

**Sri Guru Ram Das University of Health Sciences, Amritsar**  
**Course Structure for the Diploma in Dialysis Technology (DDT.1.1) 2024 Session**

Course code	Course Title	Course Type	L+T+P	Total Credits/Week	Weightage Theory/ Practical/ IA+UE
<b>Semester-I</b>					
DDT-ANT.101	Anatomy-I	Foundation	3+0+2	5	25+25=50T 50P
DDT-PHY.101	Physiology-I	Foundation	3+0+2	5	25+25=50T 50P
DDT.101	Basics of Hemodialysis	Core	3+1+3	7	50+50=100T 100P
ECO.101	English/ Communication skills	Elective	2+0+0	2	NC
<b>Total Credits</b>			<b>11+1+7</b>	<b>19</b>	<b>400</b>
<b>Semester-II</b>					
DDT-ANT.102	Anatomy-II	Foundation	3+0+2	5	25+25=50T 50P
DDT-PHY.102	Physiology-II	Foundation	3+0+2	5	25+25=50T 50P
DDT.102	Basic Dialysis drug and Techniques	Core	3+0+3	6	50+50=100T 100P
DDT-PAT.101	Pathology	Foundation	1+1+0	2	25+25=50T
COM.250	Computer applications	Elective	2+0+0	2	NC
<b>Total Credits</b>			<b>12+1+7</b>	<b>20</b>	<b>450</b>
<b>Semester-III</b>					
DDT.201	Modalities of Dialysis	Core	3+1+5	9	50+50=100T 100P
DDT.202	Continuous Dialysis Management-I	Core	3+1+5	9	50+50=100T 100P
HVE.201	Human Values & Ethics	Value added course	3+0+0	3	NC
<b>Total Credits</b>			<b>9+2+8</b>	<b>21</b>	<b>400</b>
<b>Semester-IV</b>					
DDT.203	Introduction to Kidney diseases	Core	3+1+0	4	<b>30+70=100</b>
DDT.204	Continuous Dialysis Management-II	Core	3+1+2	6	<b>30+70=100</b> <b>10+40=50</b>
DDT.205	Complications of Hemodialysis	Core	3+1+2	6	<b>30+70=100</b> <b>10+40=50</b>
CRP.350	Community Rehabilitation Practice	Elective	2+0+0	2	NC
<b>Total Credits</b>			<b>11+3+4</b>	<b>18</b>	<b>400</b>
<b>Semester-V</b> (The internship will span 6 months/ 1 semester. This will include 8 hours of practice a day, totaling to 720 hours for one semester)					
<b>Grand Total</b>					

## DDT.203: Introduction to Kidney Disease (75 Hours)

1. Assessment and Diagnostic studies of the Urinary system  
Physical assessment of a person with kidney disease, basics of assessment, list various diagnostic tests done for kidney diseases, laboratory tests, imaging studies, normal values, interpretation of the tests including the roles and responsibilities of a technologist.
2. Classification of renal diseases  
Define renal disorders, introduction to the classification of various types of renal disorders
3. Glomerular diseases – causes, types & pathology  
Definition, etiology, pathophysiology of each type, medical and surgical management
4. Tubulointerstitial diseases & renal vascular disorders  
Definition, etiology, pathophysiology of each type, medical and surgical management
5. Acute Kidney Injury  
Definition, etiology, pathophysiology of each type, medical and surgical management
6. Chronic Kidney Diseases  
Definition, etiology, pathophysiology, diagnosis & management

### *Clinical Postings*

Students will observe the basic operations of the dialysis unit while interacting with the multidisciplinary team members involved in providing optimal care to dialysis patients. The student will be introduced to various terminology, equipment, and techniques used for treatment.

1. Care of Patient with CKD
2. Care of Patient with ARF
3. Health teaching on prevention of UTI

<b>DDT.204</b>	<b>Continuous Dialysis Management-II</b>
	<b>Continuous Dialysis: 10 hours</b> <ol style="list-style-type: none"> <li>I. Continuous venovenous hemofiltration</li> <li>II. Continuous hemodiafiltration</li> <li>III. Continuous slow hemodialysis</li> <li>IV. Component, access, tubing, filter, replacement, fluid,</li> <li>V. Anticoagulation, flow rate.</li> </ol>
	<b>Peritoneal Dialysis: 30 hours</b> History, Peritoneal physiology, kinetics technique, catheter, dialysate fluid, insertion procedure, drainage, complication. Continuous peritoneal dialysis procedure, dose

	<p><b>Practical :160 Teaching Hours:</b>          Actual conduction of Hemodialysis : 140 hours          Actual conduction of Peritoneal Dialysis : 20 hours          Clinical assessment of patients</p>
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DDT.205	Complications of Hemodialysis	03 credit
1	<p><b>Complications of Hemodialysis:</b>          Access related complication          Dialyzer related complication          Dialysate related complication          Anticoagulant related complication          Machine/Blood Pump associated complication          Metabolic complications          Management of complications          Maintenance of hygiene in Dialysis unit          Access – core          Anticoagulation  <b>Doses of Hemodialysis:</b>          Duration, index, clearance          Middle molecules, Urea reduction ration          Urea kinetic modeling, Dialysis adequacy</p>	<p><b>15 Hours</b></p> <p><b>10 hours</b></p>
2	<p><b>Complications of Hemodialysis– Acute &amp; chronic</b></p> <p>Complications of Hemodialysis, acute complications – monitoring, prevention for acute complications. Chronic complications – list, prevention strategies, monitoring for chronic complications. Discussion of practical clinical case scenarios involving above topics wherever possible.</p>	<b>10 hours</b>
	<p><b>Practical :</b>  <b>Demonstration: (60 Teaching Hours)</b>  <b>Demonstration of -</b>          Hemodialysis unit          Demineralisation plant          Machine          Initiation of Dialysis          Conduction of Dialysis          Dialysis – closure          Washing, cleaning, reuse          Maintenance of hygiene in Dialysis unit          Access – core          Anticoagulation  <b>B. Actual participation in Dialysis Procedure:</b>          120 Teaching Hours including clinical evaluation of patient</p>	

**CRP.350: Community Rehabilitation practice**

**SYLLABUS FOR ALLIED & HEALTH PROFESSIONALS**

**TITLE OF THE COURSE: Community Rehabilitation Practice**

CATEGORY: Compulsory Elective

**AIM: To provide foundational knowledge and competencies in rehabilitation in practice, focusing on functioning, participation, equitable care across the life course.**

COURSE STRUCTURE:

- Total duration -30 hours
- Credits: 2
- Teaching scheme: Theory learning:24 hours and Applied: 6 hours

**CONTENT**

**Unit I: rehabilitation & health systems**

- Concept and definition of rehabilitation (WHO)
- rehabilitation as an essential health service
- Overview of Rehabilitation
- Introduction to World Rehabilitation Alliance

**Unit II: Functioning, Disability &ICF Framework**

- Function versus disease -based models
- Components of ICF
- Activity, Participation, and contextual factors
- Application of ICF in basic case scenarios

**Unit III: community-based rehabilitation**

- Principles of CBR
- Early identification of disability
- Home-based rehabilitation
- Community participation and empowerment

**Unit IV: Life-courses & Vulnerable Populations**

- Women's health and caregiving burden
- Ageing and fall prevention
- Chronic diseases and disability
- Social determinants of health

**Unit V: Primary Care & Interprofessional Practice**

- Referral pathways
- Team-based rehabilitation
- Ethical and professional roles
- Communication in community settings

**Unit VI: Applied Community Planning**

- Designing a simple community rehabilitation plan
- Screening tools for functional limitations
- Documentation using ICF framework
- Case discussion

*Principles and practice of Dialysis Part II Practical's (60 Hours)*

1. Preparation and positioning of patient for dialysis.

2. Assessment of HD patients
3. Perform HD
4. Perform PD