Postgraduate Certificate

Hemodialysis for Nursing

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Postgraduate Certificate
Hemodialysis for Nursing

- Modality: **online**
- Duration: **6 weeks**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Website: **www.techtitute.com/us/nursing/postgraduate-certificate/hemodialysis-nursing**

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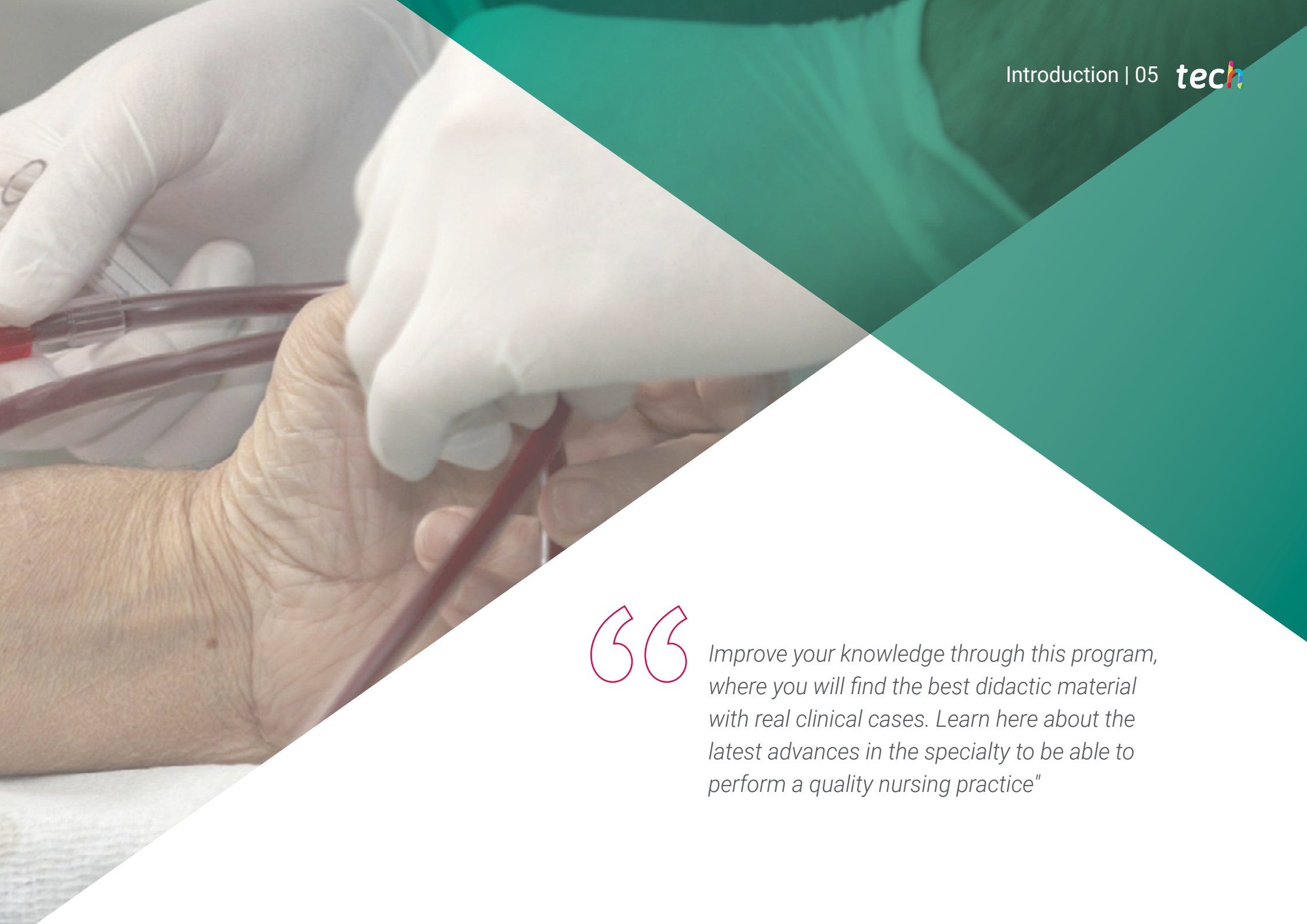
01

Introduction

Chronic Kidney Disease is a growing problem worldwide. In Spain, according to the results of the EPIRCE study (Epidemiology of Chronic Renal Failure in Spain), it is estimated that approximately 10% of the adult population suffer from CKD. The percentage was 6.8% for stages 3-5, although there were important differences with age (3.3% between 40-64 years and 21.4% for those older than 64 years).



Improve your knowledge through this program, where you will find the best didactic material with real clinical cases. Learn here about the latest advances in the specialty to be able to perform a quality nursing practice"

Nursing plays a decisive role in the care of the patient with chronic kidney disease, both from its onset and in later stages. In addition to skills in renal replacement techniques such as the acquisition of specific professional competencies, specific and quality care is required in the various studies of renal disease.

The care of the nephrological patient, including renal function replacement techniques, has made significant advances in recent years, both in terms of renal transplantation and the health care of the nephrological patient, requiring specialized and continuous training for nurses. Such specialized training is rarely found in standard curricular training, so many nurses are unaware of important aspects of caring for these patients. Training in this area is necessary to guarantee a minimum quality of care.

Increase your competencies in the approach to Hemodialysis for Nursing through this program"

This **Postgraduate Certificate in Hemodialysis for Nursing** contains the most complete and up-to-date scientific program on the market. The most important features of the University Course are:

- Development of clinical cases presented by experts in nephrology nursing. The graphic, schematic, and eminently practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice.
- Diagnostic and therapeutic developments on the performance in Hemodialysis for Nursing.
- An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course.
- With a special emphasis on evidence-based medicine and nursing research methodologies in the renal patient.
- All of this will be complemented by theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments.
- Content that is accessible from any fixed or portable device with an Internet connection

This Postgraduate Certificate may be the best investment you can make when choosing a refresher program for two reasons: in addition to updating your knowledge in Hemodialysis for Nursing, you will obtain a certificate from TECH Technological University"

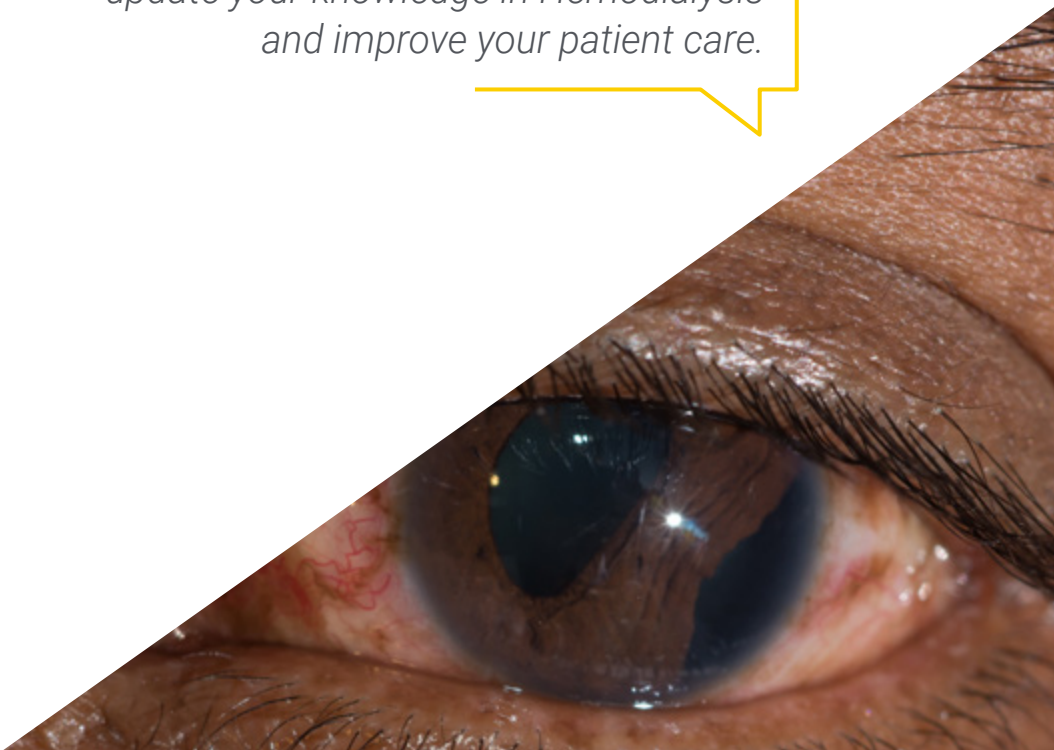
The Postgraduate Certificate includes real clinical cases and exercises to bring the development of the course closer to the practice of the nurse who provides care to renal patients.

Make the most of this opportunity to update your knowledge in Hemodialysis and improve your patient care.

Its teaching staff includes health professionals in the field of nephrological nursing, who bring to this training the experience of their work, in addition to recognized specialists belonging to scientific societies of reference.

The multimedia content developed with the latest educational technology will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide an immersive training program to train in real situations.

Problem-Based Learning underpins this program design, and the doctor must use it to try and solve the different professional practice situations that arise throughout the University Course. This will be done with the help of an innovative interactive video system developed by recognized experts in the field of nephrology nursing with extensive teaching experience.



02

Objectives

The main objective of the program is the development of theoretical and practical learning, so that the nurse can master Hemodialysis in a practical and rigorous way.

This refresher program will generate a sense of confidence when practising nursing, which will help you grow both personally and professionally"

General Objectives

- Revise the most common procedures, techniques and care methods in routine clinical practice when dealing with patients with chronic kidney disease.
- Optimize the quality and care of transplanted patients, providing more qualified healthcare professionals.
- Develop competencies and skills for the comprehensive approach and management of the renal patient.

Make the most of this opportunity and take the step to get up to date on the latest developments in Hemodialysis for Nursing.

Specific Objectives

- Develop in nursing professionals the set of knowledge and skill competencies for the comprehensive approach and management of the patient in the hemodialysis program.
- Provide the essential fundamentals and the latest theoretical and practical advances to any professional who needs or decides to start learning about Hemodialysis or who, being already in it, wants to update their knowledge.
- Gain up-to-date knowledge of the quality and efficiency of the new Hemodialysis technologies.
- Describe the importance of education in the management of this disease and self-care.
- Acquire knowledge of the different extrarenal depuration techniques.
- Know the different parameters of efficacy, dosage, water balance of treatment in each technique.
- Gain up-to-date knowledge of the care required by the patient in a Hemodialysis program.
- Update knowledge that allows the student to distinguish the different types of vascular accesses and to know the management and care of each one of them.
- Update knowledge and strategies for patients at high risk of bleeding.
- Describe the different types of coagulation in the Hemodialysis session as well as the latest developments in the management and care of the chronic renal patient.

03

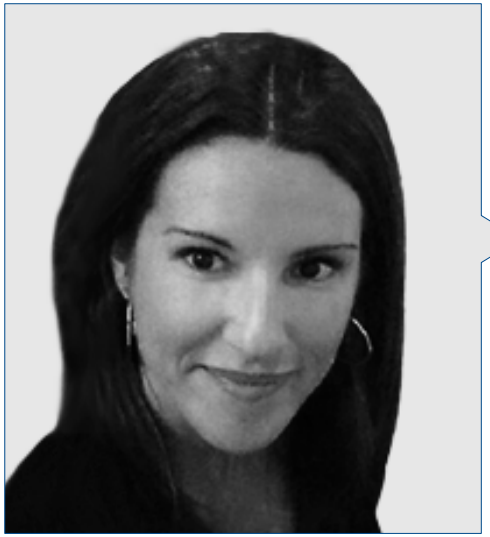
Course Management

This program includes in its teaching staff health professionals of recognized prestige, who belong to the field of nephrological nursing, and who pour into this training the experience of their work.

In addition, renowned specialists, members of prestigious national and international scientific communities, are involved in designing and preparing the program.

Learn from leading professionals the latest advances in Hemodialysis for Nursing"

Management



Mrs. Molina Fuillerat, Ruth

- Diploma in Nursing from the University of Cadiz, with a extensive experience working in Nephrology Services. Dialysis. Doctor Negrín Hospital (Las Palmas de Gran Canaria), Torrecárdenas Hospital (Almería) y Virgen de las Nieves Hospital y Clínico San Cecilio Hospital, (Granada). Currently wokring in the hemodialysis unit at Campus de la Salud Hospital (Granada) Co-author of the health application Dialysis 24h
- 1st prize Hinnovar de Novartis, 2014 edition, Hospital Management Category
- Accésit Professor Barea Award 2015 "Effect of a support tool on adherence to treatment, anxiety and quality of life of dialysis patients".
- Award for the isysCore Foundation, naming Dialysis 24h as the second best app in Spain
- Bandera de Andalucía 2015 for the commitment, dedication and devotion as a nurse in the Dialysis 24h app.
- Albert Jovell Award 2016 Accésit to Diálisis 24h app for "Best initiative that improves patient health outcomes, developed by healthcare professionals, individually or as a team".

Professors

Mr. Arenas Bonilla, Manuel Fernando

- Diploma in Nursing
- Nephrology CMU Nurse
- Hemodialysis Service
- Torrecárdenas Hospital. Almeria, Spain

Mr. Aguilar Amores, Manuel Salvador

- Diploma in Nursing
- Degree in Social and Cultural Anthropology
- Dialysis Product Applications Nurse Specialist
- Responsible for the training of healthcare personnel in the operation of hospital dialysis machines, therapeutic systems, convective techniques and home hemodialysis.
- Fresenius Medical Care España S.L

Mrs. Bravo Bazán, Marina
- Diploma in Nursing
- Nurse of the Nephrology CMU, Hemodialysis Service
- Virgen de Las Nieves Hospital Granada, Spain

Mrs. Cruz Gómez, Sandra
- Diploma in Nursing
- Surgical Nurse
- Santa Ana Motril Hospital Granada, Spain

Mr. Guisado Oliva, José
- Diploma in Nursing
- Nurse in Hemodialysis Unit Nephrology CMU
- Campus de la Salud Hospital Granada, Spain

Mrs. Mata Ortega, Olga
- Diploma in Nursing
- Virgen de Las Nieves Hospital Granada, Spain
- Regional Manager of Hemodynamic Monitoring and Product Launch
- Vygon, Spain

Mrs. Muñoz Becerra, Mercedes
- Diploma in Nursing
- Care Coordinator of Hemodialysis Service
- Campus de la Salud Hospital Granada, Spain

Mrs. Palomares Bayo, Magdalena
- Degree in Medicine and Surgery
- Specialist in Nephrology
- Head of the Hemodialysis Unit
- Campus de la Salud Hospital Granada, Spain

04

Structure and Content

The structure of the contents has been designed by a team of professionals knowledgeable about the implications of training in daily nursing practice in hemodialysis, aware of the relevance of the current importance of training to be able to act before the patient with renal pathology and committed to quality teaching through new educational technologies.

This Postgraduate Certificate in Hemodialysis for Nursing, contains the most complete and up-to-date scientific program on the market"

Module 1. Pediatric

1.1. History and Current Status.
1.2. Evolution.

Module 2. The Physiology of Hemodialysis

2.1. Diffusion.
2.2. UF.
2.3. Convection.
2.4. Convention.
2.5. Urea Kinetics.

Module 3. Dialysis Liquids

3.1. Introduction
3.2. Water Treatment.
3.3. Methods of Water Treatment.
3.4. Quality Control of Water.
3.5. The Water Treatment Plant. Types and Characteristics. Controls. Problems.

Module 4. Dialyzers

4.1. Definition, Characteristics, Formats.
4.2. Types of Membranes.
4.3. Factors to Consider when Choosing a Dialyzer. Ideal Dialyzer.

Module 5. Indications of Hemodialysis.

5.1. Dialysis Dosis: Purification of Small, Medium and Large Molecules.
5.2. Preservation of Residual Renal Function.

Module 6. Dialysis Monitors.

6.1. Main Characteristics and Differences Between Different Types.
6.2. Preparation and Verification of the Material Needed.
6.3. Session Planning According to the Prescription: Composition and Temperature of Dialysis Liquids (DL).
  6.3.1. Sterility Conditions.
  6.3.2. Adjustment of Connections of the Extracorporeal Circuit.
  6.3.3. Ending the Session.
  6.3.4. Monitor Management: Setting up, Priming, Connecting, Disconnecting and Disinfecting the Monitors.

Module 7. Quality / Efficacy of the Depuration Techniques.

7.1. Dialysis Dose KT or KT/V in Each Technique.
7.2. Water Balance.
  7.2.1. Dry Weight.
  7.2.2. Euvolemic Weight.
  7.2.3. Bioimpedance Applications.

Module 8. High-Flow Hemodialysis

8.1. Definition
8.2. Types
8.3. Equipment Management.
8.4. Benefits of High-Flow Hemodialysis: Biocompatibility

Module 9. Anticoagulation in HD: Update

9.1. The Clot. Coagulation Cascade.
9.2. Factors which Promote Clotting in HD.
9.3. Use of Anticoagulation in HD.
  9.3.1. Measurement and Monitoring of Anticoagulation.
9.4. Anticoagulation with Heparin.
  9.4.1. Unfractionated Heparin (UFH).
  9.4.2. Types of Heparinization.
  9.4.3. Low Molecular Weight Heparin (LMWH).
  9.4.4. Secondary Effects of Heparin.
  9.4.5. UFH or LMWH?
9.5. Influence of the Membrane and the HD Technique on Anticoagulation.
9.6. Strategies for Patients with High Risk of Bleeding.
  9.6.1. HD without Heparin.
  9.6.2. HD Low Dose of Heparin.
  9.6.3. Regional Heparinization with Citrate.

9.6.4. Heparinization with Heparin and Protamine.
9.6.5. Citrate in the Dialysis Fluid.
9.6.6. Regional Anticoagulation with Prostacyclin.
9.6.7. Mesilato Nafomast.
9.7. Other Methods of Clotting.
9.8. Antiaggregation and Anticoagulation in HD Patients,

Module 10. Organization of a Dialysis Unit

10.1. General Objective.
10.2. Structure of the Unit.
10.3. Dialysis Room.
10.4. Organization.
10.5. Patients.
10.6. Nursing Staff.
10.7. Procedures
  10.7.1. Preventative Medicine Controls.
  10.7.2. Patient Documentation.
  10.7.3. Analytical Controls.
  10.7.4. Nursing Protocol for the Welcoming Patients with CKD.
  10.7.5. Welcome Guide for Nursing Professionals in HD.
  10.7.6. Latest Protocols Needed During the HD Session.

Module 11. Latest Information on Vascular Accesses fro HD.

11.1. Fistulas.
  11.1.1. Native and Prosthetic Arteriovenous Fistulas. Most Common Locations.
  11.1.2. Pre-Surgery Assessment.
  11.1.3. Surgical Technique
  11.1.4. Nursing Care. Postoperative Controls.
  11.1.5. Nursing Care to Improve Fistula Development and Survival (FAVI).
  11.1.6. Home Self-Care of Arteriovenous Fistula.
  11.1.7. Home Care of an Extravasation of the Arteriovenous Fistula.
  11.1.8. Measures to Follow in Case of Hemorrhage.
  11.1.9. Puncture of the AVF. General Rules for Punctures.

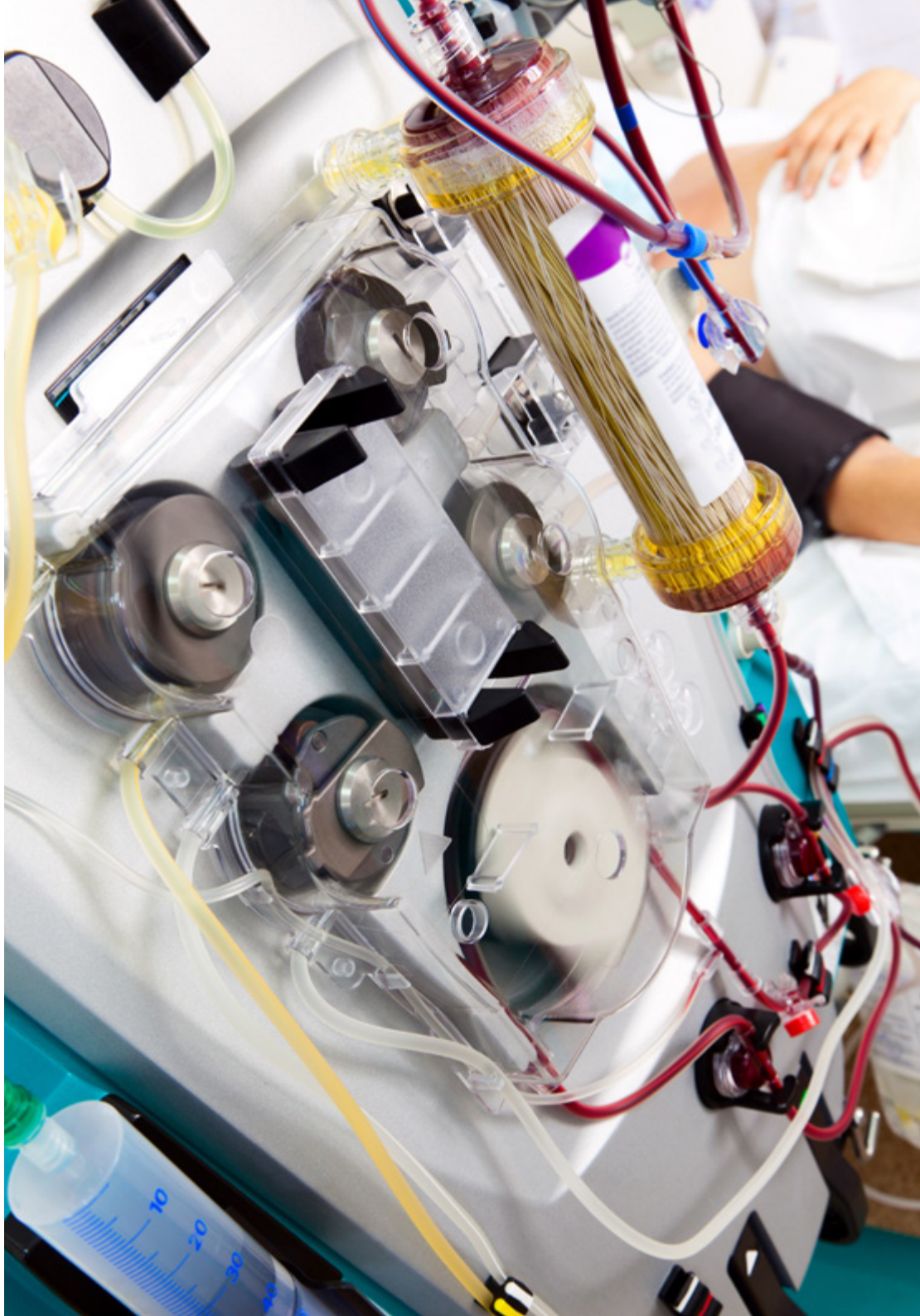
11.1.10. Pain in Punctures. Puncture Techniques. Special Considerations in the Puncture of Prosthetic AVF.
11.1.11. Puncture techniques: Unipuncture or Bipuncture. Butonhole Technique.
11.1.12. Self-Guided Vascular Cannulation (Peripheral and Central).
11.1.13. Contol of Blood Recirculation in an Arteriovenous Fistula.
11.1.14. Complications and Treatment.

11.2. Catheters.
11.2.1. Types.
11.2.2. Surgical Technique.
11.2.3. Catheter Infections.
11.2.4. Treatment
11.2.5. Catheter Care and Complications.

Module 12. General Care Procedures During the HD Session.

12.1. Monitoring of the Patient During the Sessions.
12.1.1. Medication in the Hemodialysis Session.
12.1.2. Nursing Records and Charts.
12.1.3. Nurse's Actions in the Face of Acute Complications in Hemodialysis Sessions.

12.2. Physical Complications.
12.2.1. Hypotension.
12.2.2. Blood Loss.
12.2.3. Cramps.
12.2.4. Air Embolism.
12.2.5. Hypotension. Causes. Evaluation Methods. Short and Long-Term Treatment. Dry Weight and Ideal Weight.
12.2.6. Hypertension
12.2.7. Nausea and Vomiting
12.2.8. Blood Loss.
12.2.9. Cramps.
12.2.10. Air Embolism.
12.2.11. Allergic Reaction to Drugs and Dialysis Material.
12.2.12. Haemolysis
12.2.13. Precordial Pain.
12.2.14. Seizures.
12.2.15. Headaches: Most Common Causes and Treatment.



12.3. Mechanisms
- 12.3.1. Filter Breakage.
- 12.3.2. Partial and/or Total Coagulation of the Circuit.
- 12.3.3. Blood Extravasation.
- 12.3.4. Needle Removal.
- 12.3.5. Monitor Malfunction.

12.4. Chronic Complications of HD.
- 12.4.1. Phosphocalcium Metabolism.
- 12.4.2. Sexual and Reproductive Disfunction.
- 12.4.3. Left Ventricular Hypertrophy.
- 12.4.4. Uremic Pericarditis.
- 12.4.5. Uremic Polyneuropathy.
- 12.4.6. Anemia in Hemodialysis.

Module 13. Health Education for the Chronic Renal Patient

13.1. Promotion of Healthy Lifestyle Habits.
13.2. Appropriate Nutrition.
13.3. Fluids and Ions Managament.
13.4. Quality of Life for Dialysis Patients.

Module 14. Home-based Hemodialysis.

14.1. Definition
14.2. Monitor Management.
14.3. Training the Patient for Homebased Hemodialysis.

Module 15. Managing the Infectious Pathology in Hemodialysis.

15.1. Hepatitis C Virus.
- 15.1.1. Latest Information on the Treatment of Hepatitis in Patients with CKD.
- 15.1.2. Hepatitis B Virus.
- 15.1.3. Human Immunodeficiency Virus (HIV).

A unique, key and decisive training experience to boost your professional development"

05

Methodology

This training provides you with a different way of learning. Our methodology uses a cyclical learning approach: ***Re-learning***.

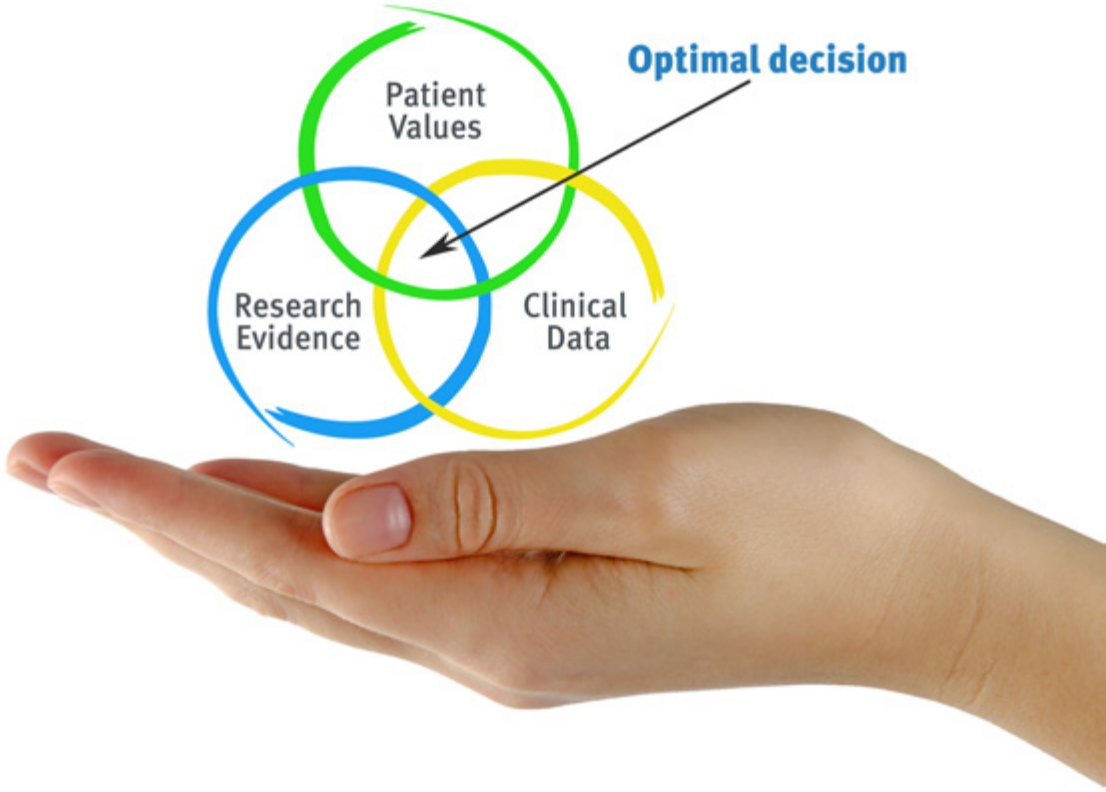
This teaching system is used in the most prestigious medical schools in the world, and major publications such as the ***New England Journal of Medicine*** have considered it to be one of the most effective.

Discover Re-learning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

At TECH Nursing School we use the Case Method

In a given clinical situation, what would you do? Throughout the program, you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Nurses learn better, faster, and more sustainably over time.

With TECH, nurses can experience a learning methodology that is shaking the foundations of traditional universities around the world.



According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, in an attempt to recreate the real conditions in professional nursing practice.

Did you know that this method was developed in 1912 at Harvard for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method"

The effectiveness of the method is justified by four fundamental achievements:

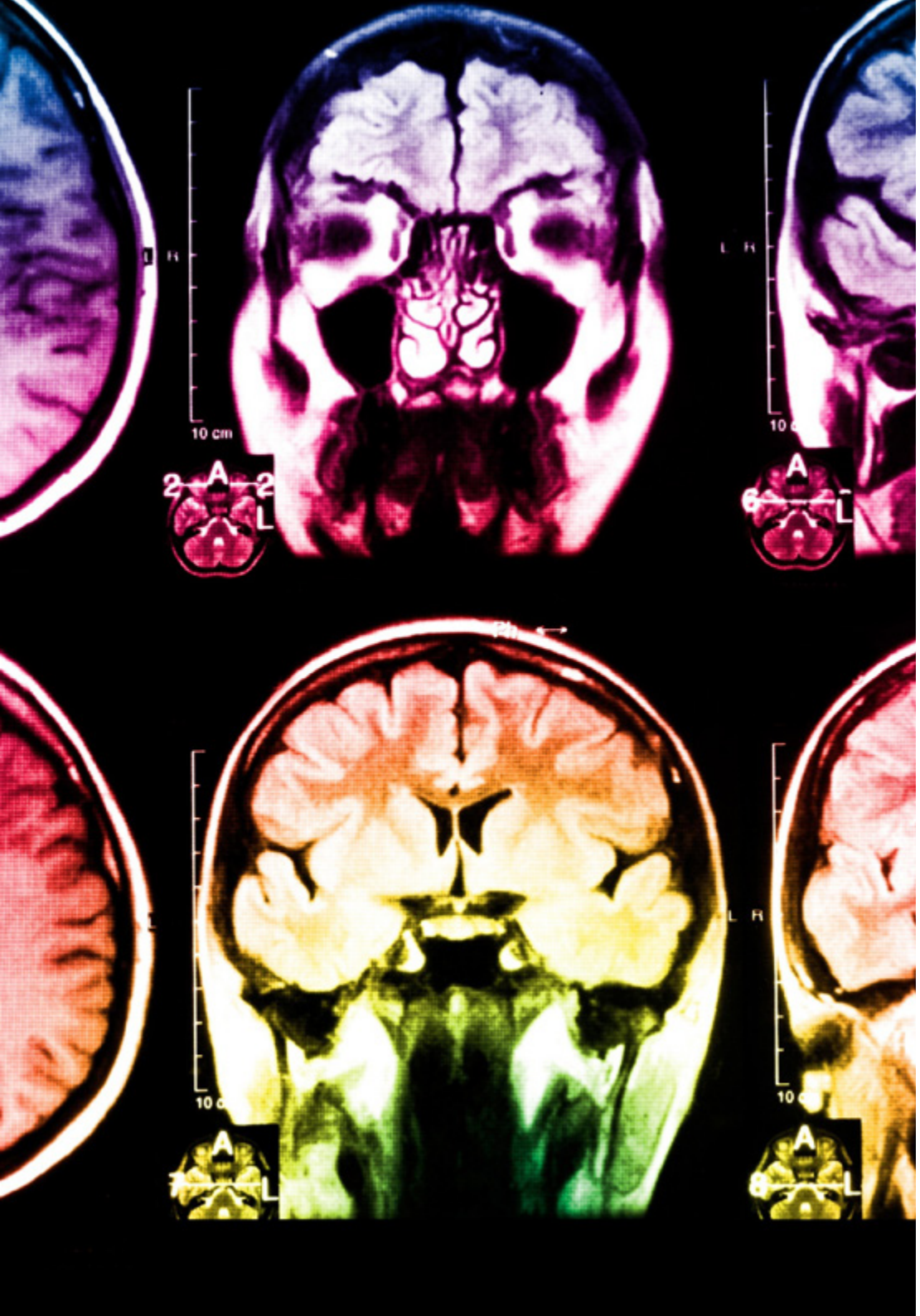
1. Nurses who follow this method not only grasp concepts, but also develop their mental capacity by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on practical skills that allow the nursing professional to better integrate knowledge acquisition into the hospital setting or primary care.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the university program.

Re-learning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

Our University is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, which represent a real revolution with respect to simply studying and analyzing cases.

The nurse will learn through real cases and by solving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.



At the forefront of world teaching, the Re-learning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best Spanish-speaking online university (Columbia University).

With this methodology we have trained more than 175,000 nurses with unprecedented success, in all specialties regardless of from the workload. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

Re-learning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.

In our program, learning is not a linear process, but rather a spiral (we learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by our learning system is 8.01, according to the highest international standards.

In this program you will have access to the best educational material, prepared with you in mind:

Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is really specific and precise.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.

Nursing Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, to the forefront of current nursing procedures and techniques. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.

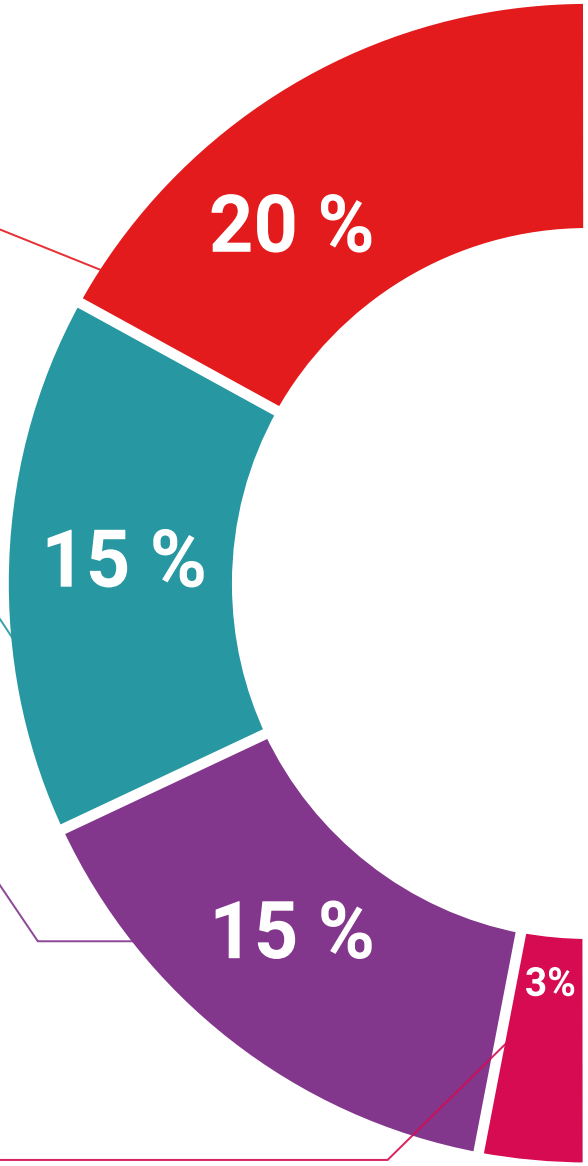
Interactive Summaries

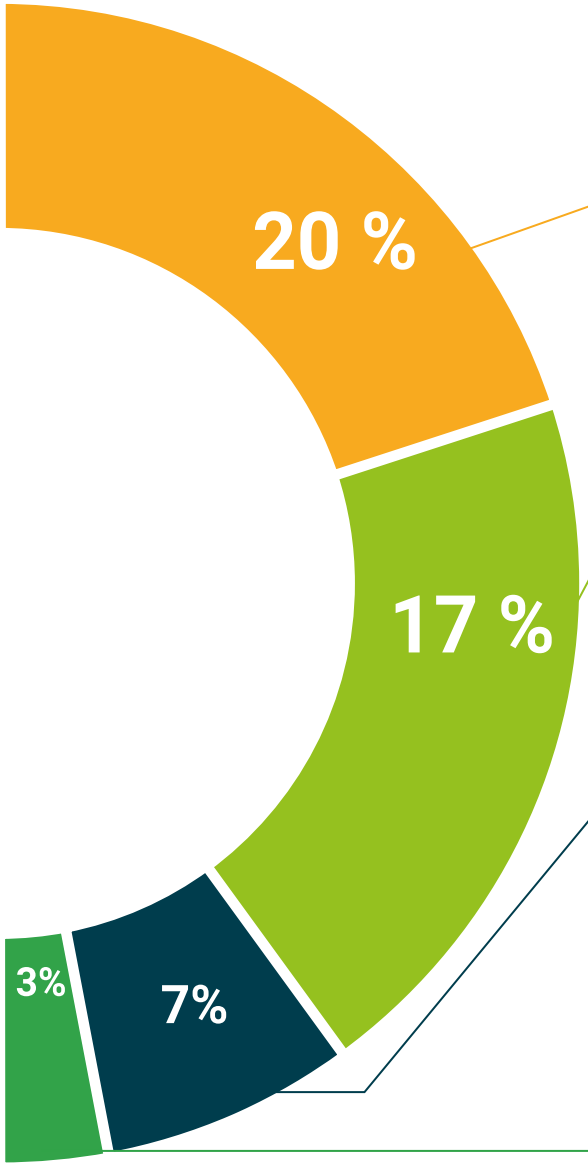
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".

Additional Reading

Recent articles, consensus documents, international guides. in our virtual library you will have access to everything you need to complete your training.





Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.

Testing & Re-Testing

We periodically evaluate and re-evaluate your knowledge throughout the program, through assessment and self-assessment activities and exercises: so that you can see how you are achieving your goals.

Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an expert strengthens knowledge and memory, and generates confidence in our difficult future decisions.

Quick Action Guides

We offer you the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.

06

Certificate

The **Postgraduate Certificate in Hemodialysis for Nursing** guarantees you, in addition to the most rigorous and up-to-date training, access to a certificate issued by **TECH Technological University.**

Successfully complete this training and receive your certificate without travel or laborious paperwork"

This **Postgraduate Certificate in Hemodialysis for Nursing** contains the most complete and up-to-date scientific program on the market.

After students have passed the evaluations, they will receive their corresponding certificate issued by **TECH Technological University** via tracked delivery.

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Certificate, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Certificate in Hemodialysis for Nursing**

Official Number of Hours: **200**


tech technological university

Awards the following

DIPLOMA

to

Mr./Ms. _____, with identification number _____.

For having passed and accredited the following program

POSTGRADUATE CERTIFICATE

in

Hemodialysis for Nursing

This is a qualification awarded by this University, with 8 ECTS credits and equivalent to 200 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro

Dean

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country.

Unique TECH Code: AFWORD23S techtitute.com/certificates

*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

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