

SAURASHTRA UNIVERSITY



Re-Accredited Grade B by NAAC

(CGPA 2.93)

CERTIFICATE COURSE IN **DIALYSIS TECHNIQUE** **(CCDT)**

One year Course

Revised Syllabus effective from July 2012

Center for Paramedical Courses

Department of Pharmaceutical Sciences

Saurashtra University

Rajkot

www.saurashtrauniversity.edu

CERTIFICATE COURSE IN DIALYSIS TECHNIQUE

(CCDT)

Examination and related Rules

O.1 CCDT:

A candidate for certificate course in dialysis technology must possess the 12th standard exam of Gujarat Secondary and Higher secondary Education Board or any other recognized or equivalent exam. Science students are preferable. However if any seats vacant after admission, student will be given admission who have general stream in 12th standard with compulsorily English in 10th as well as in 12th standard. The admission will be based on the merit of % of 12th standard.

Enlistment is essential within one month of the date of admission to the course.

The course is regular full time course having one academic year(two terms) duration.

O.2 CCDT:

Certificate course in dialysis technology examinations will be held at the end of second term and remedial examination will be held during the middle in each year.

Maximum intake is 20 students.

O.3 CCDT:

Candidates for certificate course in dialysis technology examination shall be examined after they have satisfactorily completed the prescribed courses of study & have kept the term in an institution recognized for the purpose under the recognized teachers in prescribed subjects.

The medium of instruction and examination shall be gujarati however it will be permissible to a student to answer all questions in English. Question paper shall be drawn in gujarati and English.

O.4 CCDT:

The internal test shall be of 20% and the annual examination will comprise of 80% of the total 100 marks for each subject in theory and Practical. The Min. of 75 % of attendance is mandatory to appear in CCDT annual and internal examinations.

O.5 CCDT:

The syllabus laid down for various papers of certificate course in dialysis technology examination is attached separately at the end of the rules.

O.6 CCDT:

Passing certificate will be issued by university to the students. It is essential to attend seminar/conferences/training/visit of premier kidney hospitals/industry visit in the area of dialysis or other relevant areas. The cost of expenditure will be borne by the student.

After successful completion of course, certificate will be awarded to students signed by the controller of examination.

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Saurashtra University - RAJKOT

R.1

The following shall be the scheme of teaching and examination.

Hours and Marks for Various Subjects of Certificate course in dialysis technique

Sr. No.	Subject	Teaching Scheme				
		Theory Hours/week	Practical Hours/week	Total marks		
				Internal	External	Total
1	Anatomy and Pathophysiology of kidney (Theory)	6	-	20	80	100
2	Management of dialysis (Theory)	8	-	20	80	100
3	Haemodialysis and peritoneal dialysis (Theory)	4	-	20	80	100
4	Practical (Haemodialysis and Peritoneal Dialysis procedures and clinical evaluation)	-	24	20	80	100

* indicates marks from internal examination

R.2

- The evaluation system will consist of a component of internal evaluation by the Department as well as final examination conducted by the Saurashtra University. The former will carry a 20% weight and later 80% weight towards the total marks obtained by the student in a given subject.

R.3

- Student failing in internal examination may take Remedial University Examination to be held during mid of year exam slots.

R.4

A candidate qualified to appear in university examination shall be required to submit application for admission to university exam through the Head of department and will pay examination fees prescribed by the university.

R.5

The candidate should have completed terms by attending classes, practicals and fulfilling other requirements as prescribed by the department.

R.6

No candidate shall be allowed to appear if he/she has backlog in internal component.

R.7

To pass the examination, candidate should at least secure 50% marks in internal as well as external evaluation. (i.e 10 out of 20 and 40 out of 80 maximum marks separately)

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**Certificate course in dialysis technology
(CCDT) SYLLABUS**

Name of Subject: Anatomy and Pathophysiology of kidney (Theory)

Paper code: CCDT-101

(Six hours per week)

UNIT-I

Anatomy & Physiology

Normal kidney structure & function including Renal Blood flow, Tubular function, Urinary Track & Bladder measuring of renal function

UNIT-II

Derangement of kidney function

Actiology

Clinical manifestation

Diagnosis of Acute & Chronic Renal Failure

Electrolytes, minerals & metabolism defect with disease manifestation

UNIT III

Renal Hormones Vit. D₃, EPO, Renal Anemia

UNIT-IV

End Stage Renal Disease, Diabetes & Hypertension – basics with necessary prescriptions schedule follow – up.

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**Certificate course in dialysis technology
(CCDT) SYLLABUS**

Name of Subject: Management of dialysis (Theory)

Paper code: CCDT-102

(Eight hours per week)

UNIT-I

Dialysis – The concept, Brief history, definition, mechanism
Haemodialysis / Peritoneal Dialysis – Basics

UNIT-II

Vascular access parameters
Dialysis preparation-Water treatment

UNIT-III

Dialysis treatment – Operation
Hygiene & maintenance technical data & specifications
Anticoagulation
Heparin, alternative to heparin, Regional, No heparin dialysis
Dialyser's Reuse, Rinsing

UNIT-IV

Renal diet, diet on dialysis
Medications – when on dialysis

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Certificate course in dialysis technology
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Name of Subject: Haemodialysis and peritoneal dialysis (Theory)

Paper code: CCDT-103

(Four hours per week)

UNIT-I

Emergency in dialysis unit with clinical orientation

Complication of Haemodialysis

- Access Related complication
- Dialyzer related complication
- Dialysate related complication
- Anticoagulant related complication
- Machine / Blood pump
- Associated complication
- Special type of complication
- Management of hygiene in dialysis unit
- Access care
- Anticoagulation

UNIT-II

Indices of Haemodialysis

- i. Duration, Index & clearance
- ii. Middle molecule, urea clearance
- iii. Urea kinetic modeling, dialysis adequacy & clinical assessment

UNIT III

Continuous Dialysis

- i. Continuous AV hemofiltration
- ii. Continuous Veno – venous hemofiltration
- iii. Continuous Slow Hemodialysis
- iv. Continuous Hemodiafiltration
- v. Plasmapheresis replacement, Fluid, Anticoagulation various filters

UNIT-IV

Peritoneal Dialysis

History, P.Catheter, Dialysate Fluid, Insertion procedure drainage complication, complete peritoneal dialysis done (CAPD).

UNIT-IV

Preparation of surgical trays / emergency & upkeep trays used in dialysis.

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**Certificate course in dialysis technology
(CCDT) SYLLABUS**

**Name of Subject: Practical (Haemodialysis and Peritoneal Dialysis procedures
and clinical evaluation)**

Paper code: CCDT-104

(24 hours per week)

1. Practical Demonstration of

- Documentation & Records
- Ideal Body weight upkeep
- A Haemodialysis Unit
- Demineralization plant
- Machine
- Initial of dialysis
- Conduction of dialysis
- Dialysis closure
- Washing, Cleaning, Reuse
- Maintenance of hygiene in dialysis unit
- Access – Care
- Anti coagulation

2. Actual participation in dialysis procedures including clinical evaluation of the patient.

1. Actual conduction of Haemodialysis
2. Actual conduction of peritoneal dialysis
3. Dialysis procedure and in depth knowledge with steps & further practical related to Management of dialysis.