DDT (Diploma in Dialysis Technology) Syllabus DDT I SEMESTER Session 2023-2024

				Teachi	ing and Ev	aluation	Scheme				
			7	heory		Prac	tical				S
Subject Code	Category	Subject Name	End Sem University Exam (60%)	Two Term Exam (20%)	Teacher Assessment (20%)	End Sem University Exam (60%)	Teacher Assessment (40%)	L	Т	P	CREDITS
DDT101	СС	Anatomy & Physiology I	60	20	20	0	0	3	0	0	3

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P - Practical; C - Credit;

Course Educational Objectives (CEOs): The students will

CEO1: rationalize the fundamental knowledge of the human body system.

CEO2: understanding detailed functioning about human system histology.

CEO3: gain knowledge about clinical conditions of different body systems.

Course Outcomes (COs): Student should be able to

CO1: understand the human system with emphasis on normal and pathophysiological conditions.

CO2: acquainted with the different body systems and their prime functions.

CO3: Identification of the different clinical conditions with their signs and symptoms.

CO4: Learn some important clinical identification processes of diseases.

Unit-I Cell:

- Structure of Human Cell: Protoplasm and Nucleus.
- Functions of Human Cells.
- Cellular Transportation.

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DDT (Diploma in Dialysis Technology) Syllabus DDT I SEMESTER Session 2023-2024

				Teachir	ng and Eva	luation S	Scheme					
			Т	heory		Pract	ical					
Subject Code	Category	Subject Name	End Sem University Exam (60%)	Two Term Exam (20%)	Teacher Assessment (20%)	End Sem University Exam (60%)	Teacher Assessment (40%)	L	Т	P	CREDITS	
DDT101		Anatomy & Physiology I	60	20	20	0	0	3	0	0	3	

 $[\]boldsymbol{Legends} \colon \boldsymbol{L} \text{ - Lecture; } \boldsymbol{T} \text{ - Tutorial/Teacher Guided Student Activity; } \boldsymbol{P} - Practical; \quad \boldsymbol{C} \text{ - Credit; }$

Unit-II

Circulatory System I:

- Structure and Functions of Heart.
- Circulations: Systemic, Pulmonary and Different Regional Circulations.
- Heart Sounds.

Unit-III

Respiratory System I:

- Structure and Functions of Lungs.
- Mechanism of Breathing.
- Buffer system for maintenance of pH of the body.

			Teaching and Evaluation Scheme									
			Т	heory		Pract	ical					
Subject Code	Category	Subject Name	End Sem University Exam (60%)	Two Term Exam (20%)	Teacher Assessment (20%)	End Sem University Exam (60%)	Teacher Assessment (40%)	L	Т	P	CREDITS	

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DDT (Diploma in Dialysis Technology) Syllabus DDT I SEMESTER Session 2023-2024

DDT101	CC	Anatomy & Physiology I	60	20	20	0	0	3	0	0	3	
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Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P - Practical; C - Credit;

Unit-IV

Digestive system I:

- Introduction to Digestion
- Structure and Function of Digestive system.
- Different digestive juices and their composition.

Unit-V

Renal system I:

- Structure and Functions of Kidney.
- Structure and Functions of Nephron.
- Juxtaglomerular apparatus.

	Teaching and Evalu	ation Scheme		
	Theory	Practical		

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DDT (Diploma in Dialysis Technology) Syllabus DDT I SEMESTER Session 2023-2024

Subject Code	Category	Subject Name	End Sem University Exam (60%)	Two Term Exam (20%)	Teacher Assessment (20%)	End Sem University Exam (60%)	Teacher Assessment (40%)	L	Т	P	
DDT101(P)	CC	Anatomy & Physiology I (Practical)	00	00	00	30	20	0	0	2	1

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P - Practical; C - Credit;

Course Educational Objectives (CEOs): The students will

CEO1: identify various bones present in the human body.

CEO2: develop understanding about vitals of human cardiovascular system and factors affecting them.

systems.

CEO3: understand, analyze and interpret various histological tests for blood.

Course Outcomes (COs): Student should be able to

CO1: understand and identify the human bones with emphasis on general anatomy and general histology.

CO2: distinguish various human bones based on their

respective

CO3: memorize and perform various clinical tests.

CO4: analyze and interpret the results of various blood tests.

List of Practical's

- Muscles identification according to their anatomy.
- Identification of Different bones.
- Demonstration and Identification of Different Parts of Circulatory system.
- Demonstration and Identification of Different Parts of Urinary system.

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DDT (Diploma in Dialysis Technology) Syllabus DDT I SEMESTER Session 2023-2024

				Teac	hing and H	Evaluatio	on Scheme	e			
				Theory		Pract	ical				
Subject Code	Category	Subject Name	End Sem University Exam (60%)	Two Term Exam (20%)	Teacher Assessment (20%)	End Sem University Exam (60%)	Teacher Assessment (40%)	L	Т	P	CREDITS
DDT102	CC	Renal Diseases-I	60	20	20	0	0	3	0	0	3

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P - Practical; C - Credit;

Course Educational Objectives (CEOs): The students will -

CEO1: Conferring basic knowledge about renal diseases.

CEO2: Understanding of how diseases develop.

CEO3: Comprehensive knowledge about treatment of diseases.

CO1: 1. An understanding of pathophysiology of Diseases

CO2: Understanding of the treatment processes in the living system.

CO3: Understanding the mechanism and the importance of dialysis in renal diseases.

Unit I:

Acute renal Failure I:

• Causes, Treatments and Dialysis Management

Unit II:

Vitamins and co-enzymes:

• Functions of water soluble vitamins; Fat soluble Vitamins A, D, E and K.

Unit III:

Chronic Renal Failure I:

• Causes, Treatments and Dialysis Management

Unit IV:

Urinary Tract Infections I:

- Pathogens.
- Pathophysiology

^{*}Teacher Assessment shall be based following components: Quiz/Assignment/ Project/Participation in class, given that no component shall exceed more than 10 marks.



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			Teaching and Evaluation Scheme								
				Theory		Pract	ical				
Subject Code	Category	Subject Name	End Sem University Exam (60%)	Two Term Exam (20%)	Teacher Assessment (20%)	End Sem University Exam (60%)	Teacher Assessment (40%)	L	Т	P	CREDITS
DDT102	CC	Renal Diseases-I	60	20	20	0	0	3	0	0	3

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit;

Unit V: Diabetes I:

- Types of Diabetes.
- Causes of Diabetes.
- Insulin action.

^{*}Teacher Assessment shall be based following components: Quiz/Assignment/ Project/Participation in class, given that no component shall exceed more than 10 marks.



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				Teachi	ng and Eva	aluation	Scheme				
			7	Theory		Pract	ical				
Subject Code	Category	Subject Name	End Sem University Exam (60%)	Two Term Exam (20%)	Teacher Assessment (20%)	End Sem University Exam (60%)	Teacher Assessment (40%)	L	Т	P	CREDITS
DDT102(P)	CC	Renal Diseases-I (Practical)	00	00	00	30	20	0	0	2	1

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P - Practical; C - Credit;

Course Educational Objectives (CEOs): The students will-

CEO1: understand, analyze and interpret test for macronutrients, blood and Urine.

Course Outcomes (COs): Student should be able to -

CO1: memorize and perform various tests.

CO2: analyze and interpret the results of various tests.

List of Practical's:

- 1. Demonstration of Pathophysiology of Renal Tissues
- 2. Sign and Symptoms analysis of Diabetes.
- 3. Indication and Contraindication analysis of AKD
- 4. Study of pH meter

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			Teaching and Evaluation Scheme								
			r	Theory		Pract	ical				
Subject Code	Category	Subject Name	End Sem University Exam (60%)	Two Term Exam (20%)	Teacher Assessment (20%)	End Sem University Exam (60%)	Teacher Assessment (40%)	L	Т	P	CREDITS
DDT103	CC	Background of Dialysis-I	60	20	20	0	0	3	0	0	3

Course Objectives

- 1. To explain the history of Dialysis
- 2. To provide basic understanding of various stages of evolution of Dialysis.

Course Outcomes

- 1. Students will be able to understand Dialysis process.
- 2. Students will be able to understand various types of dialysis processes.

Unit-I

History of Dialysis I

- The early days of Dialysis.
- The first successful dialysis
- The Rotating drum Kidney
- Dialysis and Ultrafiltration.

Unit-II

Types of Dialysis

- What is Dialysis.
- Who needs Dialysis?
- What are the types of Dialysis?

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			Teaching and Evaluation Scheme								
				Theory		Pract	ical				
Subject Code	Category	Subject Name	End Sem University Exam (60%)	Two Term Exam (20%)	Teacher Assessment (20%)	End Sem University Exam (60%)	Teacher Assessment (40%)	L	Т	P	CREDITS
DDT103		Background of Dialysis-I	60	20	20	0	0	3	0	0	3

Unit III

Precautions of Dialysis

• Precautions before and after dialysis.

Unit-IV

Vascular access of Dialysis

- Arteriovenous Fistula.
- Arteriovenous Graft
- Venous catheter

Unit-V

Anticoagulant:

• Principle and problems.

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			Teaching and Evaluation Scheme								
				Theo	ry	Pract	ical				
Subject Code	Category	Subject Name	End Sem University Exam (60%)	Two Term Exam (20%)	Teacher Assessment (20%)	End Sem University Exam (60%)	Teacher Assessment (40%)	L	Т	P	CREDITS
DDT103(P)	CC	Background of Dialysis-I (Practical)	00	00	00	30	20	0	0	2	1

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P - Practical; C - Credit; *Teacher Assessment shall be based following components: Quiz/Assignment/ Project/Participation in class, given that no component shall exceed more than 10 marks.

List of Practical's

- 1. Demonstration of Fistula.
- 2. Demonstration of Graft
- 3. Use of anticoagulants.
- > Practical's will be modified as per the feasibility.

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DDT (Diploma in Dialysis Technology) Syllabus DDT I SEMESTER Session 2023-2024

Subject Code	Category	Subject Name	Teaching and Evaluation Scheme								
				Theor	y	Practi					
			End Sem University Exam (60%)	Two Term Exam (20%)	Teacher Assessment (20%)	End Sem University Exam (60%)	Teacher Assessment (40%)	L	T	P	CREDITS
DDT104	CC	Haemodialysis-I	60	20	20	0	0	3	0	0	3

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P - Practical; C - Credit;

Course Educational Objectives (CEOs): The students will-

CEO1: Acquire the ability to identify and find appropriate solutions to medical problems.

CEO2: Interpret morphological changes of the diseases in correlation to clinical manifestations and haemodialysis techniques of the Renal diseases.

Course Outcomes (COs): Student should be able to -

CO1: develop competency in techniques of Haemodialysis.

CO2: acquire knowledge and understand the background of hamodialysis.

CO3: understand the detailed aspects of haemodialysis techniques...

CO4: acquire knowledge and understand therapeutic use of Haemodialysis.

Unit-I

Introduction to Haemodialysis:

- History and discovery of Haemodialysis. Modern concepts of Haemodialysis.
- Physiological principle and urea kinetic Modeling.

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Subject Code	Category	Subject Name	Teaching and Evaluation Scheme									
			Theory			Pract	Practical					
			End Sem University Exam (60%)	Two Term Exam (20%)	Teacher Assessment (20%)	End Sem University Exam (60%)	Teacher Assessment (40%)	L	Т	P	CREDITS	
DDT104	CC	Haemodialysis-I	60	20	20	0	0	4	0	0	4	

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P - Practical; C - Credit;

Unit II

Basic of Haemodialysis:

- Compatibility test for haemodialysis
- Indication and Contraindication of Haemodialysis.
- Laboratory investigation haemodialysis.

Unit-III

Techniques in Haemodialysis -

- Techniques of patient preparation.
- Initiation of Hemodialysis.
- Haemodialysis Machine: Working Principles and maintenance.

Unit-IV

Acute Haemodialysis prescription.:

- Components of haemodialysis prescription.
- Management during recovery of kidney function.
- Modern guidelines.

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	Category	Subject Name	Teaching and Evaluation Scheme								
			Theory			Pract	Practical				
Subject Code			End Sem University Exam (60%)	Two Term Exam (20%)	Teacher Assessment (20%)	End Sem University Exam (60%)	Teacher Assessment (40%)	L	Т	P	CREDITS
DDT104	CC	Haemodialysis-I	60	20	20	0	0	4	0	0	4

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P - Practical; C - Credit;

Unit-V Chronic Haemodialysis prescription.:

- Components of haemodialysis prescription.
- Management during recovery of kidney function.
- Modern guidelines

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Subject Code	Category	Subject Name	Teaching and Evaluation Scheme								
			r	Theory	Pract						
			End Sem University Exam (60%)	Two Term Exam (20%)	Teacher Assessment (20%)	End Sem University Exam (60%)	Teacher Assessment (40%)	L	Т	P	CREDITS
DDT104(P)	CC	Haemodialysis-I (Practical)	00	00	00	30	20	0	0	2	1

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P - Practical; C - Credit;

Course Educational Objectives (CEOs): The students will-

CEO1: understand, analyze and interpret Haemodialysis.

Course Outcomes (COs): Student should be able to -

CO1: memorize and perform Haemodialysis.

CO2: analyze and interpret the results of haemodialysis.

List of Practical's:

- Techniques of patient preparation.
- Initiation of Hemodialysis.
- Haemodialysis Machine: Working Principles and maintenance.

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