Postgraduate Certificate
E-Health Devices: Telemedicine and Medical Devices

tech technological university

Postgraduate Certificate
E-Health Devices: Telemedicine and Medical Devices

» 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/e-health-devices-telemedicine-medical-devices**

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01

Introduction

Advances in E-Health are becoming increasingly powerful and the application of technologies in medicine has given rise to new health care trends, such as virtual care. In order to integrate these technological tools into clinical processes, present and future professionals must master their usefulness and understand the importance of their correct application, for example, for the comparison of massive data and the diagnosis of diseases. Along these lines, TECH offers a program that delves into the use of informatics tools for health care, Big Data collection and documentation, and clinical research. All this, through a 100% online teaching to expand the theoretical and practical skills of students in telemedicine. It is a flexible program, which can be studied by any professional with an Internet connection wherever they are and without following pre-set schedules.

With this University Course, you will master in only 6 weeks the possibilities of biomedicine in the clinical field and you will become a multidisciplinary professional"

Technology applied to medicine makes it possible to convert multi-center studies and clinical data into useful and structured information, which is used in scientific dissemination at the international level. The multiple possibilities offered by technology in the medical discipline make it essential to continue investing in this field. Especially when new advances make medical care a much more accessible, universal, fast and efficient service.

To meet the strong demand from the public and private sector, professionals must have a thorough specialization in the latest trends, tools, techniques and scientific evidence of E-Health. With this program, TECH aims to bring all the necessary knowledge to the most demanding professionals in this health field. For this reason it has developed a program that delves into the uses of ICTs and the different modalities of Telemedicine, as well as the devices and models that make it up.

It is a 100% online Postgraduate Certificate, so that students enjoy flexibility and can adapt the study to their needs. In this way, you will no longer have to choose one area of your life, but you will be able to develop your job while you learn in a theoretical and practical way with the best experts in E-Health. Only in this way and thanks to the digital tools that TECH applies, the student will be able to approach all the technical details of diagnostic and surgical devices, software and other aspects of E-Health in this area.

This **Postgraduate Certificate in E-Health Devices: Telemedicine and Medical Devices** contains the most complete and up-to-date scientific program on the market. The most important features include:

- The development of case studies presented by experts in E-Health and Medical Devices
- The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- The practical exercises where the self-evaluation process can be carried out to improve learning
- Its special emphasis on innovative methodologies
- 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

Discover the advances that have resulted from scientific research in the field of E-Health and become part of the future of medicine"

TECH will help you document and master the digital processes of integrated services (ISDN) through the Relearning system with which you will learn constantly.

"

The medicine of the future cannot be conceived without the integration of automated E-Health processes. Get up to date in this area now thanks to learning with TECH"

You will learn about the objects, functions and procedures of telemedicine and develop your professional skills in this emerging field.

The program's teaching staff includes professionals from the sector who contribute their work experience to this training program, as well as renowned specialists from leading societies and prestigious universities.

Its multimedia content, developed with the latest educational technology, will allow the professional a situated and contextual learning, that is, a simulated environment that will provide an immersive training programmed to train in real situations.

The design of this program focuses on Problem-Based Learning, in which the professional will have to try to solve the different professional practice situations that will arise throughout the academic course. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.

02
Objectives

The main objective of this Postgraduate Certificate in E-Health Telemedicine and Medical Devices is to broaden and update the knowledge of graduates in Nursing and other health disciplines so that they can adopt applicable strategies to their field of action. It is a program that delves into the general functions of information technologies and telemedicine in diagnostic, surgical and biomechanical devices. All this, concentrated in a dynamic program, which aims to promote the skills of the specialists enrolled in relation to modern health care and the digitization of clinical processes.

"

Achieve your goals by exploring the possibilities that E-Health Devices offer to health care intervention and care"

General Objectives

- Develop key concepts of medicine that will serve as a vehicle for the understanding of clinical medicine
- Determine how to obtain metrics and tools for healthcare management
- Examine the ethical principles and good practices that govern the different types of health sciences research
- Identify the real clinical applications of the various techniques
- Develop the key concepts of computational science and theory
- Determine the applications of computation and its implication in bioinformatics
- Provide the necessary resources for the initiation of the student in the practical application of the concepts of the module
- Develop the fundamental concepts of databases
- Determine the importance of medical databases
- Provide specialized knowledge of the technologies and used in the design, development and assessment of telemedicine systems
- Determine the different types and applications of telemedicine
- Study the most common ethical aspects and regulatory frameworks of telemedicine
- Analyze the use of medical devices
- Collect E-Health success stories and mistakes to avoid

Specific Objectives

- Analyze the evolution of telemedicine
- Assess the benefits and limitations of telemedicine
- Examine the different types, use and clinical benefits of telemedicine
- Assess the most common ethical aspects and regulatory frameworks for the use of telemedicine
- Establish the use of medical devices in healthcare in general and in telemedicine specifically
- Determine the use of the Internet and the medical resources it provides
- Delve into the main trends and future challenges in telemedicine

TECH will help you achieve your ambitions, becoming a more competent E-Health professional and much more competitive for the job market"

03
Course Management

To guarantee the correct qualification of the students, TECH relies on a team of professionals with extensive experience in the E-Health sector. Thanks to their knowledge and the characteristics of this program, students will be able to contact them through a direct communication channel, through which they will be able to solve all their doubts. In this way, teachers are added to the facilities and flexibility provided by TECH to make the study an adaptable experience with useful tools that future specialists will be able to consult in their healthcare practice focused on telemedicine.

Don't wait any longer, rely on professionals with extensive experience in Big Data and Biomedicine so that you too can acquire a high-level specialization"

Management

Ms. Sirera Pérez, Ángela

- Biomedical Engineer Expert in Nuclear Medicine and Exoskeleton Design
- Designer of specific parts for 3D printing at Technadi
- Technician in the Nuclear Medicine area of the University Clinic of Navarra
- Degree in Biomedical Engineering from the University of Navarra
- MBA and Leadership in Healthcare and Medical Technology Companies

Professors

Dr. Somolinos Simón, Francisco Javier

- Biomedical Engineering Researcher at the Bioengineering and Telemedicine Group of the Polytechnic University of Madrid GBT-UPM
- R&D&I Consultant at Evalue Innovation
- Biomedical Engineering Researcher at the Bioengineering and Telemedicine Group of the Polytechnic University of Madrid }
- PhD's Degree in Biomedical Engineering from the Polytechnic University of Madrid
- Graduate in Biomedical Engineering from the Polytechnic University of Madrid
- Master's Degree in Management and Development of Biomedical Technologies from Carlos III University of Madrid

04
Structure and Content

The content of this Postgraduate Certificate in E-Health Telemedicine and Medical Devices has been designed in detail by experts in the clinical area to impart knowledge related to the development of health care processes, using smart technology. TECH has drawn on the experience of experts, so that they not only provide theoretical support to students, but also share their real experiences. Likewise, this team has worked on academic materials in different audiovisual formats, so that the program has a first class digital character.
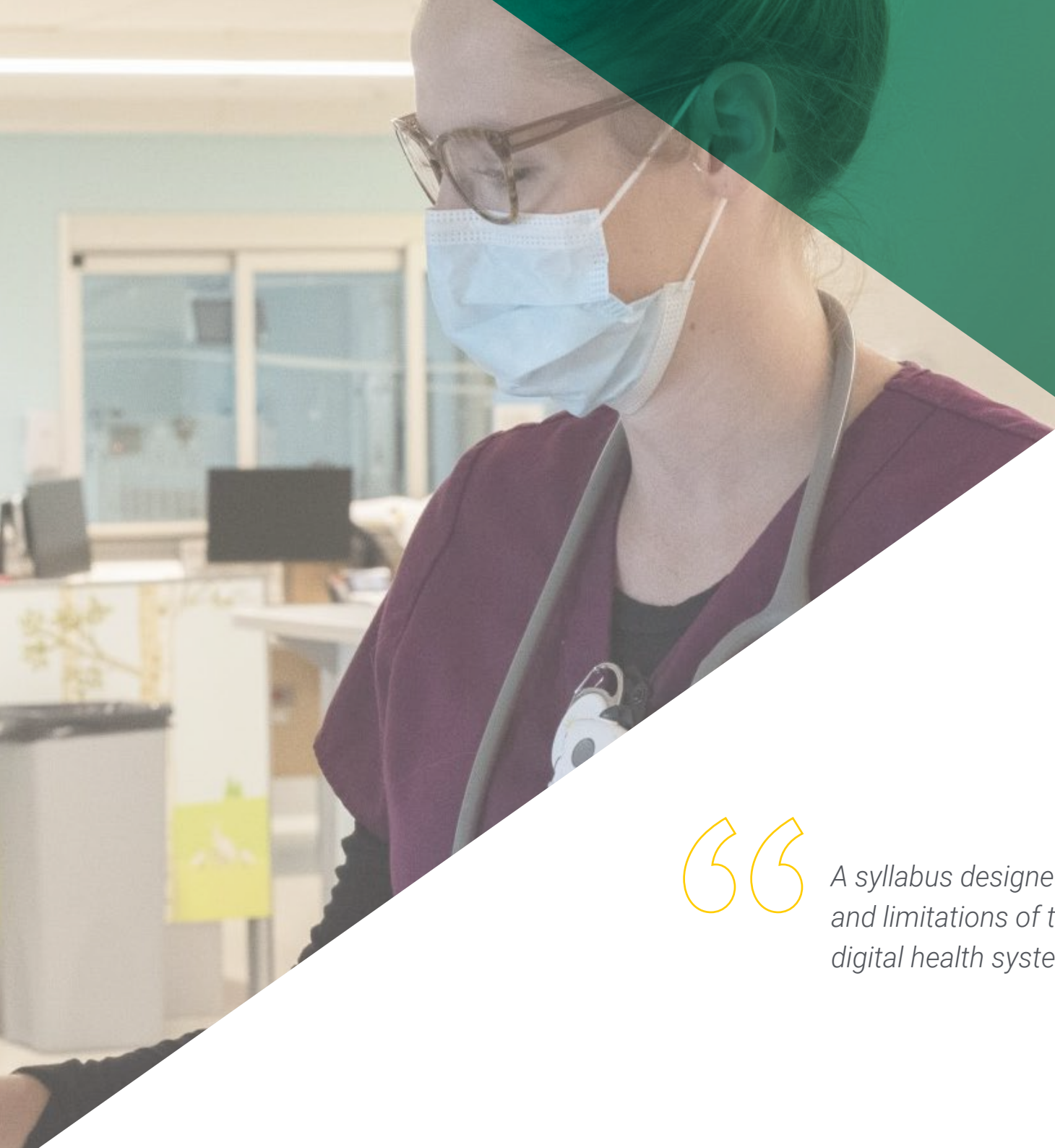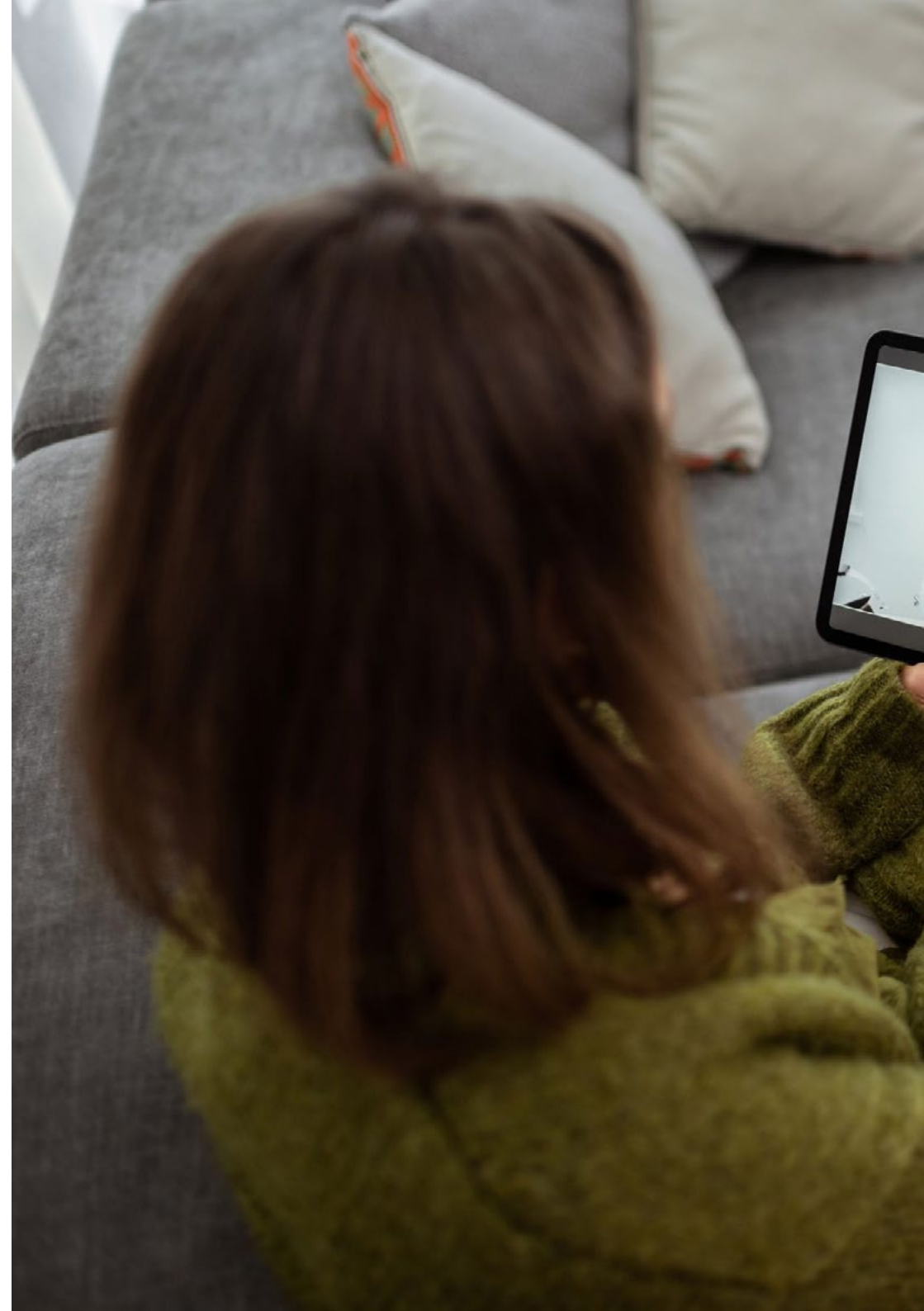
A syllabus designed around the benefits and limitations of telemedicine and its digital health systems"

Module 1. Telemedicine and Medical, Surgical and Biomechanical Devices

1.1.   Telemedicine and Telehealth

    1.1.1.   Telemedicine as a Telehealth Service

    1.1.2.   Telemedicine

        1.1.2.1. Telemedicine Objectives

        1.1.2.2. Benefits and Limitations of Telemedicine

    1.1.3.   Digital Health. Technologies

1.2.   Telemedicine Systems

    1.2.1.   Components in Telemedicine Systems

        1.2.1.1. Personal

        1.2.1.2. Technology

    1.2.2.   Information and Communication Technologies (ICT) in the Health Sector

        1.2.2.1. t-Health

        1.2.2.2. m-Health

        1.2.2.3. u-Health

        1.2.2.4.p-Health

    1.2.3.   Telemedicine Systems Assessment

1.3.   Technology Infrastructure in Telemedicine

    1.3.1.   Public Switched Telephone Network (PSTN)

    1.3.2.   Satellite Networks

    1.3.3.   Integrated Services Digital Network (ISDN)

    1.3.4.   Wireless Technology

        1.3.4.1. WAP. Wireless Application Protocol

        1.3.4.2. Bluetooth

    1.3.5.   Microwave Connections

    1.3.6.   Asynchronous Transfer Mode (ATM)

1.4.   Types of Telemedicine. Uses in Healthcare

    1.4.1.   Remote Patient Monitoring

    1.4.2.   Storage and Shipping Technologies

    1.4.3.   Interactive Telemedicine

05
Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**
This teaching system is used, for example, 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 Relearning, 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 situation, what should a professional do? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately 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 course.

Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine case studies with a 100% online learning system based on repetition combining a minimum of 8 different elements in each lesson, which is a real revolution compared to the simple study and analysis of 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.

01 learning from evidence

02 relearning from evidence

03 testing

04 learning from an expert

05 neurocognitive context dependent learning

06 Von-Restorff effect

07 case based learning through storytelling

08 competencies testing (retesting)

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

With this methodology we have trained more than 175,000 nurses with unprecedented success in all specialities regardless of practical workload. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

Relearning 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 (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

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

This program offers the best educational material, prepared with professionals 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.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.

Nursing Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch them as many times as you want.

Interactive Summaries

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".

Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.

20%

15%

15%

3%

20%

17%

7%

3%

Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.

Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their 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 future difficult decisions.

Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.

06
Certificate

The Postgraduate Certificate in E-Health Devices: Telemedicine and Medical Devices guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.

> *Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork"*

This **Postgraduate Certificate in E-Health Devices: Telemedicine and Medical Devices** contains the most complete and up-to-date scientific program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate 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 E-Health Devices: Telemedicine and Medical Devices**

Official Nº of Hours: **150 h.**

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Awards the following
DIPLOMA
to
Mr./Ms. _____, with identification number _____.
For having passed and accredited the following program

POSTGRADUATE CERTIFICATE
in
E-Health Devices: Telemedicine and Medical Devices

This is a qualification awarded by this University, equivalent to 150 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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