

Program –related speciality courses and ILOs

Students are not allowed to sit the exams of these courses before 4 years from applying to the MD degree.

Two elective courses can be set during either the 1st or 2nd parts.

The students pass if they get 50% from the written exams and 60% from oral exams, 60% from clinical/practical exams of each course and 60% of summation of the written exams, oral and clinical/practical exams of each course

500 marks for first part

1200 for second part

200 for elective courses

Written exam 40% - 70%.

Clinical /practical and oral exams 30% - 60%.

Curriculum Structure: (Courses):

| Courses and student work load list | Course Code | Core Credit points | | |
|--|-------------|--|------------|------------|
| | | Didactic Lectures | | |
| First Part | | | | |
| Basic science courses | | 1 | - | 1 |
| Course1 Medical Statistics | FAC309A | | | |
| Course 2 Research Methodology | FAC309B | 1 | - | 1 |
| Course 3 Medicolegal Aspects & Ethics in Medical Practice and Scientific Research | FAC310C | 1 | - | 1 |
| Course 4 Pathology | MED305 | 3.5 | - | 3.5 |
| Course 5 Physiology | MED303 | 3.5 | - | 3.5 |
| Elective courses* | | 3 CP | | |
| Elective course 1 | | 1.5 | | 1.5 |
| Elective course 2 | | 1.5 | | 1.5 |
| Thesis | | 40 CP | | |
| Published researches** | | 40 CP | | |
| Second Part | | Speciality courses 24 CP Speciality Clinical Work (log Book) 123 CP | | |
| <u>Course 6 internal medicine</u> | MED318 | 24 | | |
| Speciality Clinical Work (123 CP) | | | 123 | |
| Total of second part | | 24 | 123 | 147 |

* Elective courses can be taken during either the 1st or 2nd parts.

Student work load calculation:

Work load hours are scheduled depending on the type of activities and targeted competences and skills in different courses

Elective Courses#:

- Advanced medical statistics.
- Evidence based medicine.
- Advanced infection control.
- Quality assurance of medical education.
- Quality assurance of clinical practice.
- -Hospital management

Two of the above mentioned courses are prerequisites for fulfillment of the degree.

3. Thesis / Researches:

40 CP are appointed to the completion and acceptance of the thesis.

** Another 40 points are appointed to acceptance or publication of one research from the thesis in international indexed medical journals or publication of 2 researches from the thesis in local specialized medical journals.

***Internal Medicine Course**

| Units' Titles' list | % from total |
|--|--------------|
| 1)Module.1 Gastroenterology | 12% |
| 2)Module. 2 Cardiology | 12% |
| 3)Module .3 Nephrology | 12% |
| 4)Module. 4 Endocrinology | 12% |
| 5)Module. 5 Rheumatology | 12% |
| 6) Module. 6 Hematology. | 12% |
| 7) Module. 7 critical care. | 12% |
| 8) Module. 8 Neurology | 8% |
| 9) Module. 9 Chest | 8% |
| Total No. of Units (9 Modules): | 100% |

6. Courses Contents (Annex 1)

The competency based objectives for each course/module/rotation are specified in conjunction with teaching/training methods, requirements for achieving these objectives and assessment methods.

See Annex 1 for detailed specifications for each course/ module
Annex 6 III: Program Matrix

7-Admission requirements

+ Admission Requirements (prerequisites) if any :

I. General Requirements:

- Master degree in Tropical Medicine and Gastroenterology.

II. Specific Requirements:

- Fluent in English (study language)

VACATIONS AND STUDY LEAVE

The current departmental policy is to give working residents 2 week leave prior to first/ second part exams.

FEES:

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

8-Progression and completion requirements

- + Examinations of the first part (Medical statistic, Research methodology and Medicolegal Aspects and Ethics in Medical Practice and Scientific Research) could be set at 6 months from registering to the MD degree.
- + Students are allowed to sit the exams of the remaining essential courses of the first part after 12 months from applying to the MD degree.
- + Examination of the second part cannot be set before 4 years from registering to the degree.

- ✚ Discussion of the MD thesis could be set after 2 years from officially registering the MD subject, either before or after setting the second part exams.
- ✚ The minimum duration of the program is 4 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 MD thesis.
4. Acceptance or publication of one research from the thesis in international indexed medical journals or publication of 2 researches from the thesis in local specialized medical journals.

9-Program assessment methods and rules (Annex IV)

| Method | ILOs measured |
|---|------------------------------|
| Written examinations: Structured essay questions Objective questions MCQ Problem solving | K & I |
| Clinical: Long/short cases OSCE | K ,I, P &G skills |
| Structured oral | K ,I &G skills |
| Logbook assessment | All |
| Research assignment | I &G skills |

Weighting of assessments:

| Courses | Degrees | | | | |
|--|-------------|--------------|------------------------------|----------|-------|
| | Course code | Written Exam | Oral and/or Practical I Exam | Total | |
| First Part | | | | | |
| Basic science courses: | | | | | |
| Course 1: Medical Statistics | FAC309A | 35 | 15 | - | 50 |
| Course 2: Research methodology | FAC309B | 35 | 15 | - | 50 |
| Course 3: Medicolegal Aspects & Ethics in Medical Practice and Scientific Research | FAC310C | 35 | 15 | - | 50 |
| Course 4: Pathology | MED305 | | | | |
| Course 5: Physiology | MED303 | | | | |
| Total of first part | | | | | 500 |
| Second Part | | | | | |
| | Course code | written | oral* | clinical | total |
| Speciality Courses | | 500 | | | |
| Course 6 Internal Medicine | | | 200 | 500 | |
| Paper 1 | | 125 | | | |
| Paper 2 | | 125 | | | |
| Paper 3 | | 125 | | | |
| Paper 4 | | 125 | | | |
| Total of second part | | 500 | 200 | 500 | 1200 |
| Elective course 1 | | 50 | | 50 | 100 |
| Elective course 2 | | 50 | | 50 | 100 |

* 25% of the oral exam for assessment of logbook

500 marks for first part

1200 for second part

200 for elective courses

Written exam 41.7 % (500 marks).

Clinical /practical and oral exams 58 .3% (700 marks

Examination system:

➤ **First part:**

- Written exam 2 hours in Medical Statistics and Research Methodology + oral examination
- Written exam 1 hours in Medicolegal Aspects and Ethics in Medical Practice and Scientific Research + oral examination
- Written exam 3 hours in Pathology + oral exam
- Written exam 3 hours in physiology + oral exam

➤ **Second part:**

- Written exam four papers 3 hours for each in Internal Medicine + Oral exam+ Clinical exam

➤ **Elective courses**

- Written exam one paper 1 hour in Elective course 1 + Oral & Practical exam
- Written exam one paper 1 hour in Elective course 2 + Oral & Practical exam

10-Program evaluation

| By whom | Method | sample |
|---|---|--------|
| Quality Assurance Unit | Reports Field visits | # |
| External Evaluator (s): External Examiner (s): | Reports Field visits | # |
| Stakeholders | Reports Field visits questionnaires | # |
| Senior students | questionnaires | # |
| Alumni | questionnaires | # |
| | | |

#Annex 5 contains evaluation templates and reports (Joined in the departmental folder).

11-Declaration

We certify that all of the information required to deliver this program is contained in the above specification and will be implemented.

All course specifications for this program are in place.

| Contributor | Name | Signature | Date |
|---|-----------------------------|-----------------------------|------|
| Program Principle Coordinator: | Prof.Noor Eldeen AbdelAzeem | Prof.Noor Eldeen AbdelAzeem | |
| Head of the Responsible Department (Program Academic Director): | Prof :Lobna Eltony | Prof :Lobna Eltony | |

Annex 1, Specifications for Courses / Modules

Annex 1: specifications for courses

First Part

Course 1: Medical statistics

Course 2: Research Methodology

Course 3: - Medicolegal Aspects and Ethics in Medical Practice and Scientific Research

Course 4 Tropical Medicine and Gastroenterology 1

Course 1: Medical statistics

Name of department: Public Health and Community Medicine

Faculty of medicine

Assiut University

2016-2017

1. Course data

+ Course Title: Medical statistics

+ Course code: FAC309A

+ Speciality: offered to all clinical and academic specialties

+ Number of credit points: 1 credit point

+ Department (s) delivering the course: Pubic Health and Community Medicine

+ Coordinator (s):

- Course coordinator: Prof. Ahmed M. Hany

- Assistant coordinator (s):

Prof. Farag Mohammed Moftah

Prof. Hosnia Saeed Abdel Majeed

+ Date last reviewed: September 2017

+ Requirements (pre-requisites) if any :

- Completed Master degree in any of the academic or clinical departments of Medicine.

2. Course Aims

Enable graduate students to use statistical principles to improve their professional work and develop the concept of critical interpretation of data

3. Intended learning outcomes (ILOs): To be able to use statistical principals to manage data

A knowledge and understanding

| ILOS | Methods of teaching/ learning | Methods of Evaluation |
|---|-------------------------------|-----------------------|
| A. List the types of variables | Lecture and discussion | Written examination |
| B. Identify the methods of data collection | Lecture and discussion | Written examination |
| C. Describe the different sampling strategies | Lecture and discussion | Written examination |
| D. Identify types of tabular and graphic presentation of data | Lecture and discussion | Written examination |
| E. Identify measures of central tendency and dispersion | Lecture and discussion | Written examination |
| F. Identify the characters of normal distribution curve. | Lecture and discussion | Written examination |

B. intellectual

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|--|----------------------------------|-----------------------|
| A. Describe the normal curves. | Lecture & Discussions | Written examination |
| B. Describe and summarize data | Lecture & Discussions | Written examination |
| C. Select the proper test of significance | Lecture & Discussions | Written examination |
| D. Interpret the proper test of significance | Lecture & Discussions | Written examination |

C. Practical skills

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|---|----------------------------------|--------------------------|
| A. Design data entry files. | Tutorial on SPSS | Assignments SPSS exam |
| B. Validate data entry. | Tutorial on SPSS | Assignments SPSS exam |
| C. Manage data files. | Tutorial on SPSS | Assignments SPSS exam |
| D. Construct tables and graphs. | Tutorial on SPSS | Assignments SPSS exam |
| E. Calculate measures of central tendency and dispersion. | Tutorial on SPSS | Assignments SPSS exam |
| F. Select, apply and interpret the proper test of significance. | Tutorial on SPSS | Assignments SPSS exam |

D general skills

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|--|----------------------------------|---------------------------------|
| A. Appraise scientific evidence | Discussions | Research assignment |
| B. Use information technology to manage information, access on-line medical information; for the important topics. | tutorial | Research and audits' assignment |

**4. Course contents (topic s/modules/rotation
Course Matrix**

Time Schedule: First Part

| Topic | Covered ILOs | | | |
|--|----------------|-------------------|-----------------------|---------------------|
| | Knowledge A | Intellectual B | Practical skills C | General Skills D |
| Introduction | A-F | A-D | - | A&B |
| Tables and graphics | D | A-D | - | A&B |
| Sampling | C | - | - | A&B |
| Methodology of data collection | B | - | - | A&B |
| Type of variables | A | - | - | A&B |
| Proportion test& Chi-square test | E,F | C&D | - | A&B |
| Student T test& Paired T test | E,F | C&D | F | A&B |
| ANOVA test | E,F | C&D | F | A&B |
| Non parametric tests | E,F | C&D | F | A&B |
| Discrimination analysis factor analysis | E,F | C&D | - | A&B |
| SPSS Introduction | A-F | A-D | - | A&B |
| Data entry and cleaning of data | A | A-D | A-C | A&B |
| Transforming of variables | A | A&B | A-C | A&B |
| Descriptive statistics | D | A-D | D&E | A&B |
| Graphic presentation | D | A&B | D | A&B |
| Chi square and interpretation of results | E,F | C&D | F | A&B |
| Correlation Regression | E,F | C&D | F | A&B |
| Multiple and logistic Regression | E,F | C&D | F | A&B |

5. Course Methods of teaching/learning

1. Lectures
2. Assignments
3. Discussions
4. Exercises
5. Tutorial on SPSS v.16

6. Course assessment methods:

- i. **Assessment tools:**
 1. Practical examination
 2. Attendance and active participation
 3. Assignments
 4. SPSS examination
 5. written exam
- ii. **Time schedule:** After 6 months from applying to the M D degree.
- iii. **Marks:** 50 (35 for written exam and 15 for oral exam).

7. List of references

- i. **Lectures notes**
Department lecture notes
- ii. **Essential books**
Medical statistics
- iii. **Recommended books**
Discovering statistics using SPSS
- iii. **Periodicals, Web sites, etc**

8. Signatures

| | |
|---|---|
| Course Coordinator: - Prof. Ahmed M. Hany | Head of the Department: - Prof. Omaila El- Gibaly |
| Date: 17/9/2017 | Date: 17/9/2017 |

Course 2: Research Methodology

*Name of department: All clinical and academic departments
Faculty of medicine
Assiut University
2016-2017*

1. Course data

- ✚ Course Title: Research methodology
- ✚ Course code: FAC309B
- ✚ Speciality: Offered to all clinical and academic specialties
- ✚ Number of credit points: 1 credit point
- ✚ Department (s) delivering the course: Department of public health
- ✚ Coordinator (s):
 - Course coordinator: Prof. Ali Zarzour
 - Assistant coordinator (s):

Prof. Mohamed H. Qayed
Prof. Omaima El-Gibaly
- ✚ Date last reviewed: September 2017
- ✚ Requirements (prerequisites) if any :
 - Completed Master degree in any of the academic or clinical departments of Medicine.

2. Course Aims

To provide graduate students with the skills of:

- Research proposal,
- Writing planning and implementing rigorous research,
- Writing and publishing scientific papers.

3. Intended learning outcomes (ILOs): To be able to write a rigorous research proposal

A knowledge and understanding

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|--|----------------------------------|-----------------------|
| A. Explain differences between different study designs | Lecture and discussion | Written examination |
| B. Identify sources and types of bias in research | | |
| C. Describe the different sampling strategies, and compute sample size | | |
| D. Select and design valid measurement tools for research | | |
| E. Explain ethical issues in conducting research on human subjects | | |
| F. describe the rules of authorship in scientific writing | | |
| G. List the steps involved in proposal writing | | |

| | | |
|--|--|---------------------|
| H. Identify a research problem within a conceptual framework | Lecture on Criteria to Consider to identify a research problem | discussion |
| I. Use the web sources to do a literature search | Practical tutorial on web | assignment |
| J. Select the appropriate study design for the research question | Lecture on various study designs | Written examination |
| K. Minimize bias in designing research | Lecture on the different types of bias | Written examination |
| L. Screening & theoretical background | Lectures on criteria for successful screening program& criteria for evaluation a screening test. | Written examination |

B. intellectual

| Competency and Skills | Methods of teaching/ learning | Methods of Evaluation |
|---|-------------------------------|-----------------------|
| A. Apply basic science & knowledge for appraising scientific literature | Discussions & seminars | Written examination |

C. Practical skills

| Competency and Skills | Methods of teaching/ learning | Methods of Evaluation |
|---|-------------------------------|-----------------------------|
| A. Develop a budget and time line for the research | Tutorial | Assignments |
| B. Design a data entry file | Tutorial on Epi-info or Excel | Assignments Written exam |
| C. Identify steps required in fielding the study | Lecture | Assignments Written exam |
| D. Identify steps required for calculation Sensitivity, Specificity, positive predictive value, negative predictive value, Accuracy of a screening test | Lecture | Assignments Written exam |

D general skills

Practice based learning improvement & professionalism

(Scientific Paper writing skills)

| Competency and Skills | Methods of teaching/ learning | Methods of Evaluation |
|------------------------------------|-------------------------------|---|
| A. To be able to write an abstract | Tutorial | Written examination case study for critique |
| B. Write the introduction | Tutorial | Written examination |
| C. Write the methodology section | Tutorial | Written examination |
| D. Present the results | Tutorial | Written examination |
| E. Perform Discussion section | Tutorial | Written examination |
| F. Learn Authorship ethical rules | Tutorial | Written examination |

4. Course contents (topic s/modules/rotation Course Matrix

Time Schedule: First Part

| Topic | Covered ILOs | | | |
|------------------------------------|----------------|-------------------|-----------------------|---------------------|
| | Knowledge A | Intellectual B | Practical skills C | General Skills D |
| Introduction & proposal writing | G | A | A | A-F |
| Epidemiological Study designs | A,J | A | B,C | - |
| Screening & theoretical background | L | A | - | - |
| Screening practical | L | A | D | - |
| Sample size calculation | B | A | B,C | - |
| Research bias | H | A | C | F |
| Ethics in research | E,F | A | C | F |

5. Course Methods of teaching/learning:

1. Lectures
2. Assignments
3. Discussion
4. Exercises

6. Course assessment methods:

i. Assessment tools:

1. Written examination
2. Attendance and active participation
3. Class
4. Assignments

ii. Time schedule: After 6 months from applying to the M D degree.

iii. Marks: 50 (35 for written exam and 15 for oral exam).

7. List of references

i. Lectures notes

- Department lecture notes

ii. Essential books

- An epidemiologic Approach to Reproductive Health, CDC, FHI, and WHO Phyllis A. wingo, James E. Higgins, Goerge L. Rubin, and S. Christine Zahniser

iii. Recommended books

- Evidence Based Medicine How to practice and teach EBM.
- David Sachett, Sharon E. Straus, W. Scott Richardson , William Rosenberg R. Brain Haynes

iv. Periodicals, Web sites, ... etc

- Dissertation workshop open courseware JHSPH

8. Signatures

| | |
|--|---|
| Course Coordinator: - Prof. .Ali Zarzour | Head of the Department: - Prof. Omaima EL- Gibaly |
| Date: 17/9/2017 | Date: 17/9/2017 |

Course 3: Medicolegal Aspects and Ethics in Medical Practice and Scientific Research

Name of department:









Forensic medicine and clinical toxicology

Faculty of medicine

Assiut University

2016-2017

1. Course data

-  **Course Title: Medicolegal Aspects and Ethics in Medical Practice and Scientific Research**
-  **Course code: FAC310C**
-  **Speciality: *General medicine, Special medicine, Pediatrics, Public health, Oncology and Rheumatology (1st part).***
-  **Number of credit points: 1 credit point**
-  **Department (s) delivering the course: Forensic Medicine and Clinical Toxicology**
-  **Coordinator (s):**
 - **Course coordinator:**
Prof. Wafaa Mohamed Abdel Moneium
 - **Assistant coordinator (s) Assist.**
Prof. Amal Ali.Mohammed
-  **Date last reviewed: 9– 2017.**
-  **Requirements (prerequisites) if any :**
 - **Completed Master degree.**

2. Course Aims

To describe the basic ethical and medicolegal principles and bylaws relevant to practice in the field of General medicine, Special medicine, Pediatrics, Public health, Oncology and Rheumatology

3. Intended learning outcomes (ILOs):

A knowledge and understanding

| Competency and Skills | Methods of teaching/ learning | Methods of Evaluation |
|--|-------------------------------|-----------------------|
| A. Mention principals of Taking consent. | Lecture and discussion | Oral &Written exam |
| B. Mention principals of Writing a death certificate | Lecture and discussion | Oral &Written exam |
| C. Mention principals of diagnosing death. | Lecture and discussion | Oral &Written exam |
| D. Mention principals of writing toxicological reports. | Lecture and discussion | Oral &Written exam |
| E. Explain principals of medical reports. | Lecture and discussion | Oral &Written exam |
| F. List indications and principals of induced emesis, gastric lavage and samples collection. | Lecture and discussion | Oral &Written exam |

B. intellectual

| Competency and Skills | Methods of teaching/ learning | Methods of Evaluation |
|--|-------------------------------|-----------------------|
| A. Present case , seminars in death certificate | Lecture and discussion | Oral &Written exam |
| B. Present case, seminars in toxicological cases | Lecture and discussion | Oral &Written exam |

C. Practical skills

| Competency and Skills | Methods of teaching/ learning | Methods of Evaluation |
|---|-------------------------------|--|
| A. Identify medical ethics and ethics in research. | Lecture and discussion | Reading Discussion |
| B. Prepare and write consent. | Lecture and discussion | Reading Discussion |
| C. Identify medical responsibilities. | Lecture and discussion | Reading Discussion |
| D. Write death certificate. | Lecture and discussion | Reading Discussion and active participation |
| E. Deal with a case of Suspicious death | Lecture and discussion | Reading Discussion and active participation |
| F. Perform gastric lavage, induce emesis, and obtain samples. | | |
| G. Write medical and toxicological reports | Lecture and discussion | Reading Discussion and active participation |
| H. Develop and carry out | | |

| | | |
|---|--|--|
| patient management plans for Euthanaesia, and Organ Transplantation | | |
| I. Counsel patients and their families about speciality related conditions including Permanent infirmities, Euthanasia, and Organ Transplantation | | |

D general skills

| Competency and Skills | Methods of teaching/ learning | Methods of Evaluation |
|---|-------------------------------|-----------------------|
| A. Present a case. | Lecture and discussion | Global rating logbook |
| B. Write a consultation note | Lecture and discussion | Global rating logbook |
| C. Inform patients and maintaining comprehensive. | Lecture and discussion | Global rating logbook |
| D. Make timely and legible medical records | Lecture and discussion | Global rating logbook |
| E. Acquire the teamwork skills | Lecture and discussion | Global rating logbook |

4. Course contents (topic s/modules/rotation Course Matrix

Time Schedule: First Part

| Topic | Covered ILOs | | | |
|---------------------------------|--------------|--------------|------------------|----------------|
| | Knowledge | Intellectual | Practical skills | General Skills |
| | A | B | C | D |
| 1. Death and death certificate. | B,C | A | D,E | A |
| 2. Medical Reports | A | | G | A,D,E |
| 3. Toxicological reports | D,F | B | G,F | A,E |
| 4. Ethics in research. | A | | A | |
| 5. Medical ethics. | E | | A,B,C,H,I | B,C,E |

5. Course Methods of teaching/learning:

1. Lectures.
2. Discussions.
3. Exercises.

6. Course assessment methods:

i. Assessment tools:

1. Written examination.
2. Attendance and active participation.
3. Oral examination.

ii. Time schedule: After 6 months from applying to the M D degree.

iv. Marks: 50 (35 for written exam and 15 for oral exam).

7. List of references

i. Lectures notes

- Course notes.
- Staff members print out of lectures and/or CD copies.

ii. Essential books

- Ballantyne B., Marrs T. and Syversen T.(1999):General and Applied Toxicology.2nd edition. MACMILLAN REFERENCE LTD.UK.
- Bernard Knight and Pekka Saukko (2004): Knight Forensic Pathology. Hodder Arnold press

iii. Recommended books

- Klassen D. (2001): Casarettand Doull s. Toxicology the basic science of poisons. McGraw. Hill press medical publishing division New York

iv. Journal and web site

- Journals of all Egyptian Universities of Forensic Medicine and Clinical Toxicology.
- All International Journals of Forensic Medicine and Clinical Toxicology which available in the university network at www.sciencedirect.com. As :
Forensic Science International Journal.
Toxicology Letter.

8. Signatures

| | |
|---|---|
| - Course Coordinator: Prof. Wafaa Mohamed Abdel Moneium | - Head of the Department: Prof. Wafaa Mohamed Abdel Moneium |
| Date: 17- 9-2017 | Date: 17- 9-2017 |

Course 4 Pathology






Name of department: Internal medicine


Faculty of medicine


Assiut University


2016-2017

1. Course data

-  **Course Title: Pathology**
-  **Course code: MED 305**
-  **Speciality: *Internal medicine***
-  **Number of credit points: 3.5 credit point**
-  **Department (s) delivering the course: Pathology department**

-  **Coordinator (s):**
 - Staff members of pathology**

-  **Date last reviewed : 9– 2017.**

-  **Requirements (prerequisites) if any :**
 - **Completed Master degree.**

2. Course Aims

- -The student should acquire the pathological facts necessary for Internal Medicine

3. Intended learning outcomes (ILOs):

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|---|-------------------------------|---|
| A. Illustrate knowledge and the methods used to assess pathology in the following diseases: <ul style="list-style-type: none">• Chronic hepatitis• Hepatocellular carcinoma• Metabolic liver diseases• Peptic ulcer disease• Glomerulonephritis• Nephrotic syndrome• End stage Renal diseases• Rheumatoid arthritis• Pathology of tumors• Gain knowledge in liver and kidney histology in both normal and diseased states. | -Lectures | -Written and oral examination - Log book |

Intellectual outcomes

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|--|---|--|
| A. Correlates the facts of Pathology with clinical reasoning, diagnosis and management of common diseases related to Internal Medicine | Didactic (lectures, seminars, tutorial) | -Written and oral examination -Log book |

Practical skills = 0

D-General Skills

Practice-Based Learning and Improvement

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|--|--|-----------------------|
| A. Use information technology to manage information, access on-line medical information; and support their own education | seminars Senior Staff Experience | Oral exam Logbook |

Interpersonal and Communication Skills

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|---|----------------------------------|------------------------------------|
| B. Write reports in common conditions mentioned in A .A | CLINICAL ROUNDS SEMINARS | Logbook Oral exam Chick list |

Professionalism

| ILOs | Methods of teaching/ Learning | Methods of Evaluation |
|---|----------------------------------|-----------------------|
| C. Demonstrate a commitment to ethical principles | | Logbook Oral exam |

Systems-Based Practice

| ILOs | Methods of teaching learning | Methods of Evaluation |
|---|---------------------------------|-----------------------|
| D. Work effectively in different health care delivery settings and systems. | Senior Staff Experience | 1. 360o global rating |

**4. Course contents (topic s/modules/rotation
Course Matrix**

Time Schedule: First part

| Topic | Covered ILOs | | | |
|--|--------------|--------------|-----------------|----------------|
| | Knowledge | Intellectual | Practical skill | General Skills |
| Pathology | | | | |
| Chronic hepatitis | A | B | - | A-D |
| Hepatocellular carcinoma | A | B | - | A-D |
| Metabolic liver diseases | A | B | - | A-D |
| Peptic ulcer disease | A | B | - | A-D |
| Glomerulonephritis | A | B | - | A-D |
| Nephrotic syndrome | A | B | - | A-D |
| End stage Renal diseases | A | B | - | A-D |
| Rheumatoid arthritis | A | B | - | A-D |
| Pathology of tumors | A | B | - | A-D |
| Gain knowledge in liver and kidney histology in both normal and diseased states. | A | B | - | A-D |

5. Course Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. journal club

**6. Course Methods of teaching/learning: for students
with poor achievements**

1. Extra Didactic (lectures, seminars, tutorial) according to their needs
2. Extra training according to their needs

7. Course assessment methods:

i. Assessment tools:

1. Oral examination
2. Written examination

ii. Time schedule: At the end of First part

iii. Marks: 175

8. List of references

i. Lectures notes

- Course notes
- Staff members print out of lectures and/or CD copies

ii. Essential books

Robbins and Cotran's Pathologic basis of diseases

iii. Recommended books

Robbin's Basic Pathology

9. Signatures

| Course Coordinator | |
|-------------------------------|---|
| Coordinator: DR. Abeer Refaiy | Head of the Department: Prof. Lobna Eltony |
| Date: | Date: ... |

Course 5: Physiology

Name of department:






Internal medicine


Faculty of medicine



Assiut University

2016-2017

1. Course data

-  **Course Title: Physiology**
-  **Course code: MED 303**
-  **Speciality: *Internal medicine***
-  **Number of credit points: 3.5 credit point**
-  **Department (s) delivering the course: Physiology department**

-  **Coordinator (s):**
 - **Staff members of physiology department**

-  **Date last reviewed: 9– 2017.**
-  **Requirements (prerequisites) if any :**
 - **Completed Master degree.**

Course Aims

-The student should acquire the physiological facts necessary for *Internal Medicine*.

Intended learning outcomes (ILOs):

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|--|-------------------------------|---|
| <p>A. Illustrate knowledge and physiological principles of the following:</p> <ul style="list-style-type: none"> ● Regulation of the heart rate. ● Regulation of arterial blood pressure. ● Pulmonary and coronary circulation. ● Mechanism of blood coagulation. ● Regulation of blood glucose ● Calcium homeostasis ● Gastrointestinal hormones ● Physiology of digestion and absorption ● Acid base balance (mechanisms and abnormalities) ● Hormones of the kidney | -Lectures | -Written and oral examination - Log book |

A-Intellectual outcomes

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|--|---|--|
| A. Correlates the facts of Pathology with clinical reasoning, diagnosis and management of common diseases related to Internal Medicine | Didactic (lectures, seminars, tutorial) | -Written and oral examination -Log book |

Practical skills = 0

D-General Skills

Practice-Based Learning and Improvement

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|--|--|-----------------------|
| A. Use information technology to manage information, access on-line medical information; and support their own education | seminars Senior Staff Experience | Oral exam Logbook |

Interpersonal and Communication Skills

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|---|--------------------------------|------------------------------------|
| B. Write reports in common conditions mentioned in A .A | CLINICAL ROUNDS SEMINARS | Logbook Oral exam Chick list |

Professionalism

| ILOs | Methods of teaching/ Learning | Methods of Evaluation |
|---|-------------------------------|-----------------------|
| C. Demonstrate a commitment to ethical principles | | Logbook Oral exam |

Systems-Based Practice

| ILOs | Methods of teaching learning | Methods of Evaluation |
|---|-------------------------------|-----------------------|
| D. Work effectively in different health care delivery settings and systems. | Senior Staff Experience | 1. 360o global rating |

**4. Course contents (topic s/modules/rotation
Course Matrix**

Time Schedule: first part

| Topic | Covered ILOs | | | |
|--|--------------|--------------|-----------------|----------------|
| | Knowledge | Intellectual | Practical skill | General Skills |
| Physiology | | | | |
| Regulation of the heart rate. | A | B | - | A-D |
| Regulation of arterial blood pressure. | A | B | - | A-D |
| Pulmonary and coronary circulation. | A | B | - | A-D |
| Mechanism of blood coagulation. | A | B | - | A-D |
| Regulation of blood glucose | A | B | - | A-D |
| Calcium homeostasis | A | B | - | A-D |
| Gastrointestinal hormones | A | B | - | A-D |
| Physiology of digestion and absorption | A | B | - | A-D |
| Acid base balance (mechanisms and abnormalities) | A | B | - | A-D |
| Hormones of the kidney | A | B | - | A-D |

5. Course Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. journal club

6. Course Methods of teaching/learning: for students with poor achievements

1. Extra Didactic (lectures, seminars, tutorial) according to their needs
2. Extra training according to their needs

7. Course assessment methods:

- i. Assessment tools:
 1. Oral examination
 2. Written examination
- ii. Time schedule: At the end of first part
- iii. Marks: 175

8. List of references

i. Lectures notes

- Course notes
- Staff members print out of lectures and/or CD copies
- Medical physiology books by Staff Members of the Department of Medical physiology -Assiut University.
-

ii. Essential books

- 1- Guyton AC, Hall JE: Textbook of Medical Physiology, 11th ed. Saunders, 2006.

iii. Recommended books

1. Ganong's Review of medical physiology

9. Signatures

| Course Coordinator | |
|---|---|
| Coordinator: Prof. Omyma Galal | Head of the Department: Prof. Lobna Eltony |
| Date: | Date: |

Second Part

Course 6 Internal medicine

Name of department: **Internal medicine**

Faculty of medicine

Assiut University

2016-2017

1. Course data

- ✚ Course Title: Internal Medicine.
- ✚ Course code: MED 318
- ✚ Speciality is Internal Medicine
- ✚ Didactic 34 CREDIT POINTS (16. 3%) practical 123 (83.7 %) total 147 CREDIT POINTS.
- ✚ Department (s) delivering the course: Department of Internal Medicine- Faculty of Medicine- Assiut- EGYPT
- ✚ Coordinator (s):
 - Course coordinator: Prof. Noor Eldeen Abdelazeem Mohammad
 - Assistant coordinator (s) Prof. Enas A.ElKareemy Prof.Mohammad Abbas sobh
- ✚ Date last reviewed: September 2017
- ✚ Requirements (prerequisites) if any :
 - ✚ None
- ✚ Requirements from the students to achieve course ILOs are clarified in the joining log book.

This course consists of 9 Units(Modules)

- 1)Module.1Gastroenterology
- 2)Module. 2 Cardiology
- 3)Module .3 Nephrology
- 4)Module. 4 Endocrinology
- 5)Module. 5 Rheumatology
- 6) Module. 6 Heamatology.
- 7) Module. 7 critical care.
- 8) Module. 8 Neurology
- 9) Module. 9 Chest

2. Course Aims

1/1 To enable candidates to master high level of patients care by teaching high level of clinical skills, bedside care skills, in addition to update medical knowledge as well as clinical experience and competence in the area of gastroenterology, Cardiovascular , rheumatology, endocrine, hematology, nephrology, chest, neurology and geriatric medicine in addition to intensive and intermediate care and units , besides dealing with emergent cases in emergency unit and enabling the candidates of making appropriate referrals to a sub-specialist.

1/2. Provide specialists with fundamental knowledge intensive care unit as regards; dealing in details with critically ill patients, ICU equipments, techniques, indications, contraindications and training skills of different intensive care techniques.

1/3 To introduce candidates to the basics and advances of scientific medical research.

1/4 To acquire in depth the physiological and pathological Background necessary for internal Medicine in clinical reasoning, diagnosis and management of systemic diseases.

3. Course intended learning outcomes (ILOs):

A-Knowledge and understanding

Unit 1 Gastroenterology

| ILOs | Methods of teaching/ learning | <i>Methods of Evaluation</i> |
|---|--|--|
| <p>A. Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions:</p> <ul style="list-style-type: none"> ▪ IBD ▪ Malabsorption ▪ Acute and chronic diarrhea ▪ Peptic ulcer ▪ GIT malignancy ▪ GIT motility disorders ▪ Esophageal disorders ▪ Acute and chronic hepatitis ▪ Liver cirrhosis ▪ Hepatic encephalopathy ▪ NASH ▪ Hepatic malignancy ▪ Acute and chronic pancreatitis ▪ Tumors of the pancreas <hr style="width: 50%; margin-left: 0;"/> <ul style="list-style-type: none"> ▪ Liver abscess | <ul style="list-style-type: none"> -Lecture - seminar -outpatient -inpatient -case presentation -Direct observation -tutorial) - journal club, -Critically appraised topic. | <ul style="list-style-type: none"> -OSCE -Written Exam - Oral Exam - Case presentation -MCQ exam -Log book |
| <p>B. Mention the principles of</p> <ul style="list-style-type: none"> ▪ Gastrointestinal hormones ▪ Digestion and Absorption ▪ GIT motility | | |

| | | |
|--|--|--|
| <ul style="list-style-type: none"> ▪ Liver function ▪ Drug therapy of GI diseases ▪ Drug - induced Liver diseases ▪ Drug handling in liver cell failure ▪ Ascitic fluid infection | | |
| <p>C. Mention Basics of the following rare diseases and conditions:</p> <ul style="list-style-type: none"> ▪ Celiac disease ▪ Gastrointestinal motility disorder ▪ Metabolic liver diseases | | |
| <p>D. Explain the facts and principles of the relevant basic supportive sciences related to Advanced gastroenterology and hepatology.</p> | | |
| <p>E. Explain the facts and principles of the relevant clinically supportive sciences related to Advanced gastroenterology and hepatology.</p> | | |
| <p>F. Describe the basic ethical and medicolegal principles relevant to Advanced gastroenterology and hepatology.</p> | | |
| <p>G. Describe the basics and measurement of quality assurance to ensure good clinical care in Advanced gastroenterology and hepatology.</p> | | |
| <p>H. Explain the ethical and scientific principles of medical research</p> | | |
| <p>I. Explain the impact of common health problems in the field of Advanced gastroenterology and hepatology on the society.</p> | | |

Unit 2 Cardiology

| ILOs | Methods of teaching/ learning | <i>Methods of Evaluation</i> |
|--|--|--|
| <p>A. Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions:</p> <p>a. Myocardial ischemia syndromes like chronic stable angina, acute coronary syndromes, coronary artery spasm, and others.</p> <p>b. Hypertension and hypertensive heart diseases.</p> <p>c. Rheumatic fever and rheumatic heart diseases.</p> <p>d. Different pericardial diseases, whether acute or chronic.</p> <p>e. Acute and chronic diseases of the myocardial muscle.</p> <p>f. Coma</p> <p>g. Hypertensive emergencies</p> <p>h. Acute coronary syndromes</p> <p>i. Arrhythmias</p> <p>j. Pulmonary embolism</p> <p>k. Cardiogenic shock</p> | <ul style="list-style-type: none"> -Lecture - seminar -outpatient -inpatient -case presentation -Direct observation -tutorial) - journal club, -Critically appraised topic. | <ul style="list-style-type: none"> -OSCE -Written Exam - Oral Exam - Case presentation -MCQ exam -Log book |
| <p>B. Mention the principles of</p> <p>a. - Disturbances of the cardiac rhythm and all types of both tachycardias & bradycardias.</p> <p>b. Interrelation ship between the heart and other body systems.</p> <p>c. Drug and non drug therapy of different cardiac diseases.</p> <p>d. Central venous line placement</p> <p>e. Noninvasive mechanical ventilation</p> <p>f. Airway management</p> | | |

| | | |
|--|--|--|
| g. Endotracheal intubation h. Hemodynamic monitoring | | |
| C. Mention Basics of the following rare diseases and conditions: <ul style="list-style-type: none"> • Congenital heart diseases • Cardiac tumors | | |
| D. Explain the facts and principles of the relevant basic supportive sciences related to Cardiovascular system. | | |
| E. Explain the facts and principles of the relevant clinically supportive sciences related to Cardiovascular system. | | |
| F. Describe the basic ethical and medicolegal principles relevant to Cardiovascular system. | | |
| G. Describe the basics and measurement of quality assurance to ensure good clinical care in Cardiovascular system. | | |
| H. Explain the ethical and scientific principles of medical research | | |
| I. Explain the impact of common health problems in the field of Cardiovascular system on the society. | | |

Unit 3 Nephrology

| ILOs | Methods of teaching/ learning | <i>Methods of Evaluation</i> |
|--|---|---|
| <p>A. Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions:</p> <p>a. Glomerulonephritis b. Nephrotic syndrome c. Tubulo interstitial disease d. Renal failure e. UTI - Cystitis - Renal TB</p> | <p>-Lecture - seminar -outpatient -inpatient -case presentation -Direct observation -tutorial) - journal club, -Critically appraised topic.</p> | <p>-OSCE -Written Exam - Oral Exam - Case presentation -MCQ exam -Log book</p> |
| <p>B. Mention the principles of</p> <p>-Renal vascular disease - Urine formation -kidney functions</p> <ul style="list-style-type: none"> ● Acid base balance ● Water, electrolyte balance ● drug therapy of renal diseases ● drug - induced renal diseases ● drug handling in renal failure | | |
| <p>C. Mention Basics of the following rare diseases and conditions:</p> <p>-Congenital Renal diseases</p> | | |
| <p>D. Explain the facts and principles of the relevant basic supportive sciences related to Nephrology.</p> | | |
| <p>E. Explain the facts and principles of the relevant</p> | | |

| | | |
|---|--|--|
| clinically supportive sciences related to Nephrology. | | |
| F. Describe the basic ethical and medicolegal principles relevant to Nephrology. | | |
| G. Describe the basics and measurement of quality assurance to ensure good clinical care in Nephrology. | | |
| H. Explain the ethical and scientific principles of medical research | | |
| I. Explain the impact of common health problems in the field of Nephrology on the society. | | |

Unit 4 Endocrinology

| ILOs | Methods of teaching/ learning | <i>Methods of Evaluation</i> |
|--|---|--|
| <p>A. Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions:</p> <ul style="list-style-type: none"> ▪ Diabetes mellitus ▪ Thyroid and parathyroid diseases ▪ Adrenal gland diseases ▪ Obesity ▪ Pituitary gland diseases ▪ Diabetes insipidus ▪ Short stature | <ul style="list-style-type: none"> -Lecture - seminar -outpatient -inpatient -case presentation -Direct observation (tutorial) - journal club, -Critically appraised topic. | <ul style="list-style-type: none"> -OSCE -Written Exam - Oral Exam - Case presentation -MCQ exam -Log book |
| <p>B-Mention the principles of</p> <ul style="list-style-type: none"> ▪ Osteoporosis | | |

| | | |
|---|--|--|
| <ul style="list-style-type: none"> ▪ Growth disorder ▪ Calcium homeostasis ▪ Endocrine Emergencies ▪ Update in endocrine disorders ▪ Update management of D.M ▪ Drug therapy of Thyroid gland disorders ▪ Drug therapy of other endocrinal diseases & drug interaction | | |
| <p>C-Mention Basics of the following rare diseases and conditions: -Hereditary Endocrinal disorders(MEN type I and MEN type II)</p> | | |
| <p>D-Explain the facts and principles of the relevant basic supportive sciences related to Advanced Endocrinology.</p> | | |
| <p>E. Explain the facts and principles of the relevant clinically supportive sciences related to Advanced Endocrinology.</p> | | |
| <p>F. Describe the basic ethical and medicolegal principles relevant to Advanced Endocrinology.</p> | | |
| <p>G. Describe the basics and measurement of quality assurance to ensure good clinical care in Advanced Endocrinology.</p> | | |
| <p>H-Explain the ethical and scientific principles of medical research</p> | | |
| <p>I-Explain the impact of common health problems in the field of Advanced Endocrinology on the society.</p> | | |

Unit 5 Rheumatology

| ILOs | Methods of teaching/ learning | <i>Methods of Evaluation</i> |
|--|--|--|
| <p>A. Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions:</p> <ul style="list-style-type: none"> ▪ Rheumatoid arthritis ▪ SLE ▪ Crystal induced arthropathy ▪ Systemic sclerosis ▪ Dermatomyositis and polymyositis ▪ Osteoarthritis ▪ Seronegative arthropathy ▪ Arthritis in systemic diseases ▪ Infective arthritis | <ul style="list-style-type: none"> -Lecture - seminar -outpatient -inpatient -case presentation -Direct observation -tutorial) - journal club, -Critically appraised topic. | <ul style="list-style-type: none"> -OSCE -Written Exam - Oral Exam - Case presentation -MCQ exam -Log book |
| <p>B. Mention the principles of</p> <ul style="list-style-type: none"> ▪ Antiphospholipid syndrome ▪ Vasculitis. ▪ Acute phase response ▪ Uric acid metabolism ▪ Drug therapy of various rheumatic disease ▪ Drug - induced rheumatic diseases | | |
| <p>C. Mention Basics of the following rare diseases and conditions:</p> <ul style="list-style-type: none"> ▪ Systemic sclerosis ▪ Dermatomyositis and polymyositis ▪ Polymyalgia rheumatica | | |
| <p>D. Explain the facts and principles of the relevant basic supportive sciences related to advanced Rheumatology and Musculoskeletal disease</p> | | |
| <p>E- Explain the facts and principles of the relevant clinically supportive sciences related to advanced Rheumatology and Musculoskeletal disease</p> | | |
| <p>F. Describe the basic ethical and medicolegal</p> | | |

| | | |
|---|--|--|
| principles relevant to advanced Rheumatology and Musculoskeletal disease | | |
| G. Describe the basics and measurement of quality assurance to ensure good clinical care in advanced Rheumatology and Musculoskeletal disease | | |
| H. Explain the ethical and scientific principles of medical research | | |
| I. Explain the impact of common health problems in the field of advanced Rheumatology and Musculoskeletal disease on the society. | | |

Unit 6 Hematology

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|--|--|--|
| <p>A. Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions:</p> <ul style="list-style-type: none"> ▪ Anemias (Iron deficiency, Megaloblastic, Hemolytic) ▪ Hemoglobinopathies ▪ Bone marrow aplasia ▪ Myelodysplastic syndromes ▪ Abnormalities in Granulocytes (neutropenia, leukomoid reaction) ▪ Disorders of Bleeding (platelet function and number disorders) Vascular disorders ▪ Clotting disorders ▪ Thrombophilia (predisposition, causes) ▪ Blood transfusion ▪ Bone marrow transplantation ▪ Acute leukemias ▪ Chronic leukemias | <ul style="list-style-type: none"> -Lecture - seminar -outpatient -inpatient -case presentation -Direct observation -tutorial) - journal club, -Critically appraised topic. | <ul style="list-style-type: none"> -OSCE -Written Exam - Oral Exam - Case presentation -MCQ exam -Log book |

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| <ul style="list-style-type: none"> ▪ Lymphomas ▪ Myeloproliferative disorders ▪ Plasma cell disorders (Multiple myeloma) | | |
| <p>B-Mention the principles of</p> <ul style="list-style-type: none"> • Hemoglobin synthesis and function • Granulocyte functions • Immune functions • Clotting cascade • Hemoglobinopathies • Drug therapy of anemias • secondary bone marrow diseases • clotting and bleeding disorders | | |
| <p>C-Mention Basics of the following rare diseases and conditions:</p> <ul style="list-style-type: none"> • Hereditary clotting disorders • Opportunistic infections | | |
| <p>D. Explain the facts and principles of the relevant basic supportive sciences related to Advanced Hematology</p> | | |
| <p>E-Explain the facts and principles of the relevant clinically supportive sciences related to Advanced Hematology</p> | | |
| <p>F-Describe the basic ethical and medicolegal principles relevant to Advanced Hematology</p> | | |
| <p>G. Describe the basics and measurement of quality assurance to ensure good clinical care in Advanced Hematology</p> | | |
| <p>H. Explain the ethical and scientific principles of medical research</p> | | |
| <p>I. Explain the impact of common health problems in the field of Advanced Hematology on the society.</p> | | |

Unit 7 Critical care unit

| ILOs | Methods of teaching/ learning | <i>Methods of Evaluation</i> |
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| <p>A. Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions:</p> <p><u>ON cardiovascular critical care unit:</u></p> <ul style="list-style-type: none"> ▪ Coma ▪ Hypertensive emergencies ▪ Acute coronary syndromes ▪ Arrhythmias ▪ Pulmonary embolism ▪ Cardiogenic shock <p><u>ON Endocrinal critical care unit:</u></p> <ul style="list-style-type: none"> ▪ Diabetic emergencies ▪ Sepsis ▪ Multiple organ failure ▪ Endocrinal emergencies <p><u>ON Haematology critical care unit:</u></p> <ul style="list-style-type: none"> ▪ Neutropenic patients ▪ Critically thrombocytopenic patients ▪ Haematological malignancy patients on chemotherapy <p><u>ON Hepatogastroenterology Intensive Care Unit</u></p> <ul style="list-style-type: none"> ▪ Hepatic encephalopathy ▪ Acute gastrointestinal bleeding ▪ Acute pancreatitis ▪ Hepatorenal syndrome ▪ Cholangitis ▪ Acute liver cell failure. | <ul style="list-style-type: none"> -Lecture - seminar -outpatient -inpatient -case presentation -Direct observation -tutorial) - journal club, -Critically appraised topic. | <ul style="list-style-type: none"> -OSCE -Written Exam - Oral Exam - Case presentation -MCQ exam -Log book |

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| <p>B. Mention the principles of</p> <ul style="list-style-type: none"> ▪ Central venous line placement ▪ Noninvasive mechanical ventilation ▪ Airway management ▪ Endotracheal intubation ▪ Hemodynamic monitoring <p>Basic and advanced life support</p> <p>Preventive practice in critically ill</p> <ol style="list-style-type: none"> 1. Infection control in ICUs 2. Alimentary prophylaxis 3. Venous thromboembolism prophylaxis. <p>Indications of admission to ICU</p> <p>Vascular access:</p> <p>Airway management</p> <ol style="list-style-type: none"> 1. Nasal and oral airways 2. Laryngeal mask airway 3. Endotraheal tube 4. Suction <p>Haemodynamic monitoring</p> <ol style="list-style-type: none"> 1. Arterial blood pressure 2. Central venous pressure and pulmonary artery wedge pressure. 3. Cardiac output 4. Arrhythmias 5. Haemodynamic drug infusion <p>Invasive & noninvasive assessment of arterial blood gases</p> <ol style="list-style-type: none"> 1. Acid base status 2. Hypoxaemia and hypercapnia <p>The most common electrolyte disorders</p> <ol style="list-style-type: none"> 1. Hypokalemia 2. Hypomagnesemia 3. Hyponatremia 4. Hypocalcaemia. <p>Infection in ICU</p> | | |
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| <p>1. Sepsis syndrome. 2. Empirical antibiotic therapy</p> <p>Nutrition</p> <p>1. Metabolic substrate requirements 2. Entral tube feeding 3. Total parenteral nutrition</p> <p>Specific management and strategies in cardiopulmonary syndromes</p> <p>1. ARDS 2. Cardiogenic pulmonary oedema 3. Acute pulmonary embolism</p> | | |
| <p>C. Mention Basics of the following rare diseases and conditions:</p> <ul style="list-style-type: none"> • Cavernous sinus thrombosis • Haemolytic uraemic syndrome • Certain drugs intoxication | | |
| <p>D. Explain the facts and principles of the relevant basic supportive sciences related to Intensive care unit</p> | | |
| <p>E. Explain the facts and principles of the relevant clinically supportive sciences related to Intensive care unit</p> | | |
| <p>F. Describe the basic ethical and medicolegal principles relevant to Intensive care unit.</p> | | |
| <p>G. Describe the basics and measurement of quality assurance to ensure good clinical care in Intensive care unit</p> | | |
| <p>H. Explain the ethical and scientific principles of medical research</p> | | |
| <p>I. Explain the impact of common health problems in the field of Intensive care unit on the society.</p> | | |

Unit 8 Chest

| ILOs | Methods of teaching/ learning | <i>Methods of Evaluation</i> |
|--|--|--|
| <p>A. Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions:</p> <ul style="list-style-type: none"> ▪ COPD ▪ Lung cancer ▪ Pleural effusion ▪ Interstitial pulmonary fibrosis ▪ Pulmonary Tuberculosis. | <ul style="list-style-type: none"> -Lecture - seminar -outpatient -inpatient -case presentation -Direct observation -tutorial) - journal club, -Critically appraised topic. | <ul style="list-style-type: none"> -OSCE -Written Exam - Oral Exam - Case presentation -MCQ exam -Log book |
| <p>B. Mention the principles of</p> <ul style="list-style-type: none"> ▪ Respiratory failure ▪ Haemoptysis ▪ Acid base balance disorders | | |
| <p>C. Mention Basics of the following rare diseases and conditions:</p> <ul style="list-style-type: none"> ▪ Cystic fibrosis | | |
| <p>D. Explain the facts and principles of the relevant basic supportive sciences related to Advanced Chest Diseases</p> | | |
| <p>E. Explain the facts and principles of the relevant clinically supportive sciences related to Advanced Chest Diseases</p> | | |
| <p>F. Describe the basic ethical and medicolegal principles relevant to Advanced Chest Diseases</p> | | |
| <p>G. Describe the basics and measurement of quality assurance to ensure good clinical care in Advanced</p> | | |

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| Chest Diseases | | |
| H. Explain the ethical and scientific principles of medical research | | |
| I. Explain the impact of common health problems in the field of Advanced Chest Diseases on the society. | | |

Unit 9 Neurology

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
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| <p>A. Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions:</p> <ul style="list-style-type: none"> ▪ Cerebrovascular stroke ▪ coma (causes and management) ▪ Myopathy and neuromuscular junctional disorder ▪ Peripheral neuropathy ▪ Degenerative diseases. | <ul style="list-style-type: none"> -Lecture - seminar -outpatient -inpatient -case presentation -Direct observation -tutorial) - journal club, -Critically appraised topic. | <ul style="list-style-type: none"> -OSCE -Written Exam - Oral Exam - Case presentation -MCQ exam -Log book |
| <p>B-Mention the principles of</p> <ul style="list-style-type: none"> ▪ Involuntary movement ▪ Infections of nervous system ▪ neurological reflexes and their centers ▪ Spinal cord diseases. ▪ Seizures. | | |
| <p>C. Mention Basics of the following rare diseases and conditions:</p> <ul style="list-style-type: none"> ▪ Drug induced myopathy ▪ Neuromuscular disorders in collagen diseases | | |
| <p>D. Explain the facts and principles of the relevant</p> | | |

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| basic supportive sciences related to Advanced Neurological Diseases. | | |
| E. Explain the facts and principles of the relevant clinically supportive sciences related to Advanced Neurological Diseases. | | |
| F. Describe the basic ethical and medicolegal principles relevant to Advanced Neurological Diseases. | | |
| G. Describe the basics and measurement of quality assurance to ensure good clinical care in Advanced Neurological Diseases. | | |
| H. Explain the ethical and scientific principles of medical research | | |
| I. Explain the impact of common health problems in the field of Advanced Neurological Diseases on the society. | | |

B-Intellectual outcomes For all unit

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|---|--|--|
| A. Design / present case in common problem related to Internal Medicine | Clinical rounds Senior staff experience | Procedure/case presentation Log book and Portfolios |
| B. Apply the basic and clinically supportive sciences which are appropriate to Internal Medicine related problems. | | |
| C. Demonstrate an investigatory and analytic thinking “problem – solving “approaches to clinical situation related to Internal Medicine | | |
| D. Plan research projects. | | |
| E. Write scientific papers. | | |

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| <p>F. Lead risk management activities as a part of clinical governs as in:</p> <p>In gastroenterology</p> <ul style="list-style-type: none"> -Gastrointestinal bleeding -Perforation after interventional endoscopy <p>In cardiology</p> <ul style="list-style-type: none"> -Arrhythmias -Myocardial infarction <ul style="list-style-type: none"> -ICU -Coma -Hypoxemia and acid base balance disorders -Electrolyte imbalance -Convulsions -Nephrology <p>Acidosis</p> <p>Complication after dialysis</p> <ul style="list-style-type: none"> -Haematology: -Haemolytic crisis | | |
| <p>G. Plain quality improvement activities in the field of medical education and clinical practice in Internal Medicine</p> | | |
| <p>H. Create and innovate plans, systems, and other issues for improvement of performance in Internal Medicine</p> | | |
| <p>I. Present and defend his / her data in front of a panel of experts</p> | | |
| <p>J. Formulate management plans and alternative decisions in different situations in the field of the Internal Medicine</p> | | |

C-Practical skills (Patient Care)

Unit 2 Cardiology

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|--|---|--|
| A. Take history, examine and clinically diagnose different conditions related Cardiovascular system. | Didactic; Lectures Clinical rounds Seminars Clinical rotations (service teaching) | -OSCE at the end of each year -log book & portfolio |
| B-Order the following non invasive and invasive diagnostic procedures -X ray chest -cardiac markers -ECG -Echocardiography. -Abdominal Ultrasound -Kidney function test Serum electrolyte -Lipogram -Complete blood count | -Clinical round with senior staff Observation -Post graduate teaching | |
| C. Interpret the following non invasive/invasive diagnostic procedures -Cardiac markers Kidney function test Serum electrolyte -Lipogram -Complete blood count - Chest x-ray - Abdominal US | Clinical round with senior staff Observation -Post graduate teaching | |

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| <ul style="list-style-type: none"> -ECG - Echocardiography. | | |
| <p>D. Perform the following non invasive and invasive diagnostic procedures.</p> <ul style="list-style-type: none"> -ECG -Blood gases - Diagnostic US guided Pleural fluid aspiration - Diagnostic echo guided aspiration from Pericardial fluid. | <ul style="list-style-type: none"> -Hand on workshops -Perform under supervision of senior staff | <ul style="list-style-type: none"> - Procedure presentation - Log book - Chick list |
| <p>E. Prescribe the following non invasive/invasive therapeutic procedures.</p> <ul style="list-style-type: none"> - Choice of drug regimens for diseases mentioned in A.A . | <p>Clinical round with senior staff Observation</p> <ul style="list-style-type: none"> -Post graduate teaching | <ul style="list-style-type: none"> - Log book - Chick list |
| <p>F. Perform the following non invasive/invasive therapeutic procedures</p> <ul style="list-style-type: none"> - Central venous line placement - Noninvasive mechanical ventilation - Airway management - Endotracheal intubation - Therapeutic echo guided aspiration from Pericardial fluid. | <ul style="list-style-type: none"> -Hand on workshops -Perform under supervision of senior staff | <ul style="list-style-type: none"> - Procedure presentation - Log book - Chick list |
| <p>G. Develop and carry out patient management plans for problems mentioned in A.A.</p> | <p>Clinical round with senior staff</p> | |
| <p>H. Counsel and educate patients and their family about:</p> <ul style="list-style-type: none"> - Hypertension and hypertensive heart diseases. -Congenital heart disease | <p>Clinical round with senior staff</p> | |
| <p>I. Use information technology to support patient care decisions and patient education for Cardiology related conditions.</p> | <ul style="list-style-type: none"> -Post graduate teaching | |

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| | -Clinical round with senior staff | |
| J. Provide health care services aimed at preventing the following conditions: <ul style="list-style-type: none"> a. - Myocardial ischemia syndromes like chronic stable angina, acute coronary syndromes, coronary artery spasm, and others. b. Hypertension and hypertensive heart diseases. c. Pulmonary embolism d. Cardiogenic shock | -Post graduate teaching -Clinical round with senior staff | |
| K. Work with health care professionals, including those from other disciplines, to provide patient-focused care | Clinical round with senior staff | |
| L-Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets (Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records) | Clinical round with senior staff | |

Unit 2 Gastroenterology

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|--|---|--|
| A. Take history, examine and clinically diagnose different conditions related gastroenterology, hepatobiliary and pancreatic disease | Didactic; Lectures Clinical rounds Seminars Clinical rotations (service teaching) | -OSCE at the end of each year -log book & portfolio |
| B-Order the following non invasive and invasive diagnostic procedures: -Liver function tests -Complete blood count - Blood urea and serum creatinine -Hepatitis markers -Tumor markers -Pancreatic enzymes (Amylase and lipase) -Abdominal Ultrasound -Diagnostic gastrointestinal endoscopy -Gastrointestinal motility studies -PH manometry -Diagnostic paracentesis -Liver biopsy | -Clinical round with senior staff Observation -Post graduate teaching | |
| C. Interpret the following non invasive/invasive diagnostic procedures -Liver function tests -Complete blood count - Blood urea and serum creatinine -Hepatitis markers | Clinical round with senior staff Observation -Post graduate | |

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| <ul style="list-style-type: none"> -Tumor markers -Pancreatic enzymes (Amylase and lipase) -Abdominal Ultrasound -Diagnostic gastrointestinal endoscopy -Diagnostic paracentesis | teaching | |
| <p>D. Perform the following non invasive and invasive diagnostic procedures.</p> <ul style="list-style-type: none"> - Diagnostic paracentesis -Abdominal ultrasound -Liver biopsy | <ul style="list-style-type: none"> -Hand on workshops -Perform under supervision of senior staff | <ul style="list-style-type: none"> - Procedure presentation - Log book - Chick list |
| <p>E. Prescribe the following non invasive/invasive therapeutic procedures.</p> <ul style="list-style-type: none"> - Choice of drug regimens for diseases mentioned in A.A . | <p>Clinical round with senior staff Observation</p> <ul style="list-style-type: none"> -Post graduate teaching | <ul style="list-style-type: none"> - Log book - Chick list |
| <p>F. Perform the following non invasive/invasive therapeutic procedures</p> <ul style="list-style-type: none"> - Therapeutic paracentesis | <ul style="list-style-type: none"> -Hand on workshops -Perform under supervision of senior staff | <ul style="list-style-type: none"> - Procedure presentation - Log book - Chick list |
| <p>G. Develop and carry out patient management plans for problems mentioned in A.A.</p> | <p>Clinical round with senior staff</p> | |
| <p>H. Counsel and educate patients and their family about:</p> <ul style="list-style-type: none"> - Viral hepatitis and mode of transmission -Complications of viral hepatitis -Complications of liver cirrhosis | <p>Clinical round with senior staff</p> | |

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| -Chronic diarrhea | | |
| I. Use information technology to support patient care decisions and patient education for Gastroenterology, hepatobiliary, pancreatic related conditions. | -Post graduate teaching -Clinical round with senior staff | |
| J. Provide health care services aimed at preventing the following conditions: -Viral hepatitis -Chronic diarrhea -Liver cirrhosis | -Post graduate teaching -Clinical round with senior staff | |
| K. Work with health care professionals, including those from other disciplines, to provide patient-focused care | Clinical round with senior staff | |
| L-Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets (Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records) | Clinical round with senior staff | |

Unit 3 Nephrology

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|--|---|--|
| A. Take history, examine and clinically diagnose different conditions related to nephrology | Didactic; Lectures Clinical rounds Seminars Clinical rotations (service teaching) | -OSCE at the end of each year -log book & portfolio |
| B-Order the following non invasive and invasive diagnostic procedures -Urine analysis -plain urinary tract -IVU -Abdominal Ultrasound -Kidney function test -Serum electrolyte -Complete blood count -Renal biopsy | -Clinical round with senior staff Observation -Post graduate teaching | |
| C. Interpret the following non invasive/invasive diagnostic procedures - Urine analysis -plain urinary tract -IVU -Abdominal Ultrasound -Kidney function test -Serum electrolyte -Complete blood count -Blood gases -Renal biopsy | Clinical round with senior staff Observation -Post graduate teaching | |

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| <p>D. Perform the following non invasive and invasive diagnostic procedures.</p> <ul style="list-style-type: none"> -Blood gases - Abdominal ultrasound - Renal biopsy | <ul style="list-style-type: none"> -Hand on workshops -Perform under supervision of senior staff | <ul style="list-style-type: none"> - Procedure presentation - Log book - Chick list |
| <p>E. Prescribe the following non invasive/invasive therapeutic procedures.</p> <ul style="list-style-type: none"> - Choice of drug regimens for diseases mentioned in A.A . | <ul style="list-style-type: none"> Clinical round with senior staff Observation -Post graduate teaching | <ul style="list-style-type: none"> - Log book - Chick list |
| <p>F. Develop and carry out patient management plans for problems mentioned in A.A.</p> | <ul style="list-style-type: none"> Clinical round with senior staff | |
| <p>G. Counsel and educate patients and their family about:</p> <ul style="list-style-type: none"> - chronic renal diseases | <ul style="list-style-type: none"> Clinical round with senior staff | |
| <p>H. Use information technology to support patient care decisions and patient education for nephrology related conditions.</p> | <ul style="list-style-type: none"> -Post graduate teaching -Clinical round with senior staff | |
| <p>I. Provide health care services aimed at preventing the following conditions:</p> <ul style="list-style-type: none"> - urinary tract infections - Renovascular hypertension - Chronic renal failure | <ul style="list-style-type: none"> -Post graduate teaching -Clinical round with senior staff | |
| <p>J. Work with health care professionals, including those from other disciplines, to provide patient-focused care</p> | <ul style="list-style-type: none"> Clinical round with senior staff | |

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| <p>K-Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets (Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records)</p> | <p>Clinical round with senior staff</p> | |
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Unit 4 Endocrinology

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|--|---|--|
| A. Take history, examine and clinically diagnose different conditions related endocrinology | Didactic; Lectures Clinical rounds Seminars Clinical rotations (service teaching) | -OSCE at the end of each year -log book & portfolio |
| B-Order the following non invasive and invasive diagnostic procedures -Hormonal assay -Abdominal Ultrasound Serum electrolyte -Lipogram -DEXA - Thyroid Ultrasound - X-ray: skull, joints and hands - Isotope scanning | -Clinical round with senior staff Observation -Post graduate teaching | |
| C. Interpret the following non invasive/invasive diagnostic procedures - Hormonal assay -Abdominal Ultrasound -Serum electrolyte -Lipogram -DEXA - Thyroid Ultrasound - X-ray: skull, joints and hands | Clinical round with senior staff Observation -Post graduate teaching | |
| D. Perform the following non invasive and invasive diagnostic procedures. -Hormonal assay | -Hand on workshops -Perform | - Procedure presentation - Log book |

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| - Abdominal Ultrasound | under supervision of senior staff | - Chick list |
| E. Prescribe the following non invasive/invasive therapeutic procedures. - Choice of drug regimens for diseases mentioned in A.A . | Clinical round with senior staff Observation -Post graduate teaching | - Log book - Chick list |
| F. Develop and carry out patient management plans for problems mentioned in A.A. | Clinical round with senior staff | |
| G. Counsel and educate patients and their family about: - Diabetes mellitus and its complications -Obesity | Clinical round with senior staff | |
| H. Use information technology to support patient care decisions and patient education for endocrinology related conditions. | -Post graduate teaching -Clinical round with senior staff | |
| I. Provide health care services aimed at preventing the following conditions: - Complications of diabetes -Complications of obesity | -Post graduate teaching -Clinical round with senior staff | |
| K. Work with health care professionals, including those from other disciplines, to provide patient-focused care | Clinical round with senior staff | |
| L-Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets (Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing an | Clinical round with senior staff | |

Unit 5 Rheumatology

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|--|---|--|
| A. Take history, examine and clinically diagnose different conditions related to rheumatology and musculoskeletal diseases | Didactic; Lectures Clinical rounds Seminars Clinical rotations (service teaching) | -OSCE at the end of each year -log book & portfolio |
| B. Order the following non invasive and invasive diagnostic procedures -Serological tests e.g Antinuclear antibodies, rheumatoid factor,... -Complete blood count -Blood urea nitrogen and serum creatinine - X-rays: chest, joints. -Diagnostic arthrocentesis | -Clinical round with senior staff Observation -Post graduate teaching | |
| C. Interpret the following non invasive/invasive diagnostic procedures -Serological tests - X-ray findings. | Clinical round with senior staff Observation -Post graduate teaching | |
| D. Perform the following non invasive and invasive diagnostic procedures. -Diagnostic arthrocentesis | -Hand on workshops -Perform under supervision of senior staff | - Procedure presentation - Log book - Chick list |
| E. Prescribe the following non invasive/invasive | Clinical | - Log book |

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| <p>therapeutic procedures. - Choice of drug regimens for diseases mentioned in A.A .</p> | <p>round with senior staff Observation -Post graduate teaching</p> | <p>- Chick list</p> |
| <p>F. Develop and carry out patient management plans for problems mentioned in A.A,</p> | <p>Clinical round with senior staff</p> | |
| <p>G. Counsel and educate patients and their family about: - Connective tissue diseases such as SLE and RA</p> | <p>Clinical round with senior staff</p> | |
| <p>H. Use information technology to support patient care decisions and patient education for rheumatology and musculoskeletal related conditions.</p> | <p>-Post graduate teaching -Clinical round with senior staff</p> | |
| <p>I. Provide health care services aimed at preventing the following conditions: -Gouty arthritis</p> | <p>-Post graduate teaching -Clinical round with senior staff</p> | |
| <p>J. Work with health care professionals, including those from other disciplines, to provide patient-focused care</p> | <p>Clinical round with senior staff</p> | |
| <p>K. Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets (Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records)</p> | <p>Clinical round with senior staff</p> | |

Unit 6 Hematology

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|--|---|--|
| A. Take history, examine and clinically diagnose different conditions related to Haematology | Didactic; Lectures Clinical rounds Seminars Clinical rotations (service teaching) | -OSCE at the end of each year -log book & portfolio |
| B-Order the following non invasive and invasive diagnostic procedures -Complete haemogram -Platelet function tests -Tumor markers and -Immunophenotyping -Bone marrow aspiration -Bone marrow biopsy | -Clinical round with senior staff Observation -Post graduate teaching | |
| C. Interpret the following non invasive/invasive diagnostic procedures - Complete haemogram -Platelet function tests -Bone marrow aspiration -Bone marrow biopsy | Clinical round with senior staff Observation -Post graduate teaching | |
| D. Prescribe the following non invasive/invasive therapeutic procedures. - Choice of drug regimens for diseases mentioned in A.A . | Clinical round with senior staff Observation -Post | - Log book - Chick list |

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| | graduate teaching | |
| E. Develop and carry out patient management plans for problems mentioned in A.A. | Clinical round with senior staff | |
| F. Counsel and educate patients and their family about: <ul style="list-style-type: none"> ▪ Disorders of Bleeding (platelet function and number disorders) Vascular disorders ▪ Hemoglobinopathies | Clinical round with senior staff | |
| G. Use information technology to support patient care decisions and patient education for Haematology related conditions. | -Post graduate teaching -Clinical round with senior staff | |
| H. Provide health care services aimed at preventing the following conditions: <ul style="list-style-type: none"> - Anemias (Iron deficiency, Megaloblastic, Hemolytic) | -Post graduate teaching -Clinical round with senior staff | |
| I. Work with health care professionals, including those from other disciplines, to provide patient-focused care | Clinical round with senior staff | |
| J-Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets (Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records) | Clinical round with senior staff | |

Unit 7 Critical care Medicine

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|--|---|--|
| A. Take history, examine and clinically diagnose different conditions related to critical care medicine: | Didactic; Lectures Clinical rounds Seminars Clinical rotations (service teaching) | -OSCE at the end of each year -log book & portfolio |
| B-Order the following non invasive and invasive diagnostic procedures according to affected system. | -Clinical round with senior staff Observation -Post graduate teaching | |
| C. Interpret the following non invasive/invasive diagnostic procedures according to affected system | Clinical round with senior staff Observation -Post graduate teaching | |
| D. Perform the following non invasive and invasive diagnostic procedures according to affected system, e.g: -Arterial blood gases -Abdominal ultrasound - Diagnostic pleurocentesis or paracentesis | -Hand on workshops -Perform under supervision of senior staff | - Procedure presentation - Log book - Chick list |

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| <p>E. Prescribe the following non invasive/invasive therapeutic procedures.</p> <ul style="list-style-type: none"> - Choice of drug regimens for diseases mentioned in A.A . | <p>Clinical round with senior staff Observation -Post graduate teaching</p> | <ul style="list-style-type: none"> - Log book - Chick list |
| <p>F. Perform the following non invasive/invasive therapeutic procedures</p> <ul style="list-style-type: none"> - Central venous line placement - Noninvasive mechanical ventilation - Airway management - Endotracheal intubation | <ul style="list-style-type: none"> -Hand on workshops -Perform under supervision of senior staff | <ul style="list-style-type: none"> - Procedure presentation - Log book - Chick list |
| <p>G. Develop and carry out patient management plans for problems mentioned in A.A.</p> | <p>Clinical round with senior staff</p> | |
| <p>H. Counsel and educate patients and their family about:</p> <ul style="list-style-type: none"> - Acute gastrointestinal bleeding -Hepatic encephalopathy -Hypertension -Coronary artery diseases -Diabetic emergencies | <p>Clinical round with senior staff</p> | |
| <p>I. Use information technology to support patient care decisions and patient education for critical care related conditions.</p> | <ul style="list-style-type: none"> -Post graduate teaching -Clinical round with senior staff | |
| <p>J. Provide health care services aimed at preventing the following conditions:</p> <ul style="list-style-type: none"> -Diabetic complications -Liver cirrhosis complications | <ul style="list-style-type: none"> -Post graduate teaching -Clinical | |

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| | round with senior staff | |
| K. Work with health care professionals, including those from other disciplines, to provide patient-focused care | Clinical round with senior staff | |
| L-Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets (Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records) | Clinical round with senior staff | |

Unit 8 Chest

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|--|---|--|
| A. Take history, examine and clinically diagnose different conditions related to Chest disease. | Didactic; Lectures Clinical rounds Seminars Clinical rotations (service teaching) | -OSCE at the end of each year -log book & portfolio |
| B-Order the following non invasive and invasive diagnostic procedures -X ray chest -CT chest -Arterial blood gases -Pulmonary function tests | -Clinical round with senior staff Observation -Post graduate | |

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| <ul style="list-style-type: none"> -Diagnostic pleurocentesis -ECG -Echocardiography | teaching | |
| <p>C. Interpret the following non invasive/invasive diagnostic procedures</p> <ul style="list-style-type: none"> - Arterial blood gases -Pulmonary function tests -Diagnostic pleurocentesis -Echocardiography | <p>Clinical round with senior staff Observation -Post graduate teaching</p> | |
| <p>D. Perform the following non invasive and invasive diagnostic procedures.</p> <ul style="list-style-type: none"> -Arterial blood gases -Diagnostic pleurocentesis | <ul style="list-style-type: none"> -Hand on workshops -Perform under supervision of senior staff | <ul style="list-style-type: none"> - Procedure presentation - Log book - Chick list |
| <p>E. Prescribe the following non invasive/invasive therapeutic procedures.</p> <ul style="list-style-type: none"> - Choice of drug regimens for diseases mentioned in A.A . | <p>Clinical round with senior staff Observation -Post graduate teaching</p> | <ul style="list-style-type: none"> - Log book - Chick list |
| <p>F. Perform the following non invasive/invasive therapeutic procedures</p> <ul style="list-style-type: none"> -Therapeutic pleurocentesis -Physiotherapy for patients with suppurative lung diseases. | <ul style="list-style-type: none"> -Hand on workshops -Perform under supervision of senior staff | <ul style="list-style-type: none"> - Procedure presentation - Log book - Chick list |
| <p>G. Develop and carry out patient management plans for problems mentioned in A.A.</p> | <p>Clinical round with senior staff</p> | |

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| <p>H. Counsel and educate patients and their family about:</p> <ul style="list-style-type: none"> - Smoking and its hazards -Bronchial asthma -Interstitial lung diseases -Chronic obstructive pulmonary diseases | <p>Clinical round with senior staff</p> | |
| <p>I. Use information technology to support patient care decisions and patient education for Chest related conditions.</p> | <ul style="list-style-type: none"> -Post graduate teaching -Clinical round with senior staff | |
| <p>J. Provide health care services aimed at preventing the following conditions:</p> <ul style="list-style-type: none"> - Bronchial asthma -Lung cancer - Interstitial lung diseases | <ul style="list-style-type: none"> -Post graduate teaching -Clinical round with senior staff | |
| <p>K. Work with health care professionals, including those from other disciplines, to provide patient-focused care</p> | <p>Clinical round with senior staff</p> | |
| <p>L-Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets (Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records)</p> | <p>Clinical round with senior staff</p> | |

Unit 9 Neurology

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|---|---|--|
| A. Take history, examine and clinically diagnose different conditions related to neurological diseases | Didactic; Lectures Clinical rounds Seminars Clinical rotations (service teaching) | -OSCE at the end of each year -log book & portfolio |
| B-Order the following non invasive and invasive diagnostic procedures -CT and MRI brain -CT and MRI spine -EEG and EMG -Nerve conduction tests -CSF aspiration | -Clinical round with senior staff Observation -Post graduate teaching | |
| C. Interpret the following non invasive/invasive diagnostic procedures -CT imaging -CSF tests | Clinical round with senior staff Observation -Post graduate teaching | |
| D. Perform the following non invasive and invasive diagnostic procedures. - CSF aspiration | -Hand on workshops -Perform under supervision of senior staff | - Procedure presentation - Log book - Chick list |
| E. Prescribe the following non invasive/invasive therapeutic procedures. - Choice of drug regimens for diseases mentioned in A.A . | Clinical round with senior staff Observation | - Log book - Chick list |

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| | -Post graduate teaching | |
| F. Develop and carry out patient management plans for problems mentioned in A.A. | Clinical round with senior staff | |
| G. Counsel and educate patients and their family about: - Cerebrovascular strokes -Peripheral neuropathy | Clinical round with senior staff | |
| H. Use information technology to support patient care decisions and patient education for neurological related conditions. | -Post graduate teaching -Clinical round with senior staff | |
| I. Provide health care services aimed at preventing the following conditions: -Cerebrovascular strokes | -Post graduate teaching -Clinical round with senior staff | |
| J. Work with health care professionals, including those from other disciplines, to provide patient-focused care | Clinical round with senior staff | |
| K.-Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets (Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records) | Clinical round with senior staff | |

D-General Skills

For all unit of this course

Practice-Based Learning and Improvement

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|--|---|---|
| A. Perform practice-based improvement activities using a systematic methodology in the common problems (plain and conduct audit cycles) | -Simulations -Clinical round -Seminars -Lectures -Case presentation -Hand on workshops | -Global rating -Procedure/case presentation -Log book and Portfolios -Chick list |
| B. Locate, appraises, and assimilates evidence from scientific studies related to patients' health problems. | Simulations Clinical round Seminars Lectures Case presentation Hand on workshops | -Global rating -Procedure/case presentation Log book and Portfolios -Chick list |
| C. Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness | | |
| D. Use information technology to manage information, access on-line medical information; and support their own education | | |
| E. Lead the learning of students and other health care professionals. | | |

Interpersonal and Communication Skills

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|--|---|---|
| <p>F. Create and sustain a therapeutic and ethically sound relationship with patients.</p> | <ul style="list-style-type: none"> -Simulations -Clinical round -Seminars -Lectures -Case presentation | <ul style="list-style-type: none"> -Global rating -Procedure/case presentation -Log book and Portfolios -Chick list |
| <p>G. Perform the following oral communications:</p> <ul style="list-style-type: none"> -Interpretation of results of different investigations discussion of different therapeutic options. -Health educations. -Family counseling. | | |
| <p>H. Fill the following reports:</p> <ul style="list-style-type: none"> -Abdominal ultrasonography reports. -GIT endoscopy reports. -Echo cardiology report. -Patient medical report. | | |
| <p>I. Work effectively with others as a member or leader of a health care team as regard diagnosis and treatment of the conditions related to internal medicine .</p> | | |

Professionalism

| ILOs | Methods of teaching/ Learning | Methods of Evaluation |
|--|---|---|
| J. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest. | Observation Senior staff experience Case taking | 1. Objective structured clinical examination 2. Patient survey |
| K. Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices. | | 1. 360o global rating |
| L. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities | | |

Systems-Based Practice

| ILOs | Methods of teaching/ learning | Methods of Evaluation |
|--|--|--|
| M. Work effectively in different health care delivery settings and systems. | -Observation -Senior staff experience | 1. 360o global rating |
| N. Practice cost-effective health care and resource allocation that does not compromise quality of care | | 1. Check list evaluation of live or recorded performance |
| O. Advocate for quality patient care and assist patients in dealing with system complexities | | 1. 360o global rating 2. Patient survey |
| P. Partner with health care managers and health care providers to assess, coordinate, and improve health care and predict how these activities can affect system performance | | |

**4. Course contents (topic s/modules/rotation
Course Matrix**

Time Schedule: Second part

| Topic | Covered ILOs | | | |
|--------------------------------|--------------|--------------|-----------------|----------------|
| | Knowledge | Intellectual | Practical skill | General Skills |
| UNIT 1 Gastroenterology | | | | |
| IBD | A,D-I | A-E,G-J | A-E,G,I,K,L | A-P |
| Malabsorption | A,D-I | A-E,G-J | A-E,G,I,K,L | A-P |
| Acute and chronic diarrhea | A,D-I | A-E,G-J | A-L | A-P |
| Peptic ulcer | A,D-I | A-E,G-J | A-E,G,I,K,L | A-P |
| GIT malignancy | A,D-I | A-E,G-J | A-E,G,I,K,L | A-P |
| GIT motility disorders | A,D-I | A-E,G-J | A-E,G,I,K,L | A-P |
| Esophageal disorders | A,D-I | A-E,G-J | A-E,G,I,K,L | A-P |
| Acute and chronic hepatitis | A,D-I | A-E,G-J | A-L | A-P |
| Liver cirrhosis | A,D-I | A-E,G-J | A-L | A-P |
| Hepatic encephalopathy | A,D-I | A-E,G-J | A-E,G,I,K,L | A-P |
| NASH | A,D-I | A-E,G-J | A-E,G,I,K,L | A-P |
| Hepatic malignancy | A,D-I | A-E,G-J | A-E,G,I,K,L | A-P |
| Acute and chronic pancreatitis | A,D-I | A-E,G-J | A-E,G,I,K,L | A-P |
| Tumors of the pancreas | A,D-I | A-E,G-J | A-E,G,I,K,L | A-P |
| Liver abscess | A,D-I | A-E,G-J | A-E,G,I,K,L | A-P |
| Gastrointestinal hormones | B,D-I | A-E,G-J | A-E,G,I,K,L | A-P |
| Digestion and Absorption | B,D-I | A-E,G-J | A-E,G,I,K,L | A-P |
| GIT motility | B,D-I | A-E,G-J | A-E,G,I,K,L | A-P |
| Liver function | B,D-I | A-E,G-J | A-E,G,I,K,L | A-P |
| Drug therapy of GI diseases | B,D-I | A-E,G-J | E | A-P |

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|--|--------------|----------------|--------------------|------------|
| Drug - induced Liver diseases | B,D-I | A-E,G-J | A-E,G,I,K,L | A-P |
| Drug handling in liver cell failure | B,D-I | A-E,G-J | A-E,G,I,K,L | A-P |
| Ascitic fluid infection | B,D-I | A-E,G-J | F | A-P |
| Celiac disease | C,D-I | A-E,G-J | A-E,G,I,K,L | A-P |
| Gastrointestinal motility disorder | C,D-I | A-E,G-J | A-E,G,I,K,L | A-P |
| Metabolic liver diseases | C,D-I | A-E,G-J | A-E,G,I,K,L | A-P |
| UNIT 2 CARDIOVASCULAR DISEASE | | | | |
| Myocardial ischemia syndromes like chronic stable angina, acute coronary syndromes, coronary artery spasm, and others. | A,D-I | A-J | A-G,I,K-L | A-P |
| a. Hypertension and hypertensive heart diseases. | A,D-I | A-J | A-L | A-P |
| b. Rheumatic fever and rheumatic heart diseases. | A,D-I | A-E,G-J | A-G,I,K-L | A-P |
| c. Different pericardial diseases, whether acute or chronic. | A,D-I | A-E,G-J | A-G,I,K-L | A-P |
| d. Acute and chronic diseases of the myocardial muscle. | A,D-I | A-E,G-J | A-G,I,K-L | A-P |
| e. Coma | A,D-I | A-J | A-G,I,K-L | A-P |
| f. Hypertensive emergencies | A,D-I | A-E,G-J | A-L | A-P |
| g. Acute coronary syndromes | A,D-I | A-J | A-L | A-P |
| h. Arrhythmias | A,D-I | A-J | A-G,I,K-L | A-P |
| i. Pulmonary embolism | A,D-I | A-E,G-J | A-L | A-P |
| j. Cardiogenic shock | A,D-I | A-E,G-J | A-L | A-P |
| Disturbances of the cardiac | B,D-I | A-J | A-G,I,K-L | A-P |

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| rhythm and all types of both tachycardias & bradycardias. | | | | |
| Interrelationship between the heart and other body systems. | B,D-I | A-E,G-J | A-G,I,K-L | A-P |
| Drug and non drug therapy of different cardiac diseases. | B,D-I | A-E,G-J | A-G,I,K-L | A-P |
| Central venous line placement | B,D-I | A-E,G-J | F | A-P |
| Noninvasive mechanical ventilation | B,D-I | A-E,G-J | F | A-P |
| Airway management | B,D-I | A-E,G-J | F | A-P |
| Endotracheal intubation | B,D-I | A-E,G-J | F | A-P |
| Hemodynamic monitoring | B,D-I | A-E,G-J | F | A-P |
| Congenital heart diseases | C,D-I | A-E,G-J | A-L | A-P |
| Cardiac tumors | C,D-I | A-E,G-J | A-G,I,K-L | A-P |
| Unit 3 Nephrology | | | | |
| Glomerulonephritis | A,D-I | A-E,G-J | A-F,H,J-K | A-P |
| Nephrotic syndrome | A,D-I | A-E,G-J | A-F,H,J-K | A-P |
| Tubulo interstitial disease | A,D-I | A-E,G-J | A-F,H,J-K | A-P |
| Renal failure | A,D-I | A-J | A-F,H,J-K | A-P |
| UTI | A,D-I | A-E,G-J | A-K | A-P |
| - Cystitis | A,D-I | A-E,G-J | A-K | A-P |
| - Renal TB | A,D-I | A-E,G-J | A-K | A-P |
| Renal vascular disease | B,D-I | A-E,G-J | A-K | A-P |
| - Urine formation | B,D-I | A-E,G-J | A-F,H,J-K | A-P |
| -kidney functions | B,D-I | A-E,G-J | A-F,H,J-K | A-P |
| Acid base balance | B,D-I | A-E,G-J | A-F,H,J-K | A-P |
| Water, electrolyte balance | B,D-I | A-E,G-J | A-F,H,J-K | A-P |
| drug therapy of renal diseases | B,D-I | A-E,G-J | E,F | A-P |
| drug - induced renal diseases | B,D-I | A-E,G-J | A-F,H,J-K | A-P |
| drug handling in renal failure | B,D-I | A-E,G-J | A-F,H,J-K | A-P |
| Congenital Renal diseases | C,D-I | A-E,G-J | A-F,H,J-K | A-P |

| Unit 4 Endocrine | | | | |
|--|--------------|----------------|------------------|------------|
| Diabetes mellitus | A,D-I | A-E,G-J | A-L | A-P |
| Thyroid and parathyroid diseases | A,D-I | A-E,G-J | A-F,H,K-L | A-P |
| Adrenal gland diseases | A,D-I | A-E,G-J | A-F,H,K-L | A-P |
| Obesity | A,D-I | A-E,G-J | A-L | A-P |
| Pituitary gland diseases | A,D-I | A-E,G-J | A-F,H,K-L | A-P |
| Diabetes insipidus | A,D-I | A-E,G-J | A-F,H,K-L | A-P |
| Short stature | A,D-I | A-E,G-J | A-F,H,K-L | A-P |
| Osteoporosis | B,D-I | A-E,G-J | A-F,H,K-L | A-P |
| Growth disorder | B,D-I | A-E,G-J | A-F,H,K-L | A-P |
| Calcium homeostasis | B,D-I | A-E,G-J | A-F,H,K-L | A-P |
| Endocrine Emergencies | B,D-I | A-J | A-F,H,K-L | A-P |
| Update in endocrine disorders | B,D-I | A-E,G-J | A-F,H,K-L | A-P |
| Update management of D.M | B,D-I | A-E,G-J | A-L | A-P |
| Drug therapy of Thyroid gland disorders | B,D-I | A-E,G-J | E,F | A-P |
| Drug therapy of other endocrinal diseases & drug interaction | B,D-I | A-E,G-J | E,F | A-P |
| Hereditary Endocrinal disorders(MEN type I and MEN type II) | C,D-I | A-E,G-J | A-F,H,K-L | A-P |
| Unit 5 Rheumatology | | | | |
| Rheumatoid arthritis | A,D-I | A-E,G-J | A-K | A-P |
| SLE | A,D-I | A-E,G-J | A-K | A-P |
| Crystal induced arthropathy | A,D-I | A-E,G-J | A-K | A-P |
| Systemic sclerosis | A,D-I | A-E,G-J | A-K | A-P |
| Dermatomyositis and polymyositis | A,D-I | A-E,G-J | A-K | A-P |
| Osteoarthritis | A,D-I | A-E,G-J | A-K | A-P |
| Seronegative arthropathy | A,D-I | A-E,G-J | A-K | A-P |
| Arthritis in systemic diseases | A,D-I | A-E,G-J | A-K | A-P |

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|---|--------------|----------------|------------------|------------|
| Infective arthritis | A,D-I | A-E,G-J | A-K | A-P |
| Antiphospholipid syndrome | B,D-I | A-E,G-J | A-K | A-P |
| Vasculitis. | B,D-I | A-E,G-J | A-K | A-P |
| Acute phase response | B,D-I | A-E,G-J | A-K | A-P |
| Uric acid metabolism | B,D-I | A-E,G-J | A-K | A-P |
| Drug therapy of various rheumatic disease | B,D-I | A-E,G-J | A-K | A-P |
| Drug - induced rheumatic diseases | B,D-I | A-E,G-J | A-K | A-P |
| Systemic sclerosis | C,D-I | A-E,G-J | A-K | A-P |
| Dermatomyositis and polymyositis | C,D-I | A-E,G-J | A-K | A-P |
| Polymyalgia rheumatica | C,D-I | A-E,G-J | A-K | A-P |
| UNIT 6 HAEMATOLOGY | | | | |
| Anemias (Iron deficiency, Megaloblastic, Hemolytic) | A,D-I | A-J | A-D,G-J | A-P |
| Hemoglobinopathies | A,D-I | A-E,G-J | A-G,I-J | A-P |
| Bone marrow aplasia | A,D-I | A-E,G-J | A-E,G,I-J | A-P |
| Myelodysplastic syndromes | A,D-I | A-E,G-J | A-E,G,I-J | A-P |
| Abnormalities in Granulocytes (neutropenia, leukomoid reaction) | A,D-I | A-E,G-J | A-E,G,I-J | A-P |
| Disorders of Bleeding (platelet function and number disorders) Vascular disorders | A,D-I | A-E,G-J | A-G,I-J | A-P |
| Clotting disorders | A,D-I | A-E,G-J | A-G,I-J | A-P |
| Thrombophilia (predisposition, causes) | A,D-I | A-E,G-J | A-G,I-J | A-P |
| Blood transfusion | A,D-I | A-E,G-J | A-E,G,I-J | A-P |
| Bone marrow transplantation | A,D-I | A-E,G-J | A-E,G,I-J | A-P |
| Acute leukemias | A,D-I | A-E,G-J | A-E,G,I-J | A-P |
| Chronic leukemias | A,D-I | A-E,G-J | A-E,G,I-J | A-P |
| Lymphomas | A,D-I | A-E,G-J | A-E,G,I-J | A-P |

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|--|-------|---------|-----------|-----|
| Myeloproliferative disorders | A,D-I | A-E,G-J | A-E,G,I-J | A-P |
| Plasma cell disorders (Multiple myeloma) | A,D-I | A-E,G-J | A-E,G,I-J | A-P |
| Hemoglobin synthesis and function | B,D-I | A-E,G-J | A-E,G,I-J | A-P |
| Granulocyte functions | B,D-I | A-E,G-J | A-E,G,I-J | A-P |
| Immune functions | B,D-I | A-E,G-J | A-E,G,I-J | A-P |
| Clotting cascade | B,D-I | A-E,G-J | A-D,G-J | A-P |
| Drug therapy of anemias | B,D-I | A-E,G-J | A-D,G-J | A-P |
| secondary bone marrow diseases | B,D-I | A-E,G-J | A-E,G,I-J | A-P |
| clotting and bleeding disorders | B,D-I | A-E,G-J | A-G,I-J | A-P |
| Hereditary clotting disorders | C,D-I | A-E,G-J | A-E,G,I-J | A-P |
| Opportunistic infections | C,D-I | A-E,G-J | A-E,G,I-J | A-P |
| UNIT 7 Critical care unit | | | | |
| <u>ON cardiovascular critical care unit:</u> | | | | |
| ▪ Coma | A,D-I | A-E,G-J | A-E,G,I-L | A-P |
| ▪ Hypertensive emergencies | A,D-I | A-E,G-J | A-L | A-P |
| ▪ Acute coronary syndromes | A,D-I | A-E,G-J | A-L | A-P |
| ▪ Arrhythmias | A,D-I | A-E,G-J | A-L | A-P |
| ▪ Pulmonary embolism | A,D-I | A-E,G-J | A-E,G,I-L | A-P |
| ▪ Cardiogenic shock | A,D-I | A-E,G-J | A-E,G,I-L | A-P |
| <u>ON Endocrinal critical care unit:</u> | | | | |
| ▪ Diabetic emergencies | A,D-I | A-E,G-J | A-L | A-P |
| ▪ Sepsis | A,D-I | A-E,G-J | A-E,G,I-L | A-P |
| ▪ Multiple organ failure | A,D-I | A-E,G-J | A-E,G,I-L | A-P |
| ▪ Endocrinal emergencies | A,D-I | A-E,G-J | A-L | A-P |
| <u>ON Haematology critical</u> | | | | |

| | | | | |
|--|-------|---------|-----------|-----|
| <u>care unit:</u> | | | | |
| ▪ Neutropenic patients | A,D-I | A-E,G-J | A-E,G,I-L | A-P |
| ▪ Critically thrombocytopenic patients | A,D-I | A-E,G-J | A-E,G,I-L | A-P |
| ▪ Haematological malignancy patients on chemotherapy | A,D-I | A-E,G-J | A-E,G,I-L | A-P |
| <u>ON Hepatogastroenterology Intensive Care Unit</u> | | | | |
| ▪ Hepatic encephalopathy | A,D-I | A-E,G-J | A-L | A-P |
| ▪ Acute gastrointestinal bleeding | A,D-I | A-E,G-J | A-L | A-P |
| ▪ Acute pancreatitis | A,D-I | A-E,G-J | A-E,G,I-L | A-P |
| ▪ Hepatorenal syndrome | A,D-I | A-E,G-J | A-E,G,I-L | A-P |
| ▪ Cholangitis | A,D-I | A-E,G-J | A-E,G,I-L | A-P |
| ▪ Acute liver cell failure. | A,D-I | A-E,G-J | A-E,G,I-L | A-P |
| ▪ Central venous line placement | B,D-I | A-E,G-J | F | A-P |
| ▪ Noninvasive mechanical ventilation | B,D-I | A-E,G-J | F | A-P |
| ▪ Airway management | B,D-I | A-E,G-J | F | A-P |
| ▪ Endotracheal intubation | B,D-I | A-E,G-J | F | A-P |
| ▪ Hemodynamic monitoring | B,D-I | A-E,G-J | F | A-P |
| Basic and advanced life support | B,D-I | A-E,G-J | F | A-P |
| Preventive practice in critically ill | B,D-I | A-E,G-J | F | A-P |
| 1. Infection control in ICUs | B,D-I | A-E,G-J | A-E,G,I-L | A-P |
| 2. Alimentary prophylaxis | B,D-I | A-E,G-J | A-E,G,I-L | A-P |
| 3. Venous thromboembolism prophylaxis. | B,D-I | A-E,G-J | A-E,G,I-L | A-P |

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|--|--------------|----------------|------------------|------------|
| Indications of admission to ICU | B,D-I | A-E,G-J | A-E,G,I-L | A-P |
| Vascular access: | B,D-I | A-E,G-J | F | A-P |
| Airway management | B,D-I | A-E,G-J | F | A-P |
| 1. Nasal and oral airways | B,D-I | A-E,G-J | F | A-P |
| 2. Laryngeal mask airway | B,D-I | A-E,G-J | F | A-P |
| 3. Endotracheal tube | B,D-I | A-E,G-J | F | A-P |
| 4. Suction | B,D-I | A-E,G-J | F | A-P |
| Haemodynamic monitoring | | | | |
| 1. Arterial blood pressure | B,D-I | A-E,G-J | F | A-P |
| 2. Central venous pressure and pulmonary artery wedge pressure. | B,D-I | A-E,G-J | F | A-P |
| 3. Cardiac output | B,D-I | A-E,G-J | A-E,G,I-L | A-P |
| 4. Arrhythmias | B,D-I | A-E,G-J | A-E,G,I-L | A-P |
| 5. Haemodynamic drug infusion | B,D-I | A-E,G-J | A-E,G,I-L | A-P |
| Invasive & noninvasive assessment of arterial blood gases | | | | |
| 1. Acid base status | B,D-I | A-J | A-E,G,I-L | A-P |
| 2. Hypoxaemia and hypercapnia | B,D-I | A-J | A-E,G,I-L | A-P |
| The most common electrolyte disorders | | | | |
| 1. Hypokalemia | B,D-I | A-J | A-E,G,I-L | A-P |
| 2. Hypomagnesemia | B,D-I | A-J | A-E,G,I-L | A-P |
| 3. Hyponatremia | B,D-I | A-J | A-E,G,I-L | A-P |
| 4. Hypocalcaemia. | B,D-I | A-J | A-E,G,I-L | A-P |
| Infection in ICU | B,D-I | A-E,G-J | A-E,G,I-L | A-P |
| 1. Sepsis syndrome. | B,D-I | A-E,G-J | A-E,G,I-L | A-P |
| 2. Empirical antibiotic therapy | B,D-I | A-E,G-J | A-E,G,I-L | A-P |
| Nutrition | B,D-I | A-E,G-J | A-E,G,I-L | A-P |

| | | | | |
|--|--------------|----------------|------------------|------------|
| 1. Metabolic substrate requirements | B,D-I | A-E,G-J | A-E,G,I-L | A-P |
| 2. Enteral tube feeding | B,D-I | A-E,G-J | A-E,G,I-L | A-P |
| 3. Total parenteral nutrition | B,D-I | A-E,G-J | A-E,G,I-L | A-P |
| Specific management and strategies in cardiopulmonary syndromes | B,D-I | A-E,G-J | A-E,G,I-L | A-P |
| 1. ARDS | B,D-I | A-J | A-E,G,I-L | A-P |
| 2. Cardiogenic pulmonary oedema | B,D-I | A-E,G-J | A-E,G,I-L | A-P |
| 3. Acute pulmonary embolism | B,D-I | A-E,G-J | A-E,G,I-L | A-P |
| Infection in ICU | B,D-I | A-E,G-J | A-E,G,I-L | A-P |
| 1. Sepsis syndrome. | B,D-I | A-E,G-J | A-E,G,I-L | A-P |
| 2. Empirical antibiotic therapy | B,D-I | A-E,G-J | A-E,G,I-L | A-P |
| Nutrition | B,D-I | A-E,G-J | A-E,G,I-L | A-P |
| 1. Metabolic substrate requirements | B,D-I | A-E,G-J | A-E,G,I-L | A-P |
| 2. Enteral tube feeding | B,D-I | A-E,G-J | A-E,G,I-L | A-P |
| 3. Total parenteral nutrition | B,D-I | A-E,G-J | A-E,G,I-L | A-P |
| Unit 8 Neurology | | | | |
| Cerebrovascular stroke | A,D-I | A-E,G-J | A-K | A-P |
| coma (causes and management) | A,D-I | A-E,G-J | A-F,H,J-K | A-P |
| Myopathy and neuromuscular junctional disorder | A,D-I | A-E,G-J | A-F,H,J-K | A-P |
| Peripheral neuropathy | A,D-I | A-E,G-J | A-K | A-P |
| Degenerative diseases. | A,D-I | A-E,G-J | A-F,H,J-K | A-P |
| Involuntary movement | B,D-I | A-E,G-J | A-F,H,J-K | A-P |
| Infections of nervous system | B,D-I | A-E,G-J | A-F,H,J-K | A-P |
| neurological reflexes and their centers | B,D-I | A-E,G-J | A-F,H,J-K | A-P |

| | | | | |
|--|-------|---------|-----------|-----|
| Spinal cord diseases. | B,D-I | A-E,G-J | A-F,H,J-K | A-P |
| Seizures. | B,D-I | A-E,G-J | A-F,H,J-K | A-P |
| Involuntary movement | B,D-I | A-E,G-J | A-F,H,J-K | A-P |
| Drug induced myopathy | C,D-I | A-E,G-J | A-F,H,J-K | A-P |
| Neuromuscular disorders in collagen diseases | C,D-I | A-E,G-J | A-F,H,J-K | A-P |
| Muchopolysacharidasis | C,D-I | A-E,G-J | A-L | A-P |
| Osteopetrosis | C,D-I | A-E,G-J | A-L | A-P |
| Spinal cord diseases. | B,D-I | A-E,G-J | A-F,H,J-K | A-P |
| Seizures. | B,D-I | A-E,G-J | A-F,H,J-K | A-P |
| Involuntary movement | B,D-I | A-E,G-J | A-F,H,J-K | A-P |
| Drug induced myopathy | C,D-I | A-E,G-J | A-F,H,J-K | A-P |
| Neuromuscular disorders in collagen diseases | C,D-I | A-E,G-J | A-F,H,J-K | A-P |
| Muchopolysacharidasis | C,D-I | A-E,G-J | A-L | A-P |
| Osteopetrosis | C,D-I | A-E,G-J | A-L | A-P |
| Unit 9 Chest | | | | |
| COPD | A,D-I | A-E,G-J | A-L | A-P |
| Lung cancer | A,D-I | A-E,G-J | A-L | A-P |
| Pleural effusion | A,D-I | A-E,G-J | A-L | A-P |
| Interstitial pulmonary fibrosis | A,D-I | A-E,G-J | A-L | A-P |
| Pulmonary Tuberculosis. | A,D-I | A-E,G-J | A-L | A-P |
| COPD | A,D-I | A-E,G-J | A-L | A-P |
| Respiratory failure | B,D-I | A-E,G-J | A-L | A-P |
| Haemoptysis | B,D-I | A-E,G-J | A-L | A-P |
| Acid base balance disorders | B,D-I | A-E,G-J | A-L | A-P |
| Cystic fibrosis | C,D-I | A-E,G-J | A-L | A-P |

5. Course Methods of teaching/learning:

3. Didactic (lectures, seminars, tutorial)
4. Outpatient
5. Inpatient

6. Case presentation
7. Direct observation
8. journal club
9. Critically appraised topic.
10. Educational prescription
11. Clinical rounds
12. Clinical rotation
13. Senior staff experience
14. Case log
15. Observation and supervision
16. Written & oral communications
17. Simulation
18. Hand on work shop
19. Service teaching
20. Perform under supervision of senior staff
21. Postgraduate teaching

6. Course Methods of teaching/learning: for students with poor achievements

1. Extra Didactic (lectures, seminars, tutorial) according to their needs
2. Extra training according to their needs

7. Course assessment methods:

i. Assessment tools:

3. Oral examination
4. Clinical examination
5. Written examination
6. Objective structure clinical examination (OSCE)
7. Procedure/case Log book and Portfolios
8. Simulation
9. Record review (report)

10. Patient survey
 11. 360o global rating
 12. Check list evaluation of live or recorded performance
 13. MCQ Exam
- ii. Time schedule: At the end of second part
- iii. Marks: 1200

8. List of references

i. Lectures notes

- Course notes
- Staff members print out of lectures and/or CD copies
- Medical physiology books by Staff Members of the Department of Medical physiology -Assiut University.
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ii. Essential books

- 2- Cecil – text book of Medicine, 22edition.
- 3- Oxford - text book of Medicine,
- 4- Davidson20 edition.
- 5- Current Medical Diagnosis & treatment, 2003.
- 6- Breinerwold text book of cardiology
- 7- Essential haematology 2006.
- 8- Brenner's text book of nephrology
- 9- William's text book of endocrinology
- 10- Hutchison's clinical methods
- 11- Clinical gastroenterology and hepatology (Wilfred M. Weinstein)
- 12- Dacie and lewis of practictal haematology.
- 13- Bisset – Khan Abdominal U/S
- 14- Infectious disease hard book

iii. Recommended books

2. Harrisons - text book of Medicine ,15 edition
3. Hurst text book of cardiology
4. Macloid clinical methods.
5. Oxford clinical haematology

6. Robbin's Basic Pathology
- iv. Periodicals, Web sites, ... etc
- American Journal of internal Medicine
 - New England Journal of Medicine
 - American Journal Of Gastroenterology
 - BMJ
 - Egyptian Heart Journal
 - www.biomedcentral.com

9. Signatures

| Course Coordinator | |
|--|---|
| Course Coordinator: Prof. Noor Eldeen Abdelazeem Date: | Head of the Department: Prof. Lobna El Tony Date: |

ANNEX 2

Program Academic Reference Standards (ARS)

1- Graduate attributes for medical doctorate in Internal Medicine

The Graduate (after residence training and medical doctorate years of study) must:

- 1-** Demonstrate competency and mastery of basics, methods and tools of scientific research and clinical audit in Internal Medicine.
- 2-** Have continuous ability to add knowledge Internal Medicine. through research and publication.
- 3-** Appraise and utilise relevant scientific knowledge to continuously update and improve clinical practice.
- 4-** Acquire excellent level of medical knowledge in the basic biomedical, behavioural and clinical sciences, medical ethics and medical jurisprudence and apply such knowledge in patient care and scientific research.
- 5-** Function as a leader of a team to provide patient care that is appropriate, effective and compassionate for dealing with health problems and health promotion.
- 6-** Identify and create solutions for health problems in Internal Medicine.
- 7-** Acquire an in depth understanding of common areas of Internal Medicine , from basic clinical care to evidence

based clinical application, and possession of required skills to manage independently all problems in these areas.

- 8-** Demonstrate leadership competencies including interpersonal and communication skills that ensure effective information exchange with individual patients and their families and teamwork with other health professions, the scientific community and the public.
- 9-** Function as teacher in relation to colleagues, medical students and other health professions.
- 10-** Master decision making capabilities in different situations related to Internal Medicine.
- 11-** Show leadership responsiveness to the larger context of the health care system, including e.g. the organisation of health care, partnership with health care providers and managers, practice of cost-effective health care, health economics, and resource allocations.
- 12-** Demonstrate in depth awareness of public health and health policy issues including independent ability to improve health care, and identify and carryout system-based improvement of care.
- 13-** Show model attitudes and professionalism.
- 14-** Demonstrate commitment for lifelong learning and maintenance of competence and ability for continuous medical education and learning in subsequent stages and in Internal Medicine or one of its subspecialties.
- 15-** Use recent technologies to improve his practice in Internal Medicine.
- 16-** Share in updating and improving clinical practice in Internal Medicine.

2- Competency based Standards for medical doctorate in Internal Medicine.

22.1- Knowledge and understanding

By the end of the program, the graduate should demonstrate satisfactory knowledge and understanding of

- 2-1-A-** Established, updated and evidence- based theories, basics and developments of Internal Medicine and relevant sciences.
- 2-1-B-** Basics, methods and ethics of medical research.
- 2-1-C-** Ethical and medicolegal principles of medical practice related to Internal Medicine.
- 2-1-D-** Principles and measurements of quality in Internal Medicine.
- 2-1-E-** Principles and efforts for maintainance and improvements of public health.

2- Intellectual skills

By the end of the program, the graduate should be able to demonstrate the following

- 2-2-A-** Application of basic and other relevant science to solve Internal Medicine related Problems.
- 2-2-B-** Problem solving based on available data.
- 2-2-C-** Involvement in research studies related to Internal Medicine.
- 2-2-D-** Writing scientific papers.
- 2-2-E-** Risk evaluation in the related clinical practice.
- 2-2-F-** Planning for performance improvement in Internal Medicine.
- 2-2-G-** Creation and innovation in Internal Medicine.
- 2-2-H-** Evidence – based discussion.
- 2-2-I-** Decision making in different situations related to Internal Medicine.

2.3- Clinical skills

By the end of the program, the graduate should be able to

+ Competency-based outcomes for Patient Care:-

- 2-3-A-** MD students must be able to provide extensive level of patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health extensive level means in depth understanding and from basic science to evidence – based clinical application and possession of skills to manage independently all problems in Internal Medicine.
- 2-3-B-** Master patient care skills relevant to Internal Medicine for patients with all diagnoses and procedures.
- 2-3-C-** Write and evaluate reports for situations related to the Internal Medicine.

2.4- General skills

By the end of the program, the graduate should be able to

+ Competency-based outcomes for Practice-based Learning and Improvement

- 2-4-A-** Master practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management
 - 2-4-B-** Use competently all information sources and technology to improve his practice.
 - 2-4-C-** Master skills of teaching and evaluating others.
- #### ***+ Competency-based objectives for Interpersonal and Communication Skills***
- 2-4-D-** Master interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and other health professionals.

+ Competency-based objectives for Professionalism

2-4-E- Master Professionalism behavior, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

+ Competency-based objectives for Systems-based Practice:

2-4-F- Demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively use system resources to provide care that is of optimal value.

2-4-G- Participate in improvement of the education system.

2-4-H- Demonstrate skills of leading scientific meetings including time management

2-4-O- Demonstrate skills of self and continuous learning.

Annex 3, Methods of teaching/learning

Annex 3, Methods of teaching/learning

| | Patient care | Medical knowledge | Practice-based learning/Improvement | Interpersonal and communication skills | Professionalism | Systems-based practice |
|---|--------------|-------------------|-------------------------------------|--|-----------------|------------------------|
| Didactic (lectures, seminars, tutorial) | X | X | | X | X | X |
| journal club, | X | X | X | | | |
| Educational prescription | X | X | X | X | X | X |
| Present a case (true or simulated) in a grand round | X | X | X | X | X | |
| Observation and supervision | X | | X | X | X | X |
| conferences | | X | X | X | | X |
| Written assignments | X | X | X | X | X | X |
| Oral assignments | X | X | X | X | X | X |

Teaching methods for knowledge

- ❖ Didactic (lectures, seminars, tutorial)
- ❖ journal club
- ❖ Critically appraised topic
- ❖ Educational prescription (a structured technique for following up on clinical questions that arise during rounds and other venues).
- ❖ Present a case (true or simulated) in a grand round
- ❖ Others

Teaching methods for patient care

- ❖ Observation and supervision /Completed tasks procedure/case logs
- ❖ On-the-job” training without structured teaching is not sufficient for this skill (checklists).
- ❖ Simulation is increasingly used as an effective method for skill/ teamwork training.

Teaching methods for other skills

- ❖ Written communication (e.g., orders, progress note, transfer note, discharge summary, operative reports, and diagnostic reports).

- ❖ Oral communication (e.g., presentations, transfer of care, interactions with patients, families, colleagues, members of the health care team) and/or non verbal skills (e.g., listening, team skills)

- ❖ Professionalism, including medical ethics, may be included as a theme throughout the program curriculum that includes both didactic and experiential components (e.g., may be integrated into already existing small group discussions of vignettes or case studies and role plays, computer-based modules) and may be modeled by the faculty in clinical practice and discussed with the resident as issues arise during their clinical practice.

Annex 4, Assessment methods

Annex 4, ILOs evaluation methods for MD students.

| Method | Practical skills | K | Intellectual | General skills | | | |
|-------------------------------|------------------|---|--------------|-------------------------------------|--|-----------------|------------------------|
| | Patient care | K | I | Practice-based learning/Improvement | Interpersonal and communication skills | Professionalism | Systems-based practice |
| Record review | X | X | X | | X | X | X |
| Checklist | X | | | | X | | |
| Global rating | X | X | X | X | X | X | X |
| Simulations | X | X | X | X | X | X | |
| Portfolios | X | X | X | X | X | | |
| Standardized oral examination | X | X | X | X | X | | X |
| Written examination | X | X | X | X | | | X |
| Procedure/case log | X | X | | | | | |
| OSCE | X | X | X | X | X | X | X |

Annex 4, Glossary of MD students assessment methods

- ❖ Record Review – Abstraction of information from patient records, such as medications or tests ordered and comparison of findings against accepted patient care standards.
- ❖ Chart Stimulated Recall – Uses the MD doctor’s patient records in an oral examination to assess clinical decision-making.
- ❖ Mini clinical evaluation: Evaluation of Live/Recorded Performance (single event) – A single resident interaction with a patient is evaluated using a checklist. The encounter may be videotaped for later evaluation.
- ❖ Standardized Patients (SP) – Simulated patients are trained to respond in a manner similar to real patients. The standardized patient can be trained to rate MD doctor’s performance on checklists and provide feedback for history taking, physical examination, and communication skills. Physicians may also rate the MD doctor’s performance.
- ❖ Objective Structured Clinical Examination (OSCE) – A series of stations with standardized tasks for the MD doctors to perform. Standardized patients and other assessment methods often are combined in an OSCE. An observer or the standardized patient may evaluate the MD doctors.
- ❖ Procedure or Case Logs – MD doctors prepare summaries of clinical experiences including clinical data. Logs are useful to document educational experiences and deficiencies.
- ❖ PSQs – Patients fill out Patient Survey questionnaires (PSQs) evaluating the quality of care provided by MD doctors.

- ❖ Case /problems – assess use of knowledge in diagnosing or treating patients or evaluate procedural skills.
- ❖ Models: are simulations using mannequins or various anatomic structures to assess procedural skills and interpret clinical findings. Both are useful to assess practice performance and provide constructive feedback.
- ❖ 360 Global Rating Evaluations – MD doctors, faculty, nurses, clerks, and other clinical staff evaluate MD doctors from different perspectives using similar rating forms.
- ❖ Portfolios – A portfolio is a set of project reports that are prepared by the MD doctors to document projects completed during the MD study years. For each type of project standards of performance are set. Example projects are summarizing the research literature for selecting a treatment option, implementing a quality improvement program, revising a medical student clerkship elective, and creating a computer program to track patient care and outcomes.
- ❖ Examination MCQ – A standardized examination using multiple-choice questions (MCQ). The in-training examination and written board examinations are examples.
- ❖ Examination Oral – Uses structured realistic cases and patient case protocols in an oral examination to assess clinical decision-making.
- ❖ Procedure or Case Logs – MD doctors prepare summaries of clinical experiences including clinical data. Logs are useful to document educational experiences and deficiencies.
- ❖ PSQs – Patients fill out Patient Survey questionnaires (PSQs) evaluating the quality of care provided by MD doctors.

Annex 5, Program evaluation tools

| By whom | Method | sample |
|--|---|--------|
| Quality Assurance Unit | Reports Field visits | # |
| External Evaluator (s):According to department council External Examiner (s): According to department council | Reports Field visits | # |
| Stakeholders | Reports Field visits questionnaires | # |
| Senior students | questionnaires | # |
| Alumni | questionnaires | # |
| | | |

Annex 6, Program Correlations:

مصفوفة توافق المعايير القومية القياسية العامة لبرامج الدكتوراه مع المعايير الأكاديمية
المعتمدة من كلية الطب – جامعة أسيوط لدرجة الدكتوراه في أمراض الباطنة

I- General Academic Reference Standards (GARS) versus Program ARS

1- Graduate attributes

| Faculty ARS | NAQAAE General ARS for Postgraduate Programs |
|---|---|
| 1- Demonstrate competency and mastery of basics, methods and tools of scientific research and clinical audit in Internal Medicine. | 1- إتقان أساسيات و منهجيات البحث العلمي |
| 2- Have continuous ability to add knowledge new developments to Internal Medicine. through research and publication. | 2- العمل المستمر علي الإضافة للمعارف في مجال التخصص |
| 3- Appraise and utilise scientific knowledge to continuously update and improve clinical practice and relevant basic sciences. | 3- تطبيق المنهج التحليلي والناقد للمعارف في مجال التخصص و المجالات ذات العلاقة |
| 4- Acquire excellent level of medical knowledge in the basic biomedical, clinical, behavioural and clinical sciences, medical ethics and medical jurisprudence and apply such knowledge in patient care and scientific | 4- دمج المعارف المتخصصة مع المعارف ذات العلاقة مستتبطا و مطورا للعلاقات البينية بينها |
| 5- Function as a leader of a team to provide patient care that is appropriate, compassionate for dealing with effective and health Problems and health promotion. 7- Acquire an in depth understanding of common areas of speciality, from basic clinical care to evidence based clinical application, and possession of skills to manage independently all problems in these areas. | 5- إظهار وعيا عميقا بالمشاكل الجارية و النظريات الحديثة في مجال التخصص |
| 6- Identify and create solutions for health problems in Internal Medicine. | 6- تحديد المشكلات المهنية و إيجاد حلولاً مبتكرة لحلها |
| 5- Function as a leader of a team to provide patient care that is appropriate, effective and compassionate for dealing with | 7- إتقان نطاقا واسعا من المهارات المهنية في مجال التخصص |

| | |
|---|--|
| <p>health problems and health promotion.</p> <p>7- Acquire an in depth understanding of common areas of Internal Medicine , from basic clinical care to evidence based clinical application, and possession of skills to manage independently all problems in these areas.</p> | |
| <p>16- Share in updating and improving clinical practice in Internal Medicine.</p> <p>9- Function as teacher in relation to colleagues, medical students and other health professions.</p> | <p>8- التوجه نحو تطوير طرق و أدوات و أساليب جديدة للمزاولة المهنية</p> |
| <p>15- Use recent technologies to improve his practice in Internal Medicine.</p> | <p>9- استخدام الوسائل التكنولوجية المناسبة بما يخدم ممارسته المهنية</p> |
| <p>8- Demonstrate leadership competencies including interpersonal and communication skills that ensure effective information exchange with individual patients and their families and teamwork with other health professions, the scientific community and the public.</p> <p>5- Function as a leader of a team to provide patient care that is appropriate, effective and compassionate for dealing with health problems and health promotion.</p> | <p>10- التواصل بفاعلية و قيادة فريق عمل في سياقات مهنية مختلفة</p> |
| <p>10- Master decision making capabilities in different situations related to Internal Medicine.</p> | <p>11- اتخاذ القرار في ظل المعلومات المتاحة</p> |
| <p>11- Show leadership responsiveness to the larger context of the health care system, including e.g. the organisation of health care, partnership with health care providers and managers, practice of cost-effective health care, health economics, and resource allocations.</p> | <p>12- توظيف الموارد المتاحة بكفاءة و تنميتها والعمل على إيجاد موارد جديدة</p> |
| <p>12- Demonstrate in depth awareness of public health and health policy issues including independent ability to improve health care, and identify and carryout system-based improvement of care.</p> | <p>13- الوعي بدوره في تنمية المجتمع والحفاظ على البيئة</p> |
| <p>13- Show model attitudes and professionalism.</p> | <p>14- التصرف بما يعكس الالتزام بالنزاهة و</p> |

| | المصداقية و قواعد المهنة |
|--|---|
| <p>14- Demonstrate commitment for lifelong learning and maintenance of competence and ability for continuous medical education and learning in subsequent stages and in Internal Medicine or one of its subspecialties.</p> <p>15- Use recent technologies to improve his practice in Internal Medicine.</p> | <p>15- الالتزام بالتنمية الذاتية المستمرة و نقل علمه و خبراته للآخرين</p> |

2- Academic standards

| Faculty ARS | NAQAAE General ARS for Postgraduate Programs |
|---|--|
| 2.1. A- Established, updated and evidence- based theories, basics and developments of Internal Medicine. and relevant sciences. | 1-2-أ- النظريات و الأساسيات والحديث من المعارف في مجال التخصص والمجالات ذات العلاقة |
| 2.1. B- Basic, methods and ethics of medical research. | 1-2-ب- أساسيات و منهجيات و أخلاقيات البحث العلمي و أدواته المختلفة |
| 2.1. C- Ethical and medicological principles of medical practice related to Internal Medicine. | 1-2-ج- المبادئ الأخلاقية و القانونية للممارسة المهنية في مجال التخصص |
| 2.1. D- Principles and measurements of quality in Internal Medicine. | 1-2-د- مبادئ و أساسيات الجودة في الممارسة المهنية في مجال التخصص |
| 2.1. E- Principles and efforts for maintains and improvements of public health. | 1-2-هـ- المعارف المتعلقة بآثار ممارسته المهنية على البيئة وطرق تنمية البيئة وصيانتها |
| 2.2. A- Application of basic and other relevant science to solve Internal Medicine. related problems. | 2-2-أ- تحليل و تقييم المعلومات في مجال التخصص و القياس عليها و الاستنباط منها |
| 2.2.B- Problem solving based on available data. | 2-2-ب- حل المشاكل المتخصصة استنادا علي المعطيات المتاحة |
| 2.2.C- Involvement in research studies related to Internal Medicine. | 2-2-ج- إجراء دراسات بحثية تضيف إلى المعارف |
| 2.2. D- Writing scientific papers. | 2-2-د- صياغة أوراق علمية |
| 2.2. E- Risk evaluation in the related clinical practice | 2-2-هـ- تقييم المخاطر في الممارسات المهنية |
| 2.2.F- Planning for performance improvement in Internal Medicine. | 2-2-و- التخطيط لتطوير الأداء في مجال التخصص |

| | |
|--|--|
| 2-2-G- Creation and innovation in the Internal Medicine. | 2-2-ز- الابتكار /الإبداع |
| 2.2. H- Evidence – based discussion. | 2-2-ح- الحوار والنقاش المبني علي البراهين والأدلة |
| 2.2.I- Discussion making in different situations related to Internal Medicine. . | 2-2-ط -اتخاذ القرارات المهنية في سياقات مهنية مختلفة |
| 2.3. A- MD students must be able to provide extensive level of patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health extensive level means in depth understanding and from basic science to evidence – based clinical application and possession of skills to manage independently all problems in Internal Medicine. 2.3. B- Master patient care skills relevant to Internal Medicine or patients with all diagnoses and procedures. | 2-3-أ - إتقان المهارات المهنية الأساسية و الحديثة في مجال التخصص |
| 2.3. C- Write and evaluate reports for situations related to the field of Internal Medicine. | 2-3-ب- كتابة و تقييم التقارير المهنية. |
| 2.4.A-Master practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management | 2-3-ج -تقييم و تطوير الطرق و الأدوات القائمة في مجال التخصص |
| 2.4.B- Use competently all information sources and technology to improve his practice. | 2-3-د - استخدام الوسائل التكنولوجية بما يخدم الممارسة المهنية |
| 2.4.A-Master practice-based learning and improvement skills that involves | 2-3-هـ -التخطيط لتطوير الممارسة |

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| <p>investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management</p> <p>2.4.G- Participate in improvement of the education system.</p> | <p>المهنية وتنمية أداء الآخرين</p> |
|--|------------------------------------|

II-Program ARS versus program ILOs

Comparison between ARS- ILOS for medical doctorate

| (ARS) | (ILOs) |
|--|---|
| <p><u>2-1- Knowledge and understanding</u></p> <p>2-1-A- Established, updated and evidence-based Theories, Basics and developments of Internal Medicine and relevant sciences.</p> | <p><u>2-1- Knowledge and understanding</u></p> <p>2-1-A- Demonstrate in-depth knowledge and understanding of theories, basics and updated biomedical, clinical epidemiological and socio behavioral science relevant to his speciality as well as the evidence – based application of this knowledge to patient care.</p> |
| <p>2-1-B Basic, methods and ethics of medical research.</p> | <p>2-1-B- Explain basics, methodology, tools and ethics of scientific medical, clinical research.</p> |
| <p>2-1-C- Ethical and medicological principles of medical practice related to Internal Medicine. field.</p> | <p>2-1-C- Mention ethical, medico logical principles and bylaws relevant to his practice in the field of Internal Medicine.</p> |
| <p>2-1-D- Principles and measurements of quality assurance in the Internal Medicine.</p> | <p>2-1-D- Mention principles and measurements of quality assurance and quality improvement in medical education and in clinical practice of Internal Medicine.</p> |
| <p>2-1-E-Principles and efforts for maintains and improvements of public health.</p> | <p>2-1-E- Mention health care system, public health and health policy, issues relevant to this speciality and principles and methods of system – based improvement of patient care in common health problems of the field of Internal Medicine.</p> |
| <p><u>2-2- Intellectual skills:</u></p> <p>2-2-A-Application of basic and other</p> | <p><u>2-2- Intellectual skills:</u></p> <p>2-2-A- Apply the basic and clinically supportive</p> |

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| relevant science to solve Internal Medicine related problems. | sciences which are appropriate to Internal Medicine related conditions / problem / topics. |
| 2-2-B- Problem solving based on available data. | 2-2-B- Demonstrate an investigatory and analytic thinking “problem – solving “approaches to clinical situation related to Internal Medicine. |
| 2-2-C- Involvement in research studies related to the Internal Medicine. | 2-2-C- Plain research projects. |
| 2-2-D Writing scientific papers. | 2-2-D- Write scientific paper. |
| 2-2-E- Risk evaluation in the related clinical practice. | 2-2-E- Participate in clinical risk management as a part of clinical governance. |
| 2-2-F- Planning for performance improvement in the Internal Medicine field. | 2-2-F- Plan for quality improvement in the field of medical education and clinical practice in his speciality. |
| 2-2-G- Creation and innovation in the speciality field. | 2-2-G- Create / innovate plans, systems, and other issues for improvement of performance in his practice. |
| 2-2-H- Evidence – based discussion. | 2-2-H- Present and defend his / her data in front of a panel of experts. |
| 2-2-I- Decision making in different situations related to Internal Medicine fields. | 2-2-I- Formulate management plans and alternative decisions in different situations in the field of the Internal Medicine. |

| continuous (ARS) | continuous (ILOs) |
|---|---|
| <p><u>2-3- Clinical skills:</u></p> <p>2-3-A- MD students must be able to provide extensive level of patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health extensive level means in depth understanding and from basic science to evidence – based clinical application and possession of skills to manage independently all problems in his field of practice.</p> <p>2-3-B- Master patient care skills relevant to Internal Medicine for patients with all diagnoses and procedures.</p> | <p><u>2/3/1/Practical skills (Patient care :)</u></p> <p>2-3-1-A- Provide extensive level of patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. <i>p.s.</i> Extensive level means in-depth understanding from basic science to evidence – based clinical application and possession of skills to manage independently all problems in field of practice.</p> <p>2-3-1-B- Provide extensive level of patient care for patients with all common diagnoses and for uncomplicated procedures related to Internal Medicine.</p> <p>2-3-1-C- Provide extensive level of patient care for non-routine, complicated patients and under increasingly difficult circumstances, while demonstrating compassionate, appropriate and effective care.</p> <p>2-3-1-D- Perform diagnostic and therapeutic procedures considered essential in the field of Internal Medicine.</p> <p>2-3-1-E- Handles unexpected complications, while demonstrating compassion and sensitivity to patient needs and concerns.</p> <p>2-3-1-F- Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families in the Internal Medicine related</p> |

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| | <p>situations.</p> <p>2-3-1-G- Gather essential and accurate information about patients of the Internal Medicine related conditions.</p> <p>2-3-1-H Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence and clinical judgment for the Internal Medicine. related conditions.</p> <p>2-3-1-I- Develop and carry out patient management plans for Internal Medicine related conditions.</p> <p>2-3-1-J- Counsel and educate patients and their families about Internal Medicine related conditions.</p> <p>2-3-1-K- Use information technology to support patient care decisions and patient education in all Internal Medicine related clinical situations.</p> <p>2-3-1-L- Perform competently all medical and invasive procedures considered essential for the Internal Medicine. related conditions / area of practices.</p> <p>2-3-1-M- Provide health care services aimed at preventing the Internal Medicine related health problems.</p> <p>2-3-1-N- Lead health care professionals, including those from other disciplines, to provide patient-focused care in</p> |
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| | Internal Medicine related conditions. |
| 2-3-C- Write and evaluate reports for situations related to the field Internal Medicine. | 2-3-1-O- Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets.(Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive timely and legible medical records). |
| <p><u>2-4- General skills</u></p> <p>2-4-A- Master practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management</p> | <p><u>2/3/2 General skills</u></p> <p>2-3-2-A- Demonstrate the competency of continuous evaluation of different types of care provision to patients in the different area of Internal Medicine.</p> <p>2-3-2-B- Appraise scientific evidence.</p> <p>2-3-2-C- Continuously improve patient care based on constant self-evaluation and <u>life-long learning</u>.</p> <p>2-3-2-D. Participate in clinical audit and research projects.</p> <p>2-3-2-E- Practice skills of evidence-based Medicine (EBM).</p> <p>2-3-2-G- Design logbooks.</p> <p>2-3-2-H- Design clinical guidelines and standard protocols of management.</p> <p>2-3-2-I- Appraise evidence from scientific studies related to the patients' health problems.</p> |

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| <p>2-4-B- Use competently all information sources and technology to improve his practice.</p> | <p>2-3-2-J- Apply knowledge of study designs and statistical methods to the appraisal of clinical studies.</p> <p>2-3-2-K- Use information technology to manage information, access on-line medical information; for the important topics.</p> |
| <p>2-4-C- Master skills of teaching and evaluating others.</p> | <p>2-3-2-F- Educate and evaluate students, residents and other health professionals.</p> |
| <p>2-4-D- Master interpersonal and communication Skills that result in effective information exchange and teaming with patients, their families, and other health professionals.</p> | <p>2-3-2-L- Master interpersonal and communication skills that result in the effective <u>exchange of information and collaboration</u> with patients, their families, and health professionals, including:-</p> <ul style="list-style-type: none"> • <u>Present</u> a case. • <u>Write</u> a consultation note. • <u>Inform patients</u> of a diagnosis and therapeutic plan Completing and maintaining comprehensive. • Timely and legible <u>medical records</u>. • Teamwork skills. <p>2-3-2-M- Create and sustain a therapeutic and ethically sound relationship with patients.</p> <p>2-3-2-N- Elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.</p> <p>2-3-2-O- Work effectively with others as a member or leader of a health care team or other professional group.</p> |
| <p>2-4-E- Master Professionalism behavior, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical</p> | <p>2-3-2-P- Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society.</p> |

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| <p>principles, and sensitivity to a diverse patient population.</p> | <p>2-3-2-Q- Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.</p> <p>2-3-2-R- Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.</p> |
| <p>2-4-F- Demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively use system resources to provide care that is of optimal value.</p> <p>2-4-G- Participate in improvement of the education system.</p> | <p>2-3-2-S- Work effectively in health care delivery settings and systems related to Internal Medicine. including good administrative and time management.</p> <p>2-3-2-T- Practice cost-effective health care and resource allocation that does not compromise quality of care.</p> <p>2-3-2-U- Advocate for quality patient care and assist patients in dealing with system complexities.</p> <p>2-3-2-V- Design, monitor and evaluate specification of under and post graduate courses and programs.</p> |
| <p>2-4-H- Demonstrate skills of leading scientific meetings including time management</p> | <p>2-3-2-W- Act as a chair man for scientific meetings including time management</p> <p>2-3-2-S- Work effectively in health care delivery settings and systems related to Internal Medicine including good administrative and time management.</p> |
| <p>2-4-O- Demonstrate skills of self and continuous learning .</p> | <p>From A to H</p> |

**III-Program matrix
Knowledge and understanding**

| Course | Program covered ILOs | | | | |
|---|----------------------|-------|-------|-------|-------|
| | 2/1/A | 2/1/B | 2/1/C | 2/1/D | 2/1/E |
| Course 1 : Medical statistics | | ✓ | | | |
| course 2 : Research Methodology | | ✓ | | | |
| Course 3 : Medicolegal Aspects & Ethics in Medical Practice and Scientific Research | | | ✓ | | |
| Course 4 Pathology | ✓ | | | | |
| Course 5 Physiology | ✓ | | | | |
| Course 6 : Internal Medicine | ✓ | ✓ | ✓ | ✓ | ✓ |

Intellectual

| Course | Program covered ILOs | | | | | | | | |
|---|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 2/2/A | 2/2/B | 2/2/C | 2/2/D | 2/2/E | 2/2/F | 2/2/G | 2/2/H | 2/2/I |
| Course 1 : Medical statistics | | | ✓ | ✓ | | | | ✓ | |
| course 2 : Research Methodology | | | ✓ | ✓ | | | | ✓ | |
| Course 3 : Medicolegal Aspects & Ethics in Medical Practice and Scientific Research | | | | | | | | ✓ | |
| Course 4 Pathology | ✓ | ✓ | | | | | | ✓ | |
| Course 5 Physiology | ✓ | ✓ | | | | | | ✓ | |
| Course 6 : Internal Medicine | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

Practical Skills (Patient Care)

| Course | Program covered ILOs | | | | | | | |
|--|----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | 2/3/1/ A | 2/3/1/ B | 2/3/1/ C | 2/3/1/ D | 2/3/1/ E | 2/3/1/ F | 2/3/1/ G | 2/3/1/ H |
| Course 1 : Medical statistics | | | | | | | | |
| course 2 : Research Methodology | | | | | | | | |
| Course 3 : Medicolegal Aspects & Ethics in Medical Practice and Scientific Research | | | | ✓ | | | | ✓ |
| Course 4 Pathology | | | | | | | | |
| Course 5 Physiology | | | | | | | | |
| Course 6 : Internal Medicine | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

Patient care

| Course | Program covered ILOs | | | | | | |
|---|----------------------|---------|---------|---------|---------|---------|---------|
| | 2/3/1/I | 2/3/1/J | 2/3/1/K | 2/3/1/L | 2/3/1/M | 2/3/1/N | 2/3/1/O |
| Course 1 : Medical statistics | | | | | | | |
| course 2 : Research Methodology | | | | | | | |
| Course 3 : Medicolegal Aspects & Ethics in Medical Practice and Scientific Research | ✓ | ✓ | | | | | ✓ |
| Course 4 Pathology | | | | | | | |
| Course 5 Physiology | | | | | | | |
| Course 6 : Internal Medicine | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

General Skills

| Course | Program covered ILOs | | | | | | | |
|---|----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | 2/3/2/ A | 2/3/2/ B | 2/3/2/ C | 2/3/2/ D | 2/3/2/ E | 2/3/2/ F | 2/3/2/ G | 2/3/2/ H |
| Course 1 : Medical statistics | | ✓ | | | | | | |
| course 2 : Research Methodology | | ✓ | | ✓ | ✓ | | | |
| Course 3 : Medicolegal Aspects & Ethics in Medical Practice and Scientific Research | | | | | | | | |
| Course 4 Pathology | | | | | | | | |
| Course 5 Physiology | | | | | | | | |
| Course 6 : Internal Medicine | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

General skill

| Course | Program covered ILOs | | | | | | | |
|---|----------------------|---------|---------|---------|---------|---------|---------|---------|
| | 2/3/2/1 | 2/3/2/J | 2/3/2/K | 2/3/2/L | 2/3/2/M | 2/3/2/N | 2/3/2/O | 2/3/2/P |
| Course 1 : Medical statistics | ✓ | ✓ | ✓ | | | | | |
| course 2 : Research Methodology | ✓ | ✓ | | | | | | |
| Course 3 : Medicolegal Aspects & Ethics in Medical Practice and Scientific Research | | | | ✓ | | | | |
| Course 4 Pathology | | | ✓ | ✓ | | | | |
| Course 5 Physiology | | | ✓ | ✓ | | | | |
| Course 6 : Internal Medicine | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

General skill

| Course | Program covered ILOs | | | | | | |
|--|----------------------|---------|---------|---------|---------|---------|---------|
| | 2/3/2/Q | 2/3/2/R | 2/3/2/S | 2/3/2/T | 2/3/2/U | 2/3/2/V | 2/3/2/W |
| Course 1 : Medical statistics | | | | | | | |
| course 2 : Research Methodology | | | | | | | |
| Course 3 : Medicolegal Aspects & Ethics in Medical Practice and Scientific Research | | | | | | | |
| Course 4 Pathology | ✓ | | ✓ | | | | |
| Course 5 Physiology | ✓ | | ✓ | | | | |
| Course 6 : Internal Medicine | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

Annex 7,
Additional information:

Equipments and Specialized Units:

- Patients' wards: 166 beds.
- Daily Internal medicine out patients' clinics (new patients, follow up post discharge appointments, discharged critical care patients Follow up clinic)
- Weekly nephrology out patient clinic.
- Twice weekly gastroenterology and hepatology out patients clinic.
- Once weekly gastrointestinal motility out patients clinic.
- Trice weekly hematology out patient clinic.
- Twice weekly cardiology out patient clinic.
- Twice weekly endocrinology out patient clinic.
- Once weekly obesity out patient clinic .
- Gastroenterology and hepatology ICU (14 beds)
- Echocardiology unit.
- Diagnostic and therapeutical (liver and kidney biopsy) Abdominal ultrasonography unit.
- Motility study unit .
- Diagnostic and therapeutical Endoscopy and ERCP unit.
- Renal dialysis unit.
- ICU (12 beds).
- ICU (8 beds).
- Hematology ICU (8 beds).
- Hematology unit (16 beds).
- Internal medicine beds (110 beds).
- Scientific Library (Internal Medicine Text Books and periodicals), MD, MSc thesis,
- Seminar room with data show.
- Electronic Library of Scientific Seminars, case presentations.
- Minor procedures skill teaching unit (Liver and renal biopsy., Diagnostic and therapeutical ascetic fluid tapping,)
- Data base filing of all the cases, procedures and out patient clinic data.

Staff members:

- أ.د/ محمد عباس صبح
أ.د/ عبد القادر عبد النبي خليف
أ.د/ فتحية خليل أبراهيم
أ.د/ محمد علي تهامي
أ.د/ ماهر عبد الجابر عبد الناصر
أ.د/ يسرية عبد الرحمن أحمد
أ.د/ عبد الله اسماعيل علي كيلاني
أ.د/ نبويه محمود توفيق
أ.د/ إيناس أحمد رضا الكريمي
أ.د/ البدرى ابراهيم ابو النور
أ.د/ نور الدين عبد العظيم الحفني
أ.د/ محمد مصطفى عشاوى
أ.د/ عصام عبد المنعم صادق البيه
أ.د/ لبنى فرج التونى
أ.د/ فاطمة ابو بكر عبد المعز
أ.د/ محمد حسام الدين حسن مغربى
أ.د/ اشرف انور ثابت الشاذلى
أ.د/ محمود علي محمود عشرى
أ.د/ علاء الدين عبد المنعم
أ.د/ سلوى صلاح الجندى
أ.د/ هالة خلف الله الشريف
أ.د/ إيمان مختار سويفى
أ.د/ نبيلة فائق أمين
أ.د/ محمد اليمنى قبيص
أ.د/ حسين احمد الامين همام
أ.د/ اسامه احمد ابراهيم
أ.د/ مصطفى عبد الله هريدى
أ.د/ هويدا عبد الحكيم نفادي
أ.د/ عمر محمد عمر شحات
أ.د/ هالة مصطفى كامل
د. / رفعت فتحى عبد العال
د. / عادل حسن مكاوي
د. / منى محمد سليمان
د. / عفت عبد الهادى تونى
د. / عصام الدين عبد المحسن محمد
د. / منال السيد عز الدين
د. / محمد رمضان عبد الحميد
د. / زين العابدين أحمد سيد
د. / محمد زين الدين حافظ
د. / لبنى عبد الواحد أحمد
د. / أحمد فراج ثابت

Opportunities within the department

- Internal medicine beds (110 beds).
- Gastroenterology and hepatology ICU (14 beds)
- ICU (12 beds).
- ICU (8 beds).
- Hemalology ICU (8 beds).
- Hematology unit (16 beds).
- Scientific Library
- Seminar room with data show
- Electronic Library of Scientific Seminars, case presentations.
- Data base filing of all the cases, procedures and out patient clinic data.

Department quality control insurance for completing the program

- + Evaluation by the Department head and staff members.
- + Regular assessments.
- + Log book monitoring.
- + Recent equipments and Specialized Units.

(End of the program specifications)