COURSE SPECIFICATION

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	**Postgraduate Doctorate degree of Nephrology** **NEPH 610**
(2) Department offering the programme:	**Internal medicine department** **Nephrology Unit**
(3) Department responsible for teaching the course:	**Internal medicine department** **Nephrology Unit**
(4) Part of the programme:	**Second part (Semesters 2-5)**
(5) Date of approval by the Department`s council	**5-11-2014**
(6) Date of last approval of programme specification by Faculty council	**9/8/2016**
(7) Course title:	Clinical nephrology, dialysis and renal transplantation
(8) Course code:	**NEPH 610**
(9) Total teaching hours:	**23 theoretical credit hours(345 hours)** **15 clinical credit hours(450 hours)**

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

- Provide practicing clinicians in Nephrology with a comprehensive training program both at a basic science and clinical level. Furthermore, to provide extensive training in research design and methodology, to facilitate candidates' career development in clinical and basic research of Nephrology.
- Respond to the educational and research training needs of doctors with a special interest in Nephrology.
- Meet the needs of Doctorate candidates whilst they are completing their clinical training or working in clinical practice.
- Provide study modules designed to give candidates a sound understanding of concepts and research in Nephrology.

(2) Intended Learning Outcomes (ILOs):

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

A- Knowledge and Understanding

A 1 Demonstrate the ability to approach patients with renal disease and to recall available investigations, radiology

A 2 recognize different forms of primary and secondary Glomerular diseases, hereditary syndromes, polycystic disease, renal calcular disease and metabolic diseases.

A 3 recall types, pathophysiology and management of tubule-interstitial diseases.

A 4 demonstrate sufficient knowledge of the definitions, epidemiology, risk factors and management of AKI

A 5 identify and recall epidemiology, progression, complications and management of CKD.

A 6 recognize and describe different modalities of hemodialysis, how and when to initiate, prescription, adequacy, emergencies and complications.

A 7 demonstrate sufficient knowledge of the principles, ethics, care, complications and outcome of renal transplantation

A 8 showing sufficient knowledge of different electrolytes and acid-base disorders

A 9 Recall the impact of systemic diseases on the kidney and how to manage

A 10 Recognize principles of peritoneal dialysis

A 11 Recall types of tropical nephropathy, basics of critical care nephrology and impact of pregnancy on the renal system

B- Intellectual skills:

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

B 2 solve professional problems according to available data and set learning and improvement goals.

B 3 analyze efficiently case scenarios and refer to the most appropriate diagnosis and possible differential diagnosis and interpret basic clinical tests and images as well as obscure findings.

B 4 Assimilate information technology to optimize learning and participate in the education of students. patients , families.

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

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

B 8 evaluate risks involved in clinical practice.

C- Professional/practical skills

C 1. Demonstrate competency in clinical examination skills and other procedures in nephrology.

C 2 perform and interpret laboratory and radiological findings in diagnosis and treatment of Nephrology.

C 3. write and evaluate medical reports and maintain comprehensive , timely, legible medical records if applicable.

C 4. use of information technology in the development of clinical practice

C5 demonstrate competency in performing diagnostic and therapeutic procedures required by the Nephrology consultants including renal biopsy, hemodialysis, peritoneal dialysis, plasmapheresis, applications of vascular access and peritoneal access.

C6 participate in development of clinical practice and evaluation of the performance of others.

D- Communication & Transferable skills

D 1 demonstrate the ability to interact with diverse patient population including but not limited to diversity in gender ,age , culture , race ,religion, disabilities.

D 2 communicate effectively with physicians, other health professionals and health related agencies.

D 3 teach and evaluate the performance of others including junior residents, house officers, nurses as well as patients and their relatives.

D 4 be prepared for continuous self learning and self evaluation.
D5 use different resources for gaining information and knowledge.
D6 work in a team and as a team leader of different working groups
D7 show compassion, integrity and respect of others and respect for patient privacy and autonomy and demonstrate responsiveness to patient needs that supersedes self interest.
D8 run scientific meetings and show the ability of time management.

(3) Course content:

Second part: Compulsory courses (4 semesters 2nd-5th)

1) Second semester Nephrology (module 1) (Compulsory)

Course title	Code	No of Hours/ week			Credit Hours
		Theoretical (hr)	Practical (hr)	Total weeks	T C
Clinical approach and Imaging of urinary system **History** **Examination** **Laboratory:** **Renal function** **Urinalysis** **Formulas** **Imaging** **Ultrasound** **Doppler** **CT** **MRI** **Renogram**		**6**	**6**	**4**	
Glomerular Diseases **Genetic related** **Minimal change** **FSGS** **Membranous** **MPGN** **Crescentic** **Infection related** **Schistosomiasis** **plasmodium** **Malignancy Associated**		**6**	**6**	**7**	
Tubulointerstitial **Acute** **Chronic** **Infectious** **Immunological** **Herbal remedies** **Vasculitis**		**6**	**6**	**4**	
Total					**6 3**

2) Third semester Nephrology (module 2) (Compulsory)

Course title	Code	No of Hours/ week			Credit Hours
		Theoretical (hr)	Practical (hr)	Total weeks	T C
Acute kidney injury Definitions and epidemiology Risk factors Diagnosis Non dialytic Management Dialytic Management Hepatorenal synd Tumor lysis Cardiorenal synd		6	8	4	
Chronic kidney Disease Epidemiology Diagnosis Progression CKD-MBD Anemia Blood and Immunology GIT and nutrition Dermatology Cardiovascular Non dialytic Management		6	8	4	
Hemodialysis Vascular access When to start Prescription Adequacy Emergencies Acute and chronic complications Cardiovascular complicatio Neurological and psychological Complications Infections Vaccinations Parathyroid disorders		6	8	4	
Slow continuous Therapy , Bioartificial and wearable kidney		6	8	3	
Total					6 4

3) Fourth semester Nephrology (module 3): (Compulsory)

Course title	Code	No of Hours/ week			Credit Hours	
		Theoretical (hr)	Practical (hr)	Total weeks	T	C
Renal Transplantation **Preparation** **procedures** **Immunosuppression** **Immediate care** **Long-term care** **Rejection** **Infections** **Recurrence** **Malignancy** **Outcome** **Psychological** **Ethics**		**6**	**8**	**4**		
Electrolytes and acid base disturbance **hypo/ hypernatremia** **hypo/ hyperkalemia** **hypo/ hypermagnesemia** **hypo/ hyperphosphatemia** **hypo/ hypercalcemia** **osmolarity** **M. Acidosis/ Alkalosis** **R. acidosis/alkalosis** **Mixed acid base dist**		**6**	**8**	**3**		
Renal manifestations Of systemic diseases, **Diabetes** **DKD** **Control of diabetes in CKD and dialysis** **Hypertension** **Renovascular hypertension** **Non pharmacologic** **Antihypertensive** **Resistant hypertension** **Post-transplant Hypertension** **Paraproteinemias**		**6**	**8**	**4**		
Hereditary syndromes **Polycystic** **Renal calculi** **Metabolic diseases**		**6**	**8**	**4**		
Total					**6**	**4**

4) Fifth semester Nephrology (module 4): (Compulsory)

Course title	Code	No of Hours/ week			Credit Hours
		Theoretical (hr)	Practical (hr)	Total weeks	T C
Peritoneal Dialysis		6	9	4	
Tropical nephropathy		6	9	3	
Critical care nephrology		6	8	4	
Pregnancy Toxemia of pregnancy		5	9	3	
Total					5 4

(4) Teaching methods:

4.1: Lectures with power point presentations and discussions.

4.2: Interactive bedside teaching with clinical case presentations of difficult and interesting cases and group discussions.

4.3: Problem solving case scenarios (commentary) .

4.4:Seminars and presentation of an essay by the postgraduate students.

4.5. Journal clubs for critical appraisal of journal articles.

4.6. Workshops and training courses for procedural skills.

4.6. Attendance of activities in the department including thesis discussion, conferences , clinical rounds, outpatient clinics , procedures …with both senior staff and junior staff …..

(5) References of the course:

Textbooks

- Brenner's textbook of nephrology.
- Chronic Kidney Disease, Dialysis, and Transplantation, Companion to Brenner and Rector's the Kidney (by Brian J.G. Pereira; Mohamed Sayegh & Peter R. Blake.
- Comprehensive clinical Nephrology textbook.
- Essential Atlas of Nephrology & Hypertension. Schrier, Robert W.; Cohen, A.H. (Eds.)
- Oxford textbook of medicine
- Oxford textbook of clinical Nephrology
- Shaul El-Massry textbook of nephrology.
- The Washington Manual® Nephrology Subspecialty Consult. Irfan A Agha, and Gopa Bhattacharyya Green

Periodicals

- Advances in Chronic Kidney Disease.
- American Journal of Hypertension.
- American Journal of Kidney Diseases.
- American Journal of Physiology - Renal Physiology.
- BMC Nephrology.
- Clinical and Experimental Nephrology.
- Clinical nephrology.
- Current Opinion in Nephrology & Hypertension.
- Journal of Renal Nutrition.
- Journal of the American Society of Nephrology.
- Kidney International.
- Nephrology, dialysis and transplantation.
- Nephron Clinical Practice.
- Nephron Experimental Nephrology.
- Nephron Physiology.
- Pediatric Nephrology.
- Peritoneal Dialysis International.
- Scandinavian Journal of Urology and Nephrology.
- Seminars in Dialysis.
- Seminars in Nephrology
- The Internet Journal of Nephrology.

Web Sites:

- American Society of Cell Biology
- American Society of Nephrology
- American Society of Transplantation
- Hdcn.com
- EDTA-ERA Educational

- Kidney Directions
- National Kidney Foundation
- Nephrology gateway
- Renal Biopsy Site
- Renal Physicians Association
- The Nephron Information Center
- The Renal Network, Inc.
- Up-To-Date

(6) Facilities and resources mandatory for course completion:

Candidates and their learning are supported in a number of ways:

■ Induction course introducing study skills
■ Candidates logbook
■Programme Specification and Handbooks
■ Extensive library and other learning resources
■ Computer laboratories with a wide range of software
■ Intranet with a wide range of learning support material
■MD Dissertation Supervisor

Course coordinator:

Prof. Mohamed Sobh (General supervisor)……..

Prof. Hussein Sheashaa (Academic Guide)…….

Head of the department:

Prof Salah Gamal……

Date: 5.11.2014