



Faculty of Medicine
Suez Canal University



Internal medicine Department
Program Specification- MSc nephrology

PROGRAM SPECIFICATIONS

Program Title:

**Master Degree of
Nephrology**

Code:

IMKD



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Program Specification

A- Basic Information

- 1- Program Title: **Master Degree of Nephrology**
- 2- Program Type: **Single** **Double** **Multiple**
- 3- Department (s): **Internal medicine Department – Nephrology unit**
- 4- Coordinator: **Head of department**
- 5- External Evaluator(s) : **Prof.**
- 6- Last date of program specifications approval: **The bylaws of the Master program in Nephrology in the Faculty of Medicine, Suez Canal University were approved by the Supreme Council of Universities in 2016.**
- 7-Date of specification revision approval: 2019
- 8- Number of credit points for this degree: **120 CP**

B- Professional Information

1- Program Aim

- The programs aims at qualifying a cadre of proficient nephrologists in Egypt
- The overall aim of the program is to enable the student to:
 - Provide high quality service for care of patients with renal disease and related systemic disorders.
 - Organize and run an academic package that satisfies requirements of obtaining a higher degree in Nephrology
 - Adopt positive attitudes towards humans, the community, and science.
 - Become a continuous self-learner.

In addition, providing students with adequate knowledge and skills in research methodology that enable them to design experiments, analyze data, and review literature critically. Finally, providing students with adequate knowledge and skills in research ethics that enable them to design researches with high ethical consideration.



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2- Intended Learning Outcomes (ILOs) of the program

a- Knowledge and Understanding:

By the end of this program, participants should be able to:

- a1. Acquire up to date knowledge of pathology to practice nephrology.
- a2. Demonstrate the rational of drug usage in renal failure patients.
- a3. Consolidate their previous knowledge of physiology in topics relevant to nephrology
- a4. Define the role of immune system in infectious and non- infectious diseases
- a5. Enumerate the infectious diseases of the kidney, their microbial causes, clinical presentation, laboratory diagnosis, prevention and treatment.
- a6. Identify basic research methodologies and statistics.
- a7. Identify basic concepts of research ethics.
- a8. Outline types of glomerular diseases & identify their causes whether it immunological or systemic
- a9. Identify epidemiology of hypertension, pathogenesis, management plan, systemic complications and hypertensive emergency.
- a10. Identify epidemiology and pathophysiology of diabetic nephropathy
- a11. List the causes of acute renal failure in critically ill patient.
- a12. Classify chronic kidney disease and describe its consequences
- a13. Illustrate dialysis procedure and its complications
- a14. Mention acid-base disorders and electrolyte disorders in chronic kidney disease
- a15. List renal & extra renal complications of adult polycystic kidney disease.
- a16. List causes of acute allergic interstitial nephritis.
- a17. Mention up-to-date principles of transplantation and its medications.
- a18. Explain functional Changes in the urinary tract during pregnancy.
- a19. Identify basis and principles of quality assurance in professional practice related to nephrology.
- a20. Recognize basic of ethics and medico legal aspects of professional practice, related to nephrology

b- Intellectual Skills

By the end of this program, participants should be able to:

- b1. Generate differential diagnosis for common and uncommon causes of haematuria and proteinuria.
- b2. Interpret different renal function tests.
- b3. Demonstrate how different systemic diseases (DM & HTN) affect kidney.
- b4. Assess different risk factors that lead to acute renal failure in admitted patients.
- b5. Interpret electrolyte and acid-base disturbances in patients has impairment kidney function.
- b6. Interpret disorders of divalent cation and mineral metabolism



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- b7. Interpret renal ultrasound
- b8. Monitor the dose of delivered dialysis, and assessment the dose of EPO
- b9. Generate differential diagnosis for various forms of cystic renal disease
- b10. Evaluate sodium and potassium handling.
- b11. Diagnosis different types of renal osteodystrophy.
- b12. Assess complications in post transplanted kidney patient
- b13. Manage women whose pregnancy is complicated by acute renal dysfunction
- b14. Adjust drug dosage in patients with renal dysfunction.
- b15. Apply critical appraisal and judgment skills of scientific papers.
- b16. Perform scientific research and write scientific background for a research problem
- b17. Integrate all data from history, examination, investigations to solve problems

c- Professional and Practical Skills

By the end of this program, participants should be able to:

- c1. Evaluate and target areas for self-improvement
- c2. Prioritize tasks so that patient care is optimized and work is completed efficiently
- c3. Uphold patient confidentiality and get informed consent for any required procedure
- c4. Be diligent in keeping legible, complete, and timely medical records.
- c5. Communicate with other physicians, nursing and clerical staff in a professional, respectful, and effective manner.
- c6. Demonstrate respect and compassion in interactions with patients and their families, including sensitivity and responsiveness to their race, gender, age, socioeconomic status, and other defining characteristics.
- c7. Demonstrate skill in full history taking.
- c8. Perform general physical examination skillfully for a patient admitted to the hospital for a relevant medical problem.
- c9. Skillfully perform abdominal examination, chest examination or cardiac examination for a patient admitted to the hospital or seen in clinic for a relevant medical problem.
- c10. Demonstrate appropriate consultative principles of communication and responsiveness to professional consultative requests.
- c11. Acquire experience to become in ascites paracentesis procedure
- c12. Insert urinary catheterization.
- c13. Assess benefit of percutaneous biopsy of autologous kidney
- c14. Place temporary vascular access for hemodialysis (Internal jugular or femoral line)
- c15. Manage acute hemodialysis sessions
- c16. Demonstrate ability to deal successfully with chronic hemodialysis sessions
- c17. Show professionalism and ethics attitude in research performance
- c18. Write provisional report about patient condition



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d- General and Transferable Skills

By the end of the program, participants should be able to:

- d1- Communicate effectively with peers and group facilitators.
- d2- Show respect to other team members' points of view.
- d3- Manage small and large groups effectively.
- d4- Function effectively in a group.
- d5- Apply ethical considerations during conduction of the self-study.
- d6- Manage change and conflicts effectively during group work.
- d7- Manage time effectively
- d8- Adopt the principles of self and lifelong learning
- d9- Demonstrate essential presentation skills.
- d10 Use available electronic and library resources to direct timely and appropriate diagnostic evaluations and treatment plans
- d11 Perform peer evaluation

3- Academic Standards

3a - External References for Standards (Benchmarks)

- The standards of the National Authority of Quality Assurance and Accreditation in Education (NAQAAE). Website: www.naqaae.org

3b - Comparaison of Provision to External References (attached)

4- Curriculum Structure and Contents

4a- Program duration: the program lasts for a minimum of 2 academic years and maximum 5 years, as specified in the internal bylaws for postgraduate studies based on credit points system in the Faculty of Medicine, Suez Canal University approved on February 7th, 2016.

4b- Program structure:

Master Program Credit points (CP) structure:

Total needed credit points for getting master degree 120 CP

The program consists of **First part 30 CP, Thesis 30 CP, and Second part 60 CP**

1. The first part (30 CP):

Duration: 15 weeks for one academic semester

This part lasts for 6 months and ends in written, practical, and oral exams. It includes:

- a- A course in Research Methodology (Code: RB) planned and held in the Community Medicine Department of the Faculty of Medicine, Suez Canal University. This part includes I(4 CP).
- b- A courses in Research Ethics (Code: RE) planned and held in the Forensic and Toxicology Department of the Faculty of Medicine, Suez Canal University. This part includes (2 CP).



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- c- A course in applied physiology (code IMKD01) planned and held in the Physiology Department of the Faculty of Medicine, Suez Canal University. This part includes (3 CP).
- d- A course in histology (code IMKD02) planned and held in the histology Department of the Faculty of Medicine, Suez Canal University. This part includes (2 CP).
- e- A course in clinical pharmacology (code IMKD03) planned and held in the pharmacology Department of the Faculty of Medicine, Suez Canal University. This part includes (4 CP).
- f- A course in applied pathology (code IMKD04) planned and held in the pathology Department of the Faculty of Medicine, Suez Canal University. This part includes (4 CP).
- g- A course in Clinical pathology (code IMKD05) planned and held in the clinical pathology Department of the Faculty of Medicine, Suez Canal University. This part includes (3 CP).
- h- A course in clinical microbiology (code IMKD06) planned and held in the microbiology Department of the Faculty of Medicine, Suez Canal University. This part includes (3 CP).
- i- A course in clinical Immunology (code IMKD07) planned and held in the Immunology Department of the Faculty of Medicine, Suez Canal University. This part includes (3 CP).
- j- One elective course (code: E), the students should select one elective among six available courses. This part includes (2 CP).

2. Master Thesis (30 CP):

(not included in the total marks of the Master degree)

The candidate has the right to register the thesis protocol 6 months after registration for the Master degree.

The thesis defense is allowed 6 months after the date of the Faculty Council approval of the thesis protocol and passing the First Part exam.

3. The Second Part (60 CP):

Duration: 45 weeks for 3 consecutive academic semesters.

The second part comprises of a specialized course in Nephrology, planned and held in the Nephrology unit – internal medicine department.

This part lasts for 1.5 years ending by written, oral and practical exams.

4bi- No. of hours per week: 2 CP / week which equivalent 50 hours/ week, including lectures, tutorials, self-learning and hands-on training.

4bii- No. of credit Points: the Master program is 120 Credit Points

Every credit point include 25 working hour (30% = 7 hours for face to face learning activities, and 70% =18 hours for self-learning activities).



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5-Program Courses

5.1- Level/Year of Program: 1st part MSc

a. Compulsory

Courses			Assessment				
Code No	Course Title	Number of credit points	Written exam			Oral Exam marks	Clinical Exam marks
			No papers	Duration	Marks		
RB	Research Methodology	4	1	2 hours	80		
RE	Research Ethics	2	1	1 hour	40		
IMKD01	Applied Physiology	3	1	1 hour	45	15	
IMKD02	Histology	2	1	1 hour	30	10	
IMKD03	Clinical Pharmacology	4	1	2 hours	60	20	
IMKD04	Applied Pathology	4	1	2 hours	60	20	
IMKD05	Clinical pathology	3	1	1 hour	45	15	
IMKD06	Clinical Microbiology	3	1	1 hour	45	15	
IMKD07	Clinical Immunology	3	1	1 hour	45	15	
E	Elective course*	2	1	1 hour	40		
Total	30 CP				600 mark		

*E: Student should select one course of the following as an elective course:

One elective course has 2 CP. The students should select one elective in first part of the Master degree

E01	Evidence Based medicine	(Community Department)
E02	Scientific Writing	(Medical Education Department)
E03	Quality in Medical Education	(Medical Education Department)
E04	Infection Control	(Microbiology Department)
E05	Critical Appraisal	(Community Department)
E06	Communication Skills	(Medical Education Department)

**Every credit point equal 20 marks



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5.2- Level/Year of Programme: 2nd part MSc
a. Compulsory

Courses			Assessment					
Code No.	Course Title	No. of Credit points	Written Exam			Oral exam	clinical Exam	Portfolio
			No of papers	Duration	Marks			
IMKD08	Advanced Course in Nephrology & internal medicine	15	2	3 hours For each paper	165 for each paper	110	330	330
	Practical training in Nephrology	40						
	***Scientific activities in Nephrology	5 (not included in the total marks)						
Total		60 credit points			**1100 score			

*Portfolio scores distributed in the different parts of the portfolio and its total score included among the total mark of the second part

**Every credit point equal 20 marks

***Scientific activities are not included in the total marks

5.3- Thesis: A faculty senior & junior supervisor from the staff members are nominated by the department council to prepare a proposal of the thesis protocol after the selection of a subject that is complementary to the research plans of the department. Data collection, methodologies, study question, time table, ethical considerations and budget are formulated by the candidate under guidance of his supervisors into a research project. The research protocol is then peer reviewed by two different staff members nominated by the Head of the department who share their ideas and comments with the supervisors to reach to the final form. The research protocol is discussed then openly in one of the department councils to be approved and diverted to the Faculty research committee where it is subjected to a critical appraisal to meet the research basic standards set by the committee. The final approvals of the research protocol are then issued by the committee of post graduate studies, the Faculty and University Council to be registered. The candidate has the right to register his/her thesis protocol after 6 months from the degree registration. The first time for thesis defense after 6 months from the date of the faculty council approval on the thesis protocol and passing the first part exam.

N.B. Thesis represents 30 credit points not included in the total mark for master degree.



6-Program Admission Requirements

- The program accepts candidates with Bachelor degree in Medicine and Surgery with minimum good grade & very good.
- Registration for the program opens 2 times/year, according to the internal bylaws for postgraduate studies of the Faculty of Medicine, Suez Canal University.

7- Student Assessment Methods

- 7.1 Written (MEQ) to assess the cognitive domain.
- 7.2 MCQs to assess the cognitive domain
- 7.3 Oral Viva Cards to assess higher cognitive and attitude domains.
- 7.3 Observations to assess practical and presentation skills.
- 7.4 Portfolio to assess the cognitive, psychomotor and the affective domains.

8- Weighting of Assessments

Total marks for master degree 1700

Type of exam

First part (30 credit points= 600 mark)

- Written exam 490
- Oral and practical exam 110
- **Total** 600

Second part (60 credit points including 5 credit points not included in the total marks =1100 mark)

- Oral exam 110
- Practical exam 330
- Written exam 330
- Portfolio 330
- **Total** 1100

9- Regulations for Progression and Program Completion

The regulations for program completion follow the regulations of Master degree of nephrology in the Faculty of Medicine, Suez Canal University approved by the Supreme Council of Universities.

First part

Passing level 60% of total marks of the exam



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At least 50% passing level of the total written exam marks

Second part

Passing level 60% of total marks of the exam

Passing level 60% is prerequisite for MSC degree

Thesis/Assay

Passing thesis defense is prerequisite for getting MSc. Degree

10-Evaluation of Program Intended Learning Outcomes (ILOs)

Evaluator	Tool	Sample
1- Postgraduate students	Needs assessment questionnaires	Random sample of participants
2- Alumni	Self-administered questionnaires	Comprehensive sample
3- Stakeholders	Self-administered questionnaires	Random sample
4-External Evaluator(s) (External Examiner(s))	External audit of the program specifications	
5- Other		

Head Of Nephrology Unit

Pro. Assem EL-Shrief

Head of Internal Medicine Department

Prof. Mahmoud EL Prince