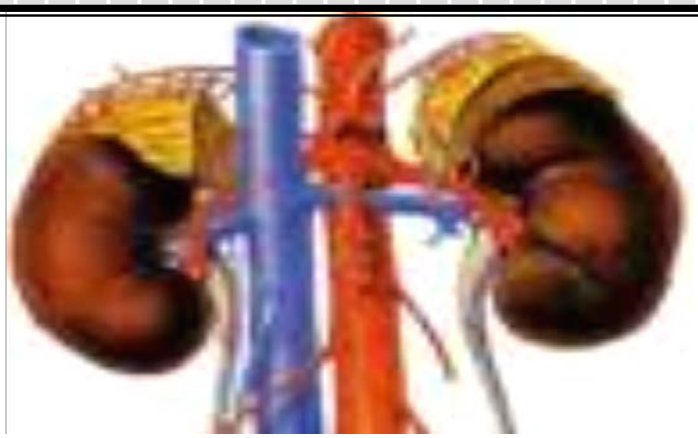
MEDICAL DOCTORATE (M.D.) DEGREE PROGRAM AND COURSES SPECIFICATIONS FOR NEPHROLOGY

According to currently applied Credit points bylaws)

Advanced nephrology unit
Department of internal medicine
Faculty of medicine
Assiut University
2021-2022



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M. D. degree of Advanced nephrology.

A. Basic Information

- **Program Title: Advanced nephrology.**
- **Nature of the program: Single.**
- **Responsible Department: Internal Medicine Department.**
- **Program Academic Director (Head of the Department): Prof. Dr. Mohammed A.Yammany**
  - **Principle coordinator: Prof.Dr. Effat Abdulhady Tony.**
  - **Assistant coordinator (s): Prof.Dr. Mohamad A. Tohamy. Prof.Dr. Mohamad A. Sobh prof.Dr Ashraf A. Shazly**
- **Internal evaluators: Prof. Dr. Enas A. Alkareemy (Assiut university)**
- **External evaluator(s): Pof.Dr. (Sohag university).**
- **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: 27 / 11/2022.**
- **Total number of courses: 6courses + two elective courses**
- **First part 5 courses**
- **Second part 1 course**

B. Professional Information

1- Program aims

1.1 To enable candidates to master 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 advanced nephrology in addition to various interventions and techniques related to it.

1.2. To provide candidates with fundamental knowledge of renal medicine as regards; dealing with critically ill patient with renal diseases, those on dialysis and pre and post renal transplantation patients

1.3. To provide candidates with skills regarding techniques of dialysis, indications, contraindications, complications, care of dialyzed patients and preparation of patients for renal transplant.

1.4. To introduce candidates to the basics of scientific medical research.

1.5. To enable candidates to describe the basic ethical and medicolegal principles relevant to advanced nephrology

1/5. To enable candidates to have professional careers as a consultant in Egypt and recognized abroad.

1/6 To enable candidates to continue self learning in subspecialties.

1/7 To enable candidates to master different research methodology and do their own.

2-Intended learning outcomes (ILOs) *for the whole program*:

2/1Knowledge and understanding:

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.
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 Nephrology.
D. Mention principles and measurements of quality assurance and quality improvement in medical education and in clinical practice of Nephrology.
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 Nephrology.

2/2 Intellectual outcomes

A. Apply the basic and clinically supportive sciences which are appropriate to Nephrology related conditions.
B. Demonstrate an investigatory and analytic thinking "problem – solving "approaches to clinical situation related to Nephrology.
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 Nephrology.
G. Create / innovate plans, systems, and other issues for improvement of performance in Nephrology.

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 Nephrology

2/3 Skills

2/3/1 Practical 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. provides extensive level of patient care *for patients with all common diagnoses and for uncomplicated procedures* related to Nephrology.

C. provides 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 Nephrology.
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 Nephrology related situations.

G, Gather essential and accurate information about patients of Nephrology 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 Nephrology related conditions.

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

J. Counsel and educate patients and their families about Advanced nephrology related conditions.

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

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

M. Provide health care services aimed at preventing Advanced nephrology related health problems.

N. Lead health care professionals, including those from other disciplines, to provide patient-focused care in Nephrology 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 the competency of continuous evaluation of different types of care provision to patients in the different area of Advanced nephrology.

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 Advanced nephrology 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 Nephrology

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.

These standards were re-revised and approved without changes by the Faculty Council on 27-11-2022.

4- Program External References (Benchmarks).

1. ACGME (Accreditation Council for Graduate Medical Education).
   http://www.acgme.org/acWebsite/navPages/nav_Public.asp
2. The Joint Committee on Higher Medical Training Advanced nephrology curriculum approved by Postgraduate Medical Education and Training Board UK2007.
   (http://www.med.umich.edu/intmed/advanced nephrology/edu/fellowinfo.htm).Hamed.msobh@yahoo.com

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
Total degrees 1700 marks.
500 marks for first part
1200 for second part
Written exam 40% - 70%.
Clinical/practical and oral exams 30% - 60%.

Curriculum Structure: (Courses):

Levels and courses of the program:

Courses and student work load list	Course Code	Core Credit points		
		Lectures	training	total
First Part				
Basic science courses (10 CP) 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	 FAC309A FAC309B FAC310C -REN305 - REN303	 1 1 1 3.5 3.5	 - - - - -	 1 1 1 3.5 3.5
Elective courses*	3 CP			
Elective course 1 Elective course 2		1.5 1.5		1.5 1.5
Thesis		40 CP		
Published researches**		40 CP		
Second Part	Speciality courses 24 CP Speciality Clinical Work (log Book) 123 CP			
Speciality Course Course 6 Nephrology)	REN318	24		24
Speciality Clinical Work (123 CP)	REN318		123	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.

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 II: Program Matrix

7-Admission requirements

- **Admission Requirements (prerequisites) if any :**
  - **I. General Requirements:**
    - **Master degree in Nephrology**
  - **II. Specific Requirements:**
    - **Fluent in English (study language)**

VACATIONS AND STUDY LEAVE

The current departmental policy is to give working Candidates 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**			
First Part	Course Code	Written Exam	Oral	and/or Practical l Exam	Total
Basic science courses:					
Course1:**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		100	75	-	175
Course 5 Physiology		100	75	-	175
Total of first part					500
Second Part					
	Course code	written	oral	Practical/ clinical	total
Speciality Courses		500			
Course 6 Nephrology Paper 1 Paper2 Paper 3	**REN318**	 125 125 125	200	**500**	

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

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 examination in Tropical Medicine and Gastroenterology 1 paper 1 (1 hour) in Basics of Radiology
- Written examination 3 hours in Pathology + oral Exam
- Written examination 3 hours in and physiology+ oral Exam
- **Second part:**
  - Written exam 4 papers 3 hours for each in Nephrology + 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):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 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. Effat Abdulhady . Tony**		
Head of the Responsible Department (Program Academic Director):	**Prof. Mohamed Yammany**		

Annex 1, Specifications for Courses / Modules

Annex 1: specifications for courses

First Part

1) **Course 1: Medical statistics**
2) **Course 2: Research Methodology**
3) **Course 3: - Medicolegal Aspects and Ethics in Medical Practice and Scientific Research**
4) **Course 4 : Pathology**
5) **Course 5: Physiology**

Course 1: Medical statistics

Name of department: Public Health and Community Medicine
Faculty of medicine
Assiut University
2022-2023

1. Course data

- **Course Title: Medical statistics**
- **Course code: FAC309A**
- **Specialty: 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. Farag Mohammed Moftah
  - Assistant coordinator (s): Prof. Medhat Araby Khalil Saleh
- Date last reviewed: January -2022
- **Requirements (pre-requisites) if any:**
  - Completed Master degree in any of the academic or clinical departments of Medicine.

2. Course Aims

Enable gradute 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
G. Detect the difference between parametric and non-parametric tests	Lecture and discussion	Written examination
H. Identify the concepts of correlation and regression	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
E. Describe the difference between parametric and non-parametric tests	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. Attendance and active participation
2. Assignment
3. Practical SPSS examination
4. 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 practical exam).

7. List of references

i. Lectures notes

Department lecture notes

ii. Essential books

- Medical Statistics: Book by Ramakrishna HK 2016
- Janet Peacock and Philip Peacock. Oxford Handbook of Medical Statistics (second edition.) Publisher: Oxford University Press, Print Publication Date: Nov 2010 Print ISBN-13: 9780199551286, Published online: Jun 2011. DOI: 10.1093/med/9780199551286.001.0001
- Leslie E. Daly MSc, PhD, Hon MFPHM,, Geoffrey J. Bourke MA, MD, FRCPI, FFPHM, FFPHMI, Interpretation and Uses of Medical Statistics, Fifth Edition, First published:1 January 2000, Print ISBN:9780632047635 |Online ISBN:9780470696750 |DOI:10.1002/9780470696750
- Marcello Pagano, Kimberlee Gauvreau: Principles of Biostatistics second edition published in 2000 by Brooks/Cole and then Cengage Learning. CRC Press, Feb 19, 2018 - Mathematics - 584 pages.

Iii- Recommended books

- Ji-Qian Fang (Sun Yat-Sen University, China) Handbook of Medical Statistics: https://doi.org/10.1142/10259 | September 2017.Pages: 852
- Robert H. Riffenburgh: Statistics in Medicine 4th Edition (2020). EvidenceEvidence Based Medicine How to practice and teach EBM.
- Discovering Statistics Using IBM SPSS Book by Andy Field, 2013.

iii. Periodicals, Web sites, etc

iv. **Periodicals , etc** Statistics in Medicine - Wiley Online Library

v. **Web sites** https://www.phc.ox.ac.uk/research/medical-statistics

8. Signatures

Course Coordinator: - Farag Mohammed Moftah	**Head of the Department:** - Prof. Eman Morsy Mohamed
Date: 10-1-2022	**Date**: 10-1-2022
Associated Coordinator: Prof. Medhat Araby Khalil Saleh	
Date: 10-1-2022	

Course 2: Research Methodology

Name of department: Public Health and Community Medicine
Faculty of medicine
Assiut University
2021-2022

1. Course data

- **Course Title: Research methodology**
- **Course code: FAC309B**
- **Specialty: 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. Mahmoud Attia

  Assistant coordinator (s): Prof. Ekram Mohamed
  - Prof. Medhat Araby Khalil
- **Date last reviewed:** January 2022
- **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:

- planning and implementing sound research
- writing a scientific research proposal

3. Intended learning outcomes (ILOs)

A knowledge and understanding

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Explain differences between different study designs.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments Practical exam
B. Identify sources and types of bias in research.	Lecture and discussion Practical sessions	Written exam Log book assignments Practical exam
C. Identify methods of data collection.	Lecture and discussion Practical sessions	Written exam Log book assignments
D. Select and design valid measurement tools for research.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments Practical exam
E. Explain ethical issues in conducting research on human subjects.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments
F. List the steps involved in proposal writing.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments Practical exam
G. Identify a research problem within a	Lecture Discussion	Written exam Log book

conceptual framework.		assignments Practical exam
H. Use the web sources to do a literature search	Practical tutorial on web	Log book assignment
I. Describe the rules of authorship in scientific writing.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments
J. Select the appropriate study design for the research question.	Lecture Practical sessions	Written exam Practical exam
K. Minimize bias in designing research.	Lecture	Written exam
L. Screening & theoretical background	Lectures	Written exam Practical exam
M. Mention the basic ethics for conducting a research and medicolegal principles relevant to data confidentiality.	lectures seminar	Written exam Practical exam

B. intellectual

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A- Apply basic science & knowledge for appraising scientific literature.	Discussions &seminars	Written exam Practical exam
B- Design research and present study data, in seminars.	lecture seminar	log book assignments
C- Design suitable epidemiological study.	lecture seminar	log book assignments
D- Design strategies for resolving ethical concerns in research, law, and regulations.	lecture Workshops	Written exam log book assignments
E- Apply coherently synthesize ideas and integrate lateral and vertical thinking.	lecture Workshops	log book assignments
F- Evaluate screening tests and interpreting their uses in different population.	lecture	Written exam Practical exam

C. Practical skills

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A- Conduct epidemiological studies, screening and surveys.	lectures seminar	written exam log book assignments
B- Identify steps required in fielding the study.	Lecture	Assignments Written exam
C- Managing data collection team.	lectures seminar	log book assignments
D- Identify steps required for calculation sensitivity, specificity, positive predictive value, negative predictive value, accuracy of a screening test.	Lecture Practical sessions	Assignments Written exam Practical exam
E- Be able to define and apply the epidemiologic criteria of causality and be able to distinguish between a measure of association and evidence of causality.	Lecture Practical sessions	Assignments Written exam Practical exam
F- Synthesize information from multiple sources for research writing and the ability to perform paper critique .	Lecture Practical sessions	Assignments Written exam Practical exam
G- Identify bias and confounding in epidemiological study designs, their types and ways to control them in various types of biases.	Lecture Practical sessions	Assignments Written exam Practical exam

D General skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A- Scientific paper and proposal writing skills: be able to write an introduction, objectives and the methodological section.	Tutorial	Written examination
B- Learn authorship ethical rules.	Tutorial	Written examination
C- Perform practice-based improvement activities using a systematic methodology (audit, logbook, critical appraisal)	- Lectures -Practical sessions - Discussion - Readings	critical appraisal
D- Appraise evidence from scientific studies(journal club)	- Lectures -Practical sessions - Discussion - Readings	critical appraisal
E- Conduct epidemiological studies, screening and surveys.	- Lectures -Practical sessions - Discussion - Readings	attendance and participation
F- Facilitate training of junior students and other health care professionals in different screening activities.	Field work Participation in projects	attendance and participation

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
G- Maintain ethically sound relationship with community members.	- Lectures -Practical sessions - Discussion - Readings	Written exams
H- Provide information using effective nonverbal, explanatory, questioning, and writing skills.	- Lectures -Practical sessions - Discussion - Readings	Written exams Practical exams
I- Present results of researches in seminars.	- Lectures -Practical sessions - Discussion - Readings	Log book assignments

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
J- Demonstrate respect, compassion, and integrity to the needs of society.	- Lectures - Discussion - Readings	Written exams
K- Manage potential conflicts of interest encountered by practitioners, researchers, and organizations.	- Lectures - Discussion - Readings	Written exams
L- Design strategies for resolving ethical concerns in research, law, and regulations.	Lectures - Discussion - Readings	Written exams Practical exams
M- Demonstrate ways to control for confounding in the analysis phase of a study	Lectures - Discussion - Readings	Written exams Practical exams
N- Demonstrate a commitment to ethical principles including confidentiality of participants' information and informed consent.	Lectures - Discussion - Readings	Written exams
O- Assess ethical considerations in developing communications and promotional initiatives.	- Lectures - Discussion - Readings	Written exams

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
Over view on research conduction and research ethics	A&E	A-D	A-C	C-G, I,L&M-O
How to write a research proposal	F,I	E	F	A-C&H
Observational study design	A& D	B & C	D	E & F
Experimental study design	A& D	B & C	B	E & F
Evaluation of diagnostic tests (Screening)	L	A	B& E	F
Systematic reviews and meta analysis	G, H & M	E& F	F	C, D
Confounding, bias & effect modification	B & K	D	E & G	M

5. Course Methods of teaching/learning:

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

6. Course assessment methods:

i. Assessment tools:

1. Attendance and participation
2. Log book assignments
3. Written examination
4. Practical examination

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

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

7. List of references

i. Lectures notes

- Department lecture notes

ii. Essential books

- Research Design: Qualitative, Quantitative and Mixed Methods Approaches 4th Edition by John W. CreswellSAGE Publications, Inc; 4th edition (January 1, 2014)
- Research methodology: A step – by – step Guide for Beginners. Ranjit Kumar, 2020. Second edition https://books.google.com.eg/books?
- Medical Research Essentials Rania Esteitie, McGraw Hill Professional, third edition, Feb 5, 2014 - Medical - 104 pages
- Research Methodology in the Medical and Biological Sciences Petter Laake, Haakon Breien Benestad, Bjorn R. Reino Olsen, 4th edition , Academic Press, Nov 5, 2007 - Science - 512 pages

iv. Recommended books

- Research Methods in Education 7th Edition, by Louis Cohen, Lawrence Manion, Keith Morrison Publisher: Routledge; (April 22, 2011) www.routledge.com/textbooks/cohen7e.
- Research Methodology: A Practical and Scientific Approach Vinayak Bairagi, Mousami V. Munot · 2019, Research Methodology: A Practical and Scientific Approach - Google Books
- Based Medicine How to practice and teach EBM. David Sachett, Sharon E. Straus, W. Scott Richardson , William Rosenberg R.Brain Haynes
- Dissertation workshop open courseware JHSPH

8. Signatures

Course Coordinator: Prof.Mahmoud Attia	**Head of the Department:** Prof. Eman Morsy Mohamed
Date: 10-1-2022	**Date**: 10-1-2022

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 Emergency Medicine* (1st part).**
- **Number of credit points: 1 credit point**
- **Department (s) delivering the course: Forensic Medicine and Clinical Toxicology**

- **Coordinator (s):**
  - **Course coordinator:**
    Prof. Ghada omran
  - **Assistant coordinator (s) Assist.**
    Prof. Zaghloul Thabet

- **Date last reviewed:** September 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 A	Intellectual B	Practical skills C	General Skills 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.

iii. 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

- Bernard Knight and Pekka Saukko (2015: Knight Forensic Pathology. Hodder Arnold press

- Goldfrank, Lewis R.; Howland, Mary Ann; Hoffman, Robert S.; Nelson, Ewis S.; Lewin, Neal A (2019): Goldfrank's Toxicologic Emergencies, 11th ed. McGraw Hill / Medical.

- Medical Ethics Manual. World medical association. Third edition 2015.
- Medical ethics and law. Dominic Wilkinson, 3rdedition 2019.

iii. Recommended books

- Biswas Gautam (2021): Review of Forensic Medicine & Toxicology. 5th ed. Jaypee Brothers Medical Pub.

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. Ghada Omran**	**- Head of the Department:** **Prof. Randa Hussein Abdel hady**
Date: 17-9-2017	**Date**: 17-9-2017

Course 4 Pathology

- **Course Title: Pathology**
- **Course code:** REN305
- **Speciality:** Nephrology
- **Number of CP : DIDACTIC 3.5 CPS (100%), practical 0(0%), total 3.5.**
- **Department (s) delivering the course:** Internal Medicine - Faculty of Medicine- Assiut- EGYPT
- **Coordinator (s):** Staff members of pathology in conjunction with staff members of Nephrology
- **Date last reviewed: September 2022**
- **Requirements (prerequisites) if any :**
  - None
- **Requirements from the students to achieve course ILOs are clarified in the joining log book.**

Course Aims

-The student should acquire the pathological facts necessary for *Nephrology.*

Intended learning outcomes (ILOs):

A- Knowledge and understanding

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A. Describe Pathologic details of: • Glomerulonephritis (primary & secondary). • Vasculitis. • Tubulo-interstitial nephritis. • Hypertension and the kidney. • Ischemic heart disease • Hypertension • Vasculitis • Renal involvement in systemic diseases	-Lectures	-Written and oral examination - Log book

B- 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 Nephrology	Didactic (lectures, seminars, tutorial)	-Written and oral examination -Log book
B. Demonstrate an investigatory and analytic thinking (problem solving) approaches to common clinical situations related to Nephrology		

C- Practical skills

Practical: 0 hours

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	-Observation and supervision -Written and oral communication	Log book Oral exam

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
B. Write a report in common condition mentioned in A.A	-Clinical round -Seminars -Lectures	- Logbook Oral exam Chick list

Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
C. Demonstrate a commitment to ethical principles	Observation Senior staff experience Case taking	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	-Observation -Senior staff experience	1. 360o global rating

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

Time Schedule: / One year after application to MD degree

Topic	Covered ILOs			
	Knowledge A	**Intellectual B**	**Practical skill C**	**General Skills D**
Course 3 Pathology				
Describe Pathologic details of:				
Glomerulonephritis (primary & secondary).	A	A,B	-	A-D
Vasculitis.	A	A, B	-	A-D
Tubulo-interstitial nephritis.	A	A,B	-	A-D
Hypertension and the kidney.	A	A,B	-	A-D
Renal involvement in systemic diseases	A	A,B	-	A-D
Ischemic heart disease	A	A,B	-	A-D

5. Course Methods of teaching/learning:

1. Didactic ; Lectures
2. Post graduate 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:

1. Written and oral examination
2. Chick list
3. log book
4. 360o global rating

ii. Time schedule: **One year after application to MD degree**

iii. Marks: 175

8. List of references

. Lectures notes

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

ii. Essential books

1- Robbines of Pathology

iii. Recommended books

1-oXford of Pathology

iv. Periodicals, Web sites, … etc

- American Journal of Pathology

9. Signatures

Course Coordinator: **…….**	**Head of the Department:** **……**
Date:	**Date:**

Course 5 Physiology

- **Course Title: Physiology**
- **Course code:** REN303
- **Speciality:** Nephrology
- **Number of CP : DIDACTIC 3.5 CPS (100%), practical 0(0%), total 3.5.**
- **Department (s) delivering the course:** Internal Medicine - Faculty of Medicine- Assiut- EGYPT
- **Coordinator (s):** Staff members of Physiology in conjunction with staff members of Nephrology
- **Date last reviewed: September 2022**
- **Requirements (prerequisites) if any :**
  - None
- **Requirements from the students to achieve course ILOs are clarified in the joining log book.**

Course Aims

-The student should acquire the facts of physiology necessary for *Nephrology.*

Intended learning outcomes (ILOs):

A- Knowledge and understanding

ILOs	**Methods of teaching/ learning**	***Methods of Evaluation***
A. Illustrate Physiologic Principles of: Kidney and urinary tract system: 1- The functional structure of the kidney and other urinary tract system. 2- The mechanism of urine formation. 3- The regulatory functions of the kidney. 4- Electrolytes disturbances. 5- Regulation of acid-base balance 6- Homeostasis 7- The innervation of the heart 8- The regulation of the heart rate. 9- The cardiac output and its components. 10- The arterial blood pressure and its regulation. 11- The pulmonary and coronary circulations. 12- The ECG and its clinical significant. 13- Acid-base balance 14-Hormones of the kidney, importance and abnormalities	-Lectures	-Written and oral examination - Log book

B- Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Correlates the facts of Physiology with clinical reasoning, diagnosis and management of common diseases related to nephrology.	Didactic (lectures, seminars, tutorial)	-Written and oral examination -Log book
B. Demonstrate an investigatory and analytic thinking (problem solving) approaches to common clinical situations related to nephrology.		

C- Practical skills

Practical: 0 hours

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	-Observation and supervision -Written and oral communication	Log book Oral exam

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
B. Write a report in common condition mentioned in A.A	-Clinical round -Seminars -Lectures	- Logbook Oral exam Chick list

Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
C. Demonstrate a commitment to ethical principles	Observation Senior staff experience Case taking	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	-Observation -Senior staff experience	1. 360o global rating

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
Course 5 physiology				
Illustrate Physiologic Principles of:				
1-The functional structure of the kidney and other urinary tract system.	A	A,B	-	A-D
2- The mechanism of urine formation.	A	A, B	-	A-D
3- The regulatory functions of the kidney.	A	A,B	-	A-D
4- Electrolytes disturbances.	A	A, B	-	A-D
5- Regulation of acid-base balance	A	A,B	-	A-E
6- Homeostasis	A	A, B	-	A-E
7- The innervation of the heart	A	A,B	-	A-E
8- The regulation of the heart rate.	A	A,B	-	A-D
9- The cardiac output and its components.	A	A, B	-	A-D
10- The arterial blood pressure and its regulation.	A	A,B	-	A-D
11- The pulmonary and coronary circulations.	A	A, B	-	A-D
12- The ECG and its clinical significant.	A	A,B	-	A-E
13- Acid-base balance	A	A, B	-	A-E
14-Hormones of the kidney, importance and abnormalities	A	A,B	-	A-E

5. Course Methods of teaching/learning:

1. Didactic ; Lectures
2. Post graduate 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:

1. Written and oral examination
2. Chick list
3. log book
4. 360o global rating

ii. Time schedule: **One year after application to MD degree**

iii. Marks: 175

8. List of references

. Lectures notes

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

ii. Essential books

- Medical physiology books by Staff Members of the Department of Medical physiology -Assiut University

iv. Periodicals, Web sites, … etc

- American Journal of Physiology

9. Signatures

Course Coordinator: ……	**Head of the Department:** ……
Date:	**Date:**

Second Part

Course 6 Nephrology

Name of department: Nephrology and transplantation
Faculty of medicine.
Assiut University.
2021-2022

1. Course data

- **Course Title: Nephrology**
- **Course code:** REN318
- **Speciality:** Nephrology
- **Number of hours: Didactic 24,.(16.3 %) practical 123(83.7 %) total 147.**
- **Department (s) delivering the course:** Nephrology- Faculty of Medicine- Assiut- EGYPT
- **Coordinator (s):**
  - **Principle coordinator :** Prof. Dr. Effat Abdulhady Tony
  - **Assistant coordinator (s):** Prof. Dr. Mohamad A. Tohamy.
    Prof. Dr. Mohamad A. Sob.
    Prof Dr. Ashraf A shazly
- **Date last reviewed: May 2022**
- **Requirements (prerequisites) if any :**
  - None
- **Requirements from the students to achieve course ILOs are clarified in the joining log book.**

This course consists of 3 Units

Module 1 Clinical nephrology 40%
Module 2 Dialysis 30%
Module:3 Transplantation 30%

2. Course Aims

1.1 To enable candidates to master 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 advanced nephrology in addition to various interventions and techniques related to it.

1.2. To provide candidates with fundamental knowledge of renal medicine as regards; dealing with critically ill patient with renal diseases, those on dialysis and pre and post renal transplantation patients

1.3. To provide candidates with skills regarding techniques of dialysis, indications, contraindications, complications, care of dialyzed patients and preparation of patients for renal transplant.

1.4. To introduce candidates to the basics of scientific medical research.

1.5. To enable candidates to describe the basic ethical and medicolegal principles relevant to Nephrology.

1.6. To acquire in depth the physiological and Pathological Background necessary for Nephrology in clinical reasoning, diagnosis and management of Renal diseases.

3. Course intended learning outcomes (ILOs):

Unit 1 Clinical nephrology

A-Knowledge and understanding

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A. Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions: 1- Fluid and electrolyte disorders 2- Primary and secondary glomerulonephritis and recent guidelines 3- Updates in pregnancy and renal diseases 4- Updates in diabetic nephropthy 5- Chronic kidney diseases and recent guidelines in management of uremic syndrome 6- Infectious diseases and the kidney 7- Drug therapy in kidney diseases 8- Acute kidney injury 9- Tubulointerstitial and vascular diseases of the kidney 10- Congenital and hereditary diseases of the kidney	• Lectures • Seminar • Outpatient and inpatient direct observation and management • case presentation • tutorial • journal club	-OSCE -Written Exam - Oral Exam - Case presentation -MCQ exam at the second half of the second year -Log book

11- Geriatric nephrology and urologic disorders		
B. Mention the principles of : 1- glomerulonephritis 2- vascular diseases of the kidney 3- Interpretation of Biochemical investigations: ▪ Urine examination ▪ Renal function tests ▪ Tests for glomerular function ▪ Tests for tubular function ▪ Microbiological examination of urine ▪ Immunological tests ▪ Kidney biopsy ▪ Radiologic examination: Ultrasonography, Plain abdominal X-ray, Intravenous urography (IVU), Computerized tomography. ▪ Interventional kidney procedures		
C. Mention Basics of the following rare diseases and conditions: • Medullary cystic kidney diseases. • Medullary sponge kidney. • Acquired renal cystic diseases. • Tuberous sclerosis. • Von Hipple- Lindau syndrome. • Environmental kidney diseases		
D. Explain the facts and principles of the relevant basic supportive sciences related to renal diseases.		
E. Explain the facts and principles of the relevant clinically supportive sciences related to renal diseases .		
F. Describe the basic ethical and medicolegal		

principles relevant to renal diseases.		
G. Describe the basics of quality assurance to ensure good clinical care in renal diseases.		
H. Explain the ethical and scientific principles of medical research.		
I. Explain the impact of common health problems in renal diseases on the society.		

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Design / present case in common problem related to renal diseases.	Clinical rounds Senior staff experience Practice with clinical cases for at least 4 month in the nephrology Unit • Supervision on the residents for the admitted cases	-case presentation Log book and Portfolios
B. Apply the basic and clinically supportive sciences which are appropriate to renal diseases related problems.		
C. Demonstrate an investigatory and analytic thinking "problem – solving "approaches to clinical situation related to renal diseases..		
D. Plan research projects.		
E. Write scientific papers.		
F. Lead risk management activities as a part of clinical governs as in: ▪ Hypertensive emergencies ▪ Acute coronary syndrome ▪ Arrhythmias ▪ Acute pulmonary edema ▪ Cardiac arrest.		

▪ Electrolyte disturbances ▪ Acute Kidney injury ▪ coma ▪ Acute complications of dialysis.		
G. Plain quality improvement activities in the field of medical education and clinical practice in renal diseases.		
H. Create and innovate plans, systems, and other issues for improvement of performance in renal diseases.		
I. Present and defend his / her data in front of a panel of experts		
J. Formulate management plans and alternative decisions in different situations in the field of renal diseases.		

C-Practical skills (Patient Care)

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Take history, examine and clinically diagnose different conditions related to renal diseases.	Didactic; Lectures Clinical rounds Seminars Clinical rotations (service teaching)	-OSCE at the end of each year -log book
B-Order the following non invasive/invasive diagnostic procedures ▪ ECG ▪ Chest x rays	-Clinical round with senior staff Observation -Post	

▪ Renal function tests ▪ Interventional nephrology procedures ▪ Tests for glomerular function ▪ Tests for tubular function ▪ Microbiological examination of urine ▪ Immunological tests ▪ Kidney biopsy ▪ Radiologic examination. ▪ Ultrasonography ▪ Plain abdominal X-ray ▪ Intravenous urography (IVU) ▪ Angiography ▪ Computerized tomography. ▪ Radionuclide imaging ▪ Magnetic resonance imaging.	graduate teaching	
C. Interpret the following non invasive/invasive diagnostic procedures ▪ ECG ▪ Chest x rays ▪ Renal function tests ▪ Tests for glomerular function ▪ Tests for tubular function ▪ Microbiological examination of urine ▪ Immunological tests ▪ Kidney biopsy ▪ Radiologic examination: Ultrasonography, Plain abdominal X-ray, Intravenous urography (IVU), Computerized tomography.	Clinical round with senior staff Observation -Post graduate teaching	
D. Perform the following non invasive/invasive diagnostic procedures: • Abdominal ultrasound • Ryle and Sengestaken fixation • Cardiopulmonary resuscitation	-Hand on workshops -Perform under supervision of senior	- Procedure presentation - Log book - Chick list

• Pleurocentesis and paracentesis • Endotracheal intubation • Airway suctioning • Hemodialysis catheter insertion either femoral or central line • Fistula cannulation • ECG and direct current use as anti-arrhythmic • Renal biopsy • Insertion of peritoneal catheter	staff	
E. Prescribe the following non invasive and invasive therapeutic procedures. - Proper drug regimens for renal disease. -	Clinical round with senior staff Observation -Post graduate teaching	- Log book - Chick list
F. Perform the following non invasive AND invasive therapeutic procedures -Paracentesis under sonography -Pulse therapy for acute glomerulonephritis		
G. Develop and carry out patient management plans for the following problems: 1. Rapidly progressive Glomerulonephritis 2. Nephrotic and nephritic syndrome 3. Tubulo interstitial diseases 4. Renal failure 5. UTI 6. Renal vascular disease	Clinical round with senior staff	
H. Counsel and educate patients and their family about: • Chronic kidney diseases • Environmental kidney diseases	Clinical round with senior staff	

• Prevention of UTI • Controlling risk factors for renal disease • Modes of disease development		
I. Use information technology to support patient care decisions and patient education for renal diseases related conditions.	-Post graduate teaching -Clinical round with senior staff	
J. Provide health care services aimed at prevention and management of renal diseases and related complications.	-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	

General Skills for all Units

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	-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
F. Create and sustain a therapeutic and ethically sound relationship with patients.	-Simulations -Clinical round -Seminars -Lectures -Case presentation	-Global rating -Procedure/case presentation -Log book and Portfolios -Chick list
G. Perform the following oral communications: -Interpretation of results of different investigations related to the conditions mentioned in A.A and A.B and A.C and discussion of different therapeutic option.		
H. Fill the following reports: -Abdominal ultrasonography reports. -Patient medical report. Renal biopsy pathology report		
I. Work effectively with others as a member or leader of a health care team in the conditions mentioned in A.A :A-C		

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		

Unit 2 Dialysis

A-Knowledge and understanding

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A. Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions: • Hemodialysis, types and complications • Peritoneal dialysis; types and complications • Plasma exchange, types and complications • Vascular access for dialysis • Dialystic therapy for drug toxcitiy and poisoning • Update in dialysis procedures and equipments	-Lecture - seminar -outpatient -inpatient -case presentation -Direct observation -tutorial) - journal club, -Critically appraised topic.	-OSCE -Written Exam - Oral Exam - Case presentation -MCQ exam at the second half of the second year -Log book
B. Mention the principles of : • **Dialysis:** Principle and indications of dialysis. Types of dialysis ▪ Haemodialysis ▪ Peritoneal dialysis preparation Procedures Types of Dialyzers Types of Dialyzate fluid Water treatment system		

Anticoagulants Complications Vascular access Insertion of femoral catheters Insertion of central venous catheters Insertion of peritoneal catheters Drug regimens after dialysis. Outcome of dialysis Dialysis adequacy		
C. Mention Basics of the following rare diseases and conditions: -Acquired renal cystic disease Dialysis related amyloidosis		
D. Explain the facts and principles of the relevant basic supportive sciences related to dialysis.		
E. Explain the facts and principles of the relevant clinically supportive sciences related to dialysis.		
F. Describe the basic ethical and medicolegal principles relevant to dialysis.		
G. Describe the basics of quality assurance to ensure good clinical care in dialysis..		
H. Explain the ethical and scientific principles of medical research.		
I. Explain the impact of common health problems in dialysis on the society.		
J. Formulate management plans and alternative decisions in different situations in the field of dialysis.		

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Design / present case in common problem related to dialysis.	Clinical rounds Senior staff experience	-case presentation Log book and Portfolios
B. Apply the basic and clinically supportive sciences which are appropriate to dialysis related problems.		
C. Demonstrate an investigatory and analytic thinking "problem – solving "approaches to clinical situation related to dialysis.		
D. Plan research projects.		
E. Write scientific papers.		
F. Lead risk management activities as a part of clinical governs as in: ▪ Bleeding during dialysis ▪ Air embolism ▪ Haemolytic reaction ▪ Hypersensitivity reaction ▪ Dysequilbruim syndrome ▪ Convulsions durng dialysis ▪ Complications of double way cannula insertion		
G. Plain quality improvement activities in the field of medical education and clinical practice in dialysis.		
H. Create and innovate plans, systems, and other issues for improvement of performance in dialysis		
I. Present and defend his / her data in front of a panel of experts		

C-Practical skills (Patient Care)

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Take history, examine and clinically diagnose different conditions related to dialysis.	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/invasive diagnostic procedures 1. Urine analysis 2. ECG 3. Abd. Ultrasound 4. Chest X ray 5. kidney function tests	-Clinical round with senior staff Observation -Post graduate teaching	log book
C. Interpret the following non invasive/invasive diagnostic procedures 1. Urine analysis 2. ECG 3. Abd. Ultrasound 4. Interpretation of chest X ray 5. Interpretation of kidney function tests	Clinical round with senior staff Observation -Post graduate teaching	log book
D. Perform the following non invasive and invasive diagnostic procedures. -Blood gas analysis -Interventional US	-Hand on workshops -Perform under supervision of senior	- Procedure presentation - Log book - Chick list

	staff	
E. Prescribe the following noninvasive and invasive therapeutic procedures. • Drug regimens for different medical complications in dialysis.	Clinical round with senior staff Observation -Post graduate teaching	- Log book - Chick list
F. Perform the following non invasive and invasive therapeutic procedures ▪ Insertion of femoral catheters ▪ Insertion of central venous catheters ▪ Insertion of peritoneal catheters		
G. Develop and carry out patient management plans for the conditions mentioned in A.A –A-C	Clinical round with senior staff	
H. Counsel and educate patients and their family about: - common hereditary renal problem	Clinical round with senior staff	
I. Use information technology to support patient care decisions and patient education for dialysis related conditions.	-Post graduate teaching -Clinical round with senior staff	
J. Provide health care services aimed at preventing dialysis related conditions.	-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 Renal transplantation

A-Knowledge and understanding

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A. Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions: ▪ Basic immunology and immunologic principles for transplantation ▪ Immunosuppressive medications in renal transplantation ▪ Evaluation and preoperative management of kidney transplant recipient ▪ Prophylaxis and treatment of kidney transplant rejection ▪ Medical management of kidney transplant recipient ▪ Recurrent diseases in kidney transplant ▪ Update in treatment and prophylaxis of renal transplant rejection.	-Lecture - seminar -outpatient -inpatient -case presentation -Direct observation -tutorial) - journal club, -Critically appraised topic.	-OSCE -Written Exam - Oral Exam - Case presentation -MCQ exam at the second half of the second year -Log book
B. Mention the principles of : - Renal transplantation - Types of transplantation - Indications - Types of kidney donors - Contraindications of transplantation - Complications of transplantation - Transplant rejection		

- Follow up of pre and post- transplant patients - Immune suppressive drugs		
C. Mention Basics of the following rare diseases and conditions: - common hereditary renal problem		
D. Explain the facts and principles of the relevant basic supportive sciences related to renal transplantation.		
E. Explain the facts and principles of the relevant clinically supportive sciences related to renal transplantation.		
F. Describe the basic ethical and medicolegal principles relevant to renal transplantation.		
G. Describe the basics of quality assurance to ensure good clinical care in renal transplantation.		
H. Explain the ethical and scientific principles of medical research.		
I. Explain the impact of common health problems in renal transplantation on the society.		
J. Formulate management plans and alternative decisions in different situations in the field of renal transplantation.		

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Design / present case in common problem related to renal transplantation.	Clinical rounds Senior staff experience	-case presentation Log book and Portfolios
B. Apply the basic and clinically supportive sciences which are appropriate to renal transplantation related problems.		
C. Demonstrate an investigatory and analytic thinking "problem – solving "approaches to clinical situation related to renal transplantation.		
D. Plan research projects.		
E. Write scientific papers.		
F. Lead risk management activities as a part of clinical governs as in: ▪ Acute Rejection ▪ Chronic allograft nephropathy		
G. Plain quality improvement activities in the field of medical education and clinical practice in renal transplantation.		
H. Create and innovate plans, systems, and other issues for improvement of performance in renal transplantation.		
I. Present and defend his / her data in front of a panel of experts		

C-Practical skills (Patient Care)

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Take history, examine and clinically diagnose different conditions related to renal transplantation.	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 1. Work up investigations prior transplantation HLA MATCHING ABO matching Estimation of GFR for the donor Abdominal US for donor Renal Arteriography for donor Biochemical parameters for donor Kidney biopsy	-Clinical round with senior staff Observation -Post graduate teaching	log book
C. Interpret the following non invasive and invasive diagnostic procedures and results of investigations mentioned in B	Clinical round with senior staff Observation -Post graduate teaching	log book
D. Perform the following noninvasive and invasive diagnostic procedures. - Abdominal US for donor	-Hand on workshops -Perform under	- Procedure presentation - Log book - Chick list

Kidney biopsy	supervision of senior staff	
E. Prescribe the following non invasive and invasive therapeutic procedures: ▪ Immunosuppressive drugs ▪ Anti-rejection therapy	Clinical round with senior staff Observation -Post graduate teaching	- Log book - Chick list
F. Perform the following non invasive and invasive therapeutic procedures: ▪ Dialysis in transplant recipients		
G. Develop and carry out patient management plans for the conditions mentioned in A.A AND A.B.	Clinical round with senior staff	
H. Counsel and educate patients and their family about: - Complication of transplantation -Donor safety	Clinical round with senior staff	
I. Use information technology to support patient care decisions and patient education for renal transplantation related conditions.	-Post graduate teaching -Clinical round with senior staff	
J. Provide health care services aimed at preventing renal transplantation related conditions.	-Post graduate teaching -Clinical round with senior staff	
K. Work with health care professionals, including those from other disciplines, to provide patient-	Clinical round with	

focused care.	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	

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

Time Schedule: / Second part

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
UNIT 1 Clinical nephrology				
Fluid and electrolyte disorders	A,D-J	A-E,G-J	A-F,I-L	A-P
Primary and secondary glomerulonephritis and recent guidelines	A,D-J	A-E,G-J	A-F,I-L	A-P
Updates in pregnancy and renal diseases	A,D-J	A-E,G-J	A-F,I-L	A-P
Updates in diabetic nephropthy	A,D-J	A-E,G-J	A-F,I-L	A-P
Chronic kidney diseases and recent guidelines in management of uremic syndrome	A,D-J	A-E,G-J	A-F,I-L	A-P
Infectious diseases and the kidney	A,D-J	A-E,G-J	A-F,I-L	A-P
Drug therapy in kidney diseases	A,D-J	A-E,G-J	A-F,I-L	A-P
Acute kidney injury	A,D-J	A-E,G-J	A-F,I-L	A-P
Tubulointerstitial and vascular diseases of the kidney	A,D-J	A-E,G-J	A-F,I-L	A-P

Congenital and hereditary diseases of the kidney	A,D-J	A-E,G-J	A-F,I-L	A-P
Geriatric nephrology and urologic disorders	A,D-J	A-E,G-J	A-F,I-L	A-P
vascular diseases of the kidney	B, ,D-J	A-E,G-J	A-F,I-L	A-P
Interpretation of Biochemical investigations:	B, ,D-J	A-E,G-J	A-F,I-L	A-P
Radiologic examination: Ultrasonography, Plain abdominal X-ray, Intravenous urography (IVU), Computerized tomography.	B, ,D-J	A-E,G-J	A-F,I-L	A-P
Glomerulonephritis	B, ,D-J	A-E,G-J	A-F,I-L	A-P
Interpretation of Biochemical investigations:	A,D-J	A-E,G-J	A-F,I-L	A-P
Medullary cystic kidney diseases.	C, D-J	*A-I*	*A-L*	*A-P*
Medullary sponge kidney.	C, D-J	*A-I*	*A-L*	*A-P*
Acquired renal cystic diseases.	C, D-J	*A-I*	*A-L*	*A-P*
Tuberous sclerosis.	C, D-J	*A-I*	*A-L*	*A-P*
Von Hipple- Lindau syndrome.	C, D-J	*A-I*	*A-L*	*A-P*
▪ Hypertensive emergencies	-	*F*	*A-E,I-L*	*A-P*
▪ Acute coronary syndrome	-	*F*	*A-E,I-L*	*A-P*
▪ Arrhythmias	-	*F*	*A-E,I-L*	*A-P*
▪ Acute pulmonary edema	-	*F*	*A-E,I-L*	*A-P*

▪ Cardiac arrest.	-	*F*	*A-E,I-L*	*A-P*
▪ Electrolyte disturbances	-	*F*	*A-E,I-L*	*A-P*
▪ Interventional nephrology procedures ▪	*B*	*C*	*B*	*A-P*
▪ Environmental kidney diseases	*C*	-	*H*	*A-P*
Unit 2 Dialysis				
Hemodialysis, types and complications	*A,D-J*	*A-I*	*A-L*	*A-P*
Peritoneal dialysis; types and complications	*A,D-J*	*A-I*	*A-L*	*A-P*
Plasma exchange, types and complications	*A,D-J*	*A-I*	*A-L*	*A-P*
Vascular access for dialysis	*A,D-J*	*A-I*	*A-L*	*A-P*
Dialystic therapy for drug toxcitiy and poisoning	*A,D-J*	*A-I*	*A-L*	*A-P*
Update in dialysis procedures and equipments	*A,D-J*	*A-I*	*A-L*	*A-P*
Principle and indications of dialysis.	*B,D-J*	*A-E,G-I*	*A-L*	*A-P*
Types of dialysis	*B,D-J*	*A-E,G-I*	*A-L*	*A-P*
▪ Haemodialysis	*B,D-J*	*A-E,G-I*	*A-L*	*A-P*
▪ Peritoneal dialysis	*B,D-J*	*A-E,G-I*	*A-L*	*A-P*
preparation	*B,D-J*	*A-E,G-I*	*A-L*	*A-P*
Procedures	*B,D-J*	*A-E,G-I*	*A-L*	*A-P*
Types of Dialyzers	*B,D-J*	*A-E,G-I*	*A-L*	*A-P*
Types of Dialyzate fluid	*B,D-J*	*A-E,G-I*	*A-L*	*A-P*
Water treatment system	*B,D-J*	*A-E,G-I*	*A-L*	*A-P*
Anticoagulants	*B,D-J*	*A-E,G-I*	*A-L*	*A-P*
Complications	*B,D-J*	*F*	*A-L*	*A-P*

Vascular access	*B,D-J*	*A-E,G-I*	*A-L*	*A-P*
Insertion of femoral catheters	*B,D-J*	*A-E,G-I*	*A-L*	*A-P*
Insertion of central venous catheters	*B,D-J*	*A-E,G-I*	*A-L*	*A-P*
Insertion of peritoneal catheters	*B,D-J*	*A-E,G-I*	*A-L*	*A-P*
Drug regimens after dialysis.	*B,D-J*	*A-E,G-I*	*A-L*	*A-P*
Outcome of dialysis	*B,D-J*	*A-E,G-I*	*A-L*	*A-P*
Dialysis adequacy	*B,D-J*	*A-E,G-I*	*A-L*	*A-P*
- Update in dialysis procedures and equipments and management of dialysis complications.	*B,D-J*	*A-E,G-I*	*A-L*	*A-P*
Acquired renal cystic disease	*C, D-J*	*A-E,G-I*	*A-L*	*A-P*
Dialysis related amyloidosis	*C, D-J*	*A-E,G-I*	*A-L*	*A-P*
Unit 3 renal transplantation				
Basic immunology and immunologic principles for transplantation	*A, D-J*	*A-L*	*A-D*	*A-L*
Immunosuppressive medications in renal transplantation	*A, D-J*	*A-L*	*A-E, G,I,*	*A-L*
Evaluation and preoperative management of kidney transplant recipient	*A, D-J*	*A-L*	*A-P*	*A-L*
Prophylaxis and treatment of kidney transplant rejection	*A, D-J*	*A-L*	*A-E, G,I*	*A-L*
Medical management of kidney transplant recipient	*A, D-J*	*A-L*	*A-P*	*A-L*
Recurrent diseases in kidney transplant	*A, D-J*	*A-L*	*A-P*	*A-L*

Patients with renal transplant rejection.	*A,D-J*	*A-I*	*A-E,G,I-L*	*A-P*
-Management of the renal transplant recipient.	*A,D-J*	*A-I*	*A-E,G,I-L*	*A-P*
- Follow up pre and post-transplant patients	*A,D-J*	*A-I*	*A-E,G,I-L*	*A-P*
- Principle of transplantation	*B,D-J*	*A-I*	*A-E,G,I-L*	*A-P*
- Types of transplantation	*B,D-J*	*A-I*	*A-E,G,I-L*	*A-P*
- Indications	*B,D-J*	*A-I*	*A-E,G,I-L*	*A-P*
- Types of kidney donors	*B,D-J*	*A-I*	*A-E,G,I-L*	*A-P*
- Contraindications	*B,D-J*	*A-I*	*A-E,G,I-L*	*A-P*
- Complications	*B,D-J*	*A-I*	*A-E,H,I-L*	*A-P*
- Transplant rejection	*B,D-J*	*A-I*	*A-E,G,I-L*	*A-P*
- Follow up of pre and post- transplant patients	*B,D-J*	*A-I*	*A-E,G,I-L*	*A-P*
- Immune suppressive drugs	*B,D-J*	*A-I*	*A-E,G,I-L*	*A-P*
- Transplant rejection	*B,D-J*	*A-I*	*A-E,G,I-L*	*A-P*
- Common hereditary renal problem	*C,D-J*	*A-I*	-	*A-P*

5. Course Methods of teaching/learning:

1. Didactic ; Lectures
2. Post graduate 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:

1. Clinical examination
2. Written and oral examination
3. Chick list
4. log book
5. Procedure/case presentation
6. MCQ
7. Objective structured clinical examination
8. Check list evaluation of live or recorded performance
9. Patient survey
10. 360o global rating

ii. Time schedule: At the end of second part

iii. Marks: 1200

8. List of references

. Lectures notes

- Staff members print out of lectures and/or CD copies
- Principles of Nephrology Book by Staff Members of the Department of renal Diseases-Assiut University

ii. Essential books

1. Primer text book of nephrology.
2. Brenner's text book of nephrology. 11th Edition, 2019
3. Hand book of dialysis. JT Daugirdas, PG Blake Ts Ing, 5 TH EDITION, 2015
4. Current text book of nephrology and hypertension, 2020
5. Hand book of peritoneal dialysis
6. Hand book of Renal Transplantation
7. Oxford text book of nephrology and hypertension, 2020
8. Oxford text book of Dialysis, 2020.
9. Washington manual book of Medicine

iii. Recommended books

1. Hand book of dialysis. JT Daugirdas, PG Blake Ts Ing 2020
2. Hand book of dialysis 2020.

3. Hand book of kidney transplantation 2020.
4. National kidney foundation 2020.
5. Bisset – Khan Abdominal U/S 2020.
6. Atlas of Renal Pathology

iv. Periodicals, Web sites, … etc

- BMJ
- American Journal of Nephrology
- Nephron
- European Journal of renal Diseases
- Egyptian Journal of renal Diseases &transplantation
- Suadian Journal of Kidney Diseases
- Nephrology Dialysis and Transplatation Journal
- Kidney Nature's Journal

9. Signatures

Course Coordinator: **…….**	**Head of the Department:** **……**
Date: **…….**	**Date:** **…….**

ANNEX 2
Program Academic Reference Standards (ARS)

1- Graduate attributes for medical doctorate in Nephrology

***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 Nephrology.

2- Have continuous ability to add knowledge to Advanced nephrology 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 his speciality.

7- Acquire an in depth understanding of common areas of speciality, 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 his field of practice.

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 the Advanced nephrology or one of its subspecialties.

15- Use recent technologies to improve his practice in the Nephrology field.

16- Share in updating and improving clinical practice in the Nephrology field

2- Competency based Standards for medical doctorate in Nephrology

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 Nephrology 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 Nephrology.

2-1-D- Principles and measurements of quality in Advanced nephrology.

2-1-E- Principles and efforts for maintainace and improvements of public health.

2-1-F- Principles and efforts for interrelationship between Covid -19 infection and Kidney Diseases at different stages , Dialysis and Transplantation .

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 Nephrology related Problems.

2-2-B- Problem solving based on available data.

2-2-C- Involvement in research studies related to Nephrology.

2-2-D- Writing scientific papers.

2-2-E- Risk evaluation in the related clinical practice.

2-2-F- Planning for performance improvement in Nephrology.

2-2-G- Creation and innovation in Nephrology.

2-2-H- Evidence – based discussion.

2-2-I- Decision making in different situations related to Nephrology.

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 Nephrology

2-3-B- Master patient care skills relevant to Advanced nephrology for patients with all diagnoses and procedures.

2-3-C- Write and evaluate reports for situations related to Nephrology

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 الكلى

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 Advanced nephrology.	1-إتقان أساسيات و منهجيات البحث العلمي
2- Have continuous ability to add knowledge new developments to Advanced nephrology 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 مستنبطا 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 Advanced nephrology	6-تحديد المشكلات المهنية و إيجاد حلولا مبتكرة لحلها
5- Function as a leader of a team to provide patient care that is appropriate,	7-إتقان نطاقا واسعا من المهارات المهنية في مجال التخصص

effective and compassionate for dealing with health problems and health promotion. 7- Acquire an in depth understanding of common areas of Advanced nephrology, from basic clinical care to evidence based clinical application, and possession of skills to manage independently all problems in these areas.	
16- Share in updating and improving clinical practice in Advanced nephrology. 9- Function as teacher in relation to colleagues, medical students and other health professions.	8- التوجه نحو تطوير طرق و أدوات و أساليب جديدة للمزاولة المهنية
15- Use recent technologies to improve his practice in Advanced nephrology.	9-استخدام الوسائل التكنولوجية المناسبة بما يخدم ممارسته المهنية
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. 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.	10-التواصل بفاعلية و قيادة فريق عمل في سياقات مهنية مختلفة
10- Master decision making capabilities in different situations related to Advanced nephrology.	11-اتخاذ القرار في ظل المعلومات المتاحة
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-توظيف الموارد المتاحة بكفاءة و تنميتها والعمل على إيجاد موارد جديدة
12- Demonstrate in depth awareness of public health and health policy issues including	13-الوعي بدوره في تنمية المجتمع والحفاظ

independent ability to improve health care, and identify and carryout system-based improvement of care.	على البيئة
13- Show model attitudes and professionalism.	14-التصرف بما يعكس الالتزام بالنزاهة و المصداقية و قواعد المهنة
14- Demonstrate commitment for lifelong learning and maintenance of competence and ability for continuous medical education and learning in subsequent stages and in Advanced nephrology or one of its subspecialties. 15- Use recent technologies to improve his practice in Advanced nephrology.	15-الالتزام بالتنمية الذاتية المستمرة و نقل علمه و خبراته للآخرين

2- Academic standards

Faculty ARS	NAQAAE General ARS for Postgraduate Programs
2.1. A- Established, updated and evidence- based theories, basics and developments of Advanced nephrology and relevant sciences.	2-1-أ- النظريات و الأساسيات والحديث من المعارف في مجال التخصص والمجالات ذات العلاقة
2.1. B- Basic, methods and ethics of medical research.	2-1-ب –أساسيات و منهجيات و أخلاقيات البحث العلمي و أدواته المختلفة
2.1. C- Ethical and medicologal principles of medical practice related to Advanced nephrology.	2-1-ج- المبادئ الأخلاقية و القانونية للممارسة المهنية في مجال التخصص
2.1. D- Principles and measurements of quality in Advanced nephrology.	2-1-د مبادئ و أساسيات الجودة في الممارسة المهنية في مجال التخصص
2.1. E- Principles and efforts for maintains and improvements of public health.	2-1-هـ – المعارف المتعلقة بآثار ممارسته المهنية على البيئة وطرق تنمية البيئة وصيانتها
2.2. A- Application of basic and other relevant science to solve Advanced nephrology 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 Advanced nephrology.	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 Advanced nephrology.	2–2–و –التخطيط لتطوير الأداء في مجال التخصص

2-2-G- Creation and innovation in the Advanced nephrology.	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 Advanced nephrology.	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 Advanced nephrology. 2.3. B- Master patient care skills relevant to Advanced nephrology 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 Advanced nephrology.	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 investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management 2.4.G- Participate in improvement of the education system.	2-3-هـ -التخطيط لتطوير الممارسة المهنية وتنمية أداء الآخرين

II-Program ARS versus program ILOs

Comparison between ARS- ILOS for medical doctorate

(ARS)	(ILOs)
2-1- Knowledge and understanding	***2-1- Knowledge and understanding***
2-1-A- Established, updated and evidence-based Theories, Basics and developments of Advanced nephrology and relevant sciences.	**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.
2-1-B Basic, methods and ethics of medical research.	**2-1-B-** Explain basics, methodology, tools and ethics of scientific medical, clinical research.
2-1-C- Ethical and medicologal principles of medical practice related to Advanced nephrology field.	**2-1-C-** Mention ethical, medico logical principles and bylaws relevant to his practice in the field of Advanced nephrology.
2-1-D- Principles and measurements of quality in the Advanced nephrology	**2-1-D-** Mention principles and measurements of quality assurance and quality improvement in medical education and in clinical practice of Advanced nephrology.
2-1-E-Principles and efforts for maintains and improvements of public health.	**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 Advanced nephrology .
***2-2- Intellectual skills*:**	***2-2- Intellectual skills:***
2-2-A-Application of basic and other relevant science to solve	**2-2-A-** Apply the basic and clinically supportive sciences which are appropriate to

Advanced nephrology related problems.	Advanced nephrology 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 Advanced nephrology.
2-2-C- Involvement in research studies related to the Advanced nephrology	**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 Advanced nephrology 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 Advanced nephrology fields.	**2-2-I-** Formulate management plans and alternative decisions in different situations in the field of the Advanced nephrology

continuous (ARS)	continuous (ILOs)
2-3- Clinical skills:	***2/3/1/Practical skills (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 his field of practice.	**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. ***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.
2-3-B- Master patient care skills relevant to Advanced nephrology for patients with all diagnoses and procedures.	**2-3-1-B-** Provide extensive level of patient care for patients with all common diagnoses and for uncomplicated procedures related to Advanced nephrology
	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.
	2-3-1-D- Perform diagnostic and therapeutic procedures considered essential in the field of Advanced nephrology
	2-3-1-E- Handles unexpected complications, while demonstrating compassion and sensitivity to patient needs and concerns.
	2-3-1-F- Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families in the Advanced nephrology related

	situations. **2-3-1-G-** Gather essential and accurate information about patients of the Advanced nephrology related conditions. **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 Advanced nephrology related conditions. **2-3-1-I-** Develop and carry out patient management plans for Advanced nephrology related conditions. **2-3-1-J-** Counsel and educate patients and their families about Advanced nephrology related conditions. **2-3-1-K-** Use information technology to support patient care decisions and patient education in all Advanced nephrology related clinical situations. **2-3-1-L-** Perform competently all medical and invasive procedures considered essential for the Advanced nephrology related conditions / area of practices. **2-3-1-M-** Provide health care services aimed at preventing the Advanced nephrology related health problems. **2-3-1-N-** Lead health care professionals, including those from other disciplines, to provide patient-focused care in Advanced nephrology related conditions**.**

2-3-C- Write and evaluate reports for situations related to the field Advanced nephrology	**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).
2-4- General skills **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	***2/3/2 General skills*** **2-3-2-A-** Demonstrate the competency of continuous evaluation of different types of care provision to patients in the different area of Advanced nephrology **2-3-2-B-** Appraise scientific evidence. **2-3-2-C-** Continuously improve patient care based on constant self-evaluation and life-long learning. **2-3-2-D**. Participate in clinical audit and research projects. **2-3-2-E-** Practice skills of evidence-based Medicine (EBM). **2-3-2-G-** Design logbooks. **2-3-2-H-** Design clinical guidelines and standard protocols of management. **2-3-2-I-** Appraise evidence from scientific studies related to the patients' health problems.

2-4-B- Use competently all information sources and technology to improve his practice.	**2-3-2-J-** Apply knowledge of study designs and statistical methods to the appraisal of clinical studies. **2-3-2-K**- Use information technology to manage information, access on-line medical information; for the important topics.
2-4-C- Master skills of teaching and evaluating others.	**2-3-2-F-** Educate and evaluate students, residents and other health professionals.
2-4-D- Master interpersonal and communication Skills that result in effective information exchange and teaming with patients, their families, and other health professionals.	**2-3-2-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. **2-3-2-M-** Create and sustain a therapeutic and ethically sound relationship with patients. **2-3-2-N**- Elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills. **2-3-2-O-** Work effectively with others as a member or leader of a health care team or other professional group.
2-4-E- Master Professionalism behavior, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical	**2-3-2-P-** Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society.

principles, and sensitivity to a diverse patient population.	**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. **2-3-2-R-** Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.
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.	**2-3-2-S-** Work effectively in health care delivery settings and systems related to Advanced nephrology including good administrative and time management. **2-3-2-T-** Practice cost-effective health care and resource allocation that does not compromise quality of care. **2-3-2-U-** Advocate for quality patient care and assist patients in dealing with system complexities. **2-3-2-V-** Design, monitor and evaluate specification of under and post graduate courses and programs.
2-4-H- Demonstrate skills of leading scientific meetings including time management	**2-3-2-W-** Act as a chair man for scientific meetings including time management **2-3-2-S-** Work effectively in health care delivery settings and systems related to Advanced nephrology including good administrative and time management.
2-4-O- Demonstrate skills of self and continuous learning.	From A-H.

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 : Nephrology	✓	✓	✓	✓	✓

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 : Nephrology	✓	✓	✓	✓	✓	✓	✓	✓	✓

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 : Nephrology	✓	✓	✓	✓	✓	✓	✓	✓

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	2/3/1/0
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 : Nephrology	✓	✓	✓	✓	✓	✓	✓

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 : Nephrology	✓	✓	✓	✓	✓	✓	✓	✓

General skill

Course	Program covered ILOs							
	2/3/2/I	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 : Nephrology	✓	✓	✓	✓	✓	✓	✓	✓

General Skills

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 : Nephrology	✓	✓	✓	✓	✓	✓	✓

Annex 7, Additional information:

Example:

Department information:

Equipments and Specialized Units:

a- Outpatient clinic for examining and investigating new patients and follow up of patients after discharge with various renal diseases (Twice weekly nephrology clinic).
b- Nephrology wards (24 beds).
c- Intensive Care unit for Renal Patients
d- Scientific library (Internal medicine text Books Nephrology text Books, MD, MS thesis in nephrology).
e- Electronic library for scientific seminars and case presentation.
f- Seminar room with data show.
g- Diagnostic unit equipped with:
    1- Abdominal U/S.
    2- Invasive diagnostic procedures for kidney biopsy.
    3- Interventional Renal procedures
h- Haemodialysis ward (58 machines well- equipped, automated).
i- Peritoneal dialysis unit.

- Evaluation by the Department head and stuff members.

Staff members

- **Prof Dr. Effat Abdulhady Tony**
- **Prof.Dr. Mohamad A. Tohamy.**
- **Prof. Mohamad A. Sobh**
- **Prof.Dr. Ashrf A. Elshazly.**
- **Dr. Mohamad Hassan**
- **Dr. Walaa Hosny Mohamad**
- **Dr. Sameer Kamal**
- **Dr. Essam AbdelAzez**
- **Dr. Marwa Kamal Abdo**
- **Dr. Nashwa Mostafa**
- **Dr. Mostafa Gaafar**
- **Dr. Alshymaa Sayed**
- **Dr. Radwa Awad**
- **Dr. Omnia Hashem**
- **Dr. Radwa A.razik**
- **Dr. Yasser A.Mawjoud**

- Regular assessments.
- Log book monitoring.
- Recent equipments and Specialized Units.

(End of the program specifications)