COURSE SPECIFICATION

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	Dialysis Fellowship(fD)
(2) Part of the programme:	Semester 2
(3) Date of last approval of programme specification by Faculty council	**9/8/2016**
(4) Course title:	**Mechanisms of solute transfer and urea kinetic modeling**
(5) Course code:	fD0
(6) Total teaching hours:	2 credit hours

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

- Provide information about mechanism of solute movement across semipermeable membranes.
- Develop updated concepts about mechanisms of dialysis
- Provide a sound understanding of different models of urea kinetics
- Identification of basics of assessment of dialysis adequacy

(2) Intended Learning Outcomes (ILOs):

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

A- Knowledge and Understanding

a1 Explain the physics of solute movement across membranes.

a2 Recognize the main physiologic mechanims applied in hemodialysis

a3 Demonstrate understanding of urea kinetic remodeling

B- Intellectual skills

B1 Utilize available resources to achieve adequate dialysis.

C- Professional/practical skills

c7. Perform bedside assessment of dialysis adequacy.

D- Communication & Transferable skills

(3) Course content: Compulsory

Course title	Code	Hours/ Lectures	Credit Hours
Medical biophysics and urea kinetic modeling:	fD0		2
-Mechanisms of solute transport		3	
-Solute removal from patient and dialyzer perspectives		5	
-Access recirculation		2	
-Cardiopulmonary recirculation		2	
-Modeling of urea distribution volume		5	
-Urea nitrogen generation		4	
-Residual renal function		4	
-Standard Kt/V urea		4	
-Machine-estimated measures of hemodialysis adequacy		1	

(4) Teaching methods:

4.1: Online lectures with discussions, quizes

4.2: Online problem -solving case scenarios

(5) Assessment methods:

-Online MCQs and EMQs exam after end of 2nd semester

-Other assessment without marks: logbook

(6) References of the course:

Textbooks

- Comprehensive clinical nephrology textbook
- Handbook of dialysis, 5th edition(Daugirdas,2015)
- Oxford handbook of dialysis
- Renal replacement by dialysis, 4th edition

Websites

- ESNT virtual academy

Periodicals

- Nephrology, dialysis and transplantation.
- CJASN

(7) Facilities and resources mandatory for course completion:

Intranet with a vast learning material

Program specification and handbooks

Candidates logbook

A very rich library and computer laboratories

Course director:

Prof.: Hussein shaeshaa

Course co-ordinators:

Dr. Ahmed Mohammed Abd El Wahab

Dr. Mostafa Abdel Salam

Date: