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/information-technology/postgraduate-certificate/e-health-devices-telemedicine-medical-devices**
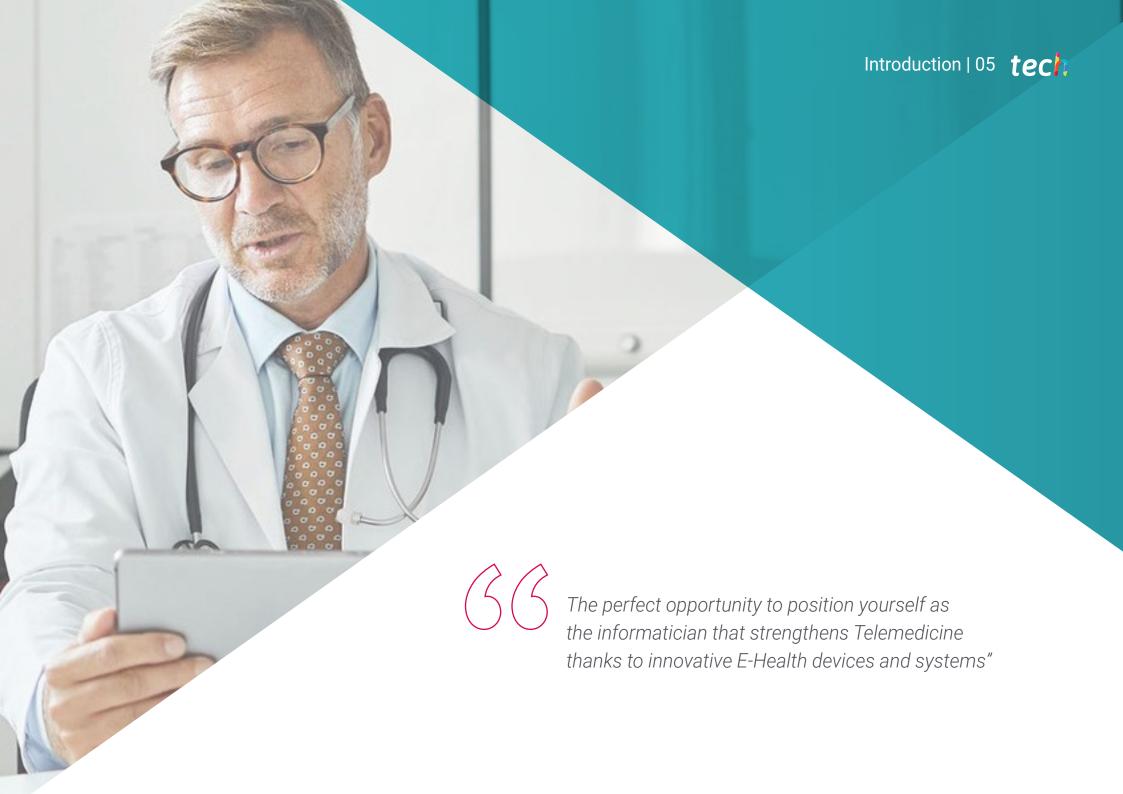
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Introduction

E-Health technology is rapidly becoming a key tool for improving medical care and Telemedicine worldwide. Medical devices that collect valuable patient information and transmit it to specialists via the telecommunications network play a key role in this field. In this type of technology, the computer scientist's work in informatics is crucial, therefore this program will be of great value to you. Through it, you will be updated on the tools that reinforce the role of Telemedicine as a telehealth service, analyzing its systems and the application of ICT to this field. All this through an attractive online format.

The perfect opportunity to position yourself as the informatician that strengthens Telemedicine thanks to innovative E-Health devices and systems"

E-Health systems help reduce health care costs by allowing patients to receive health care online instead of having to visit a health center or hospital. This is especially beneficial for people who live in remote areas or have difficulty traveling. Similarly, e-Health devices are able to improve the quality of life of chronic patients, such as diabetics or those affected by heart disease, by more effectively monitoring their state of health.

This is why this field requires highly skilled computer scientists to implement the necessary processes to make this technology work. In this sense, with TECH the IT professional will find a unique opportunity to update with this program, by deepening in the personal and technological components to establish a Telemedicine system. To this end, the wide possibilities of Information and Communication Technologies (ICT) in the health field will be explored, determining the most appropriate diagnostic, surgical and biomechanical devices.

Undoubtedly, this is a specialization that will add a very high value to the computer scientist's resume, gaining a competitive advantage in the market that will boost their employability. Additionally, the requirements are very simple, as you will only need an Internet connection. With it, you will have full access to the largest Virtual Campus ever designed on this subject.

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

- The development of case studies presented by experts in E-Health and Telemedicine devices

- The graphic, schematic and eminently practical content of the program provides technological and practical information on those 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

Were you looking for a program to analyze Telemedicine software in depth? You have it within reach at your fingertips with TECH"

Telecare, Telemonitoring, Telediagnosis... You will learn about the different general applications of Telemedicine"

Get updated on the best strategies to implement ICT in health care.

Be part of the global change that Medicine is undergoing thanks to Telemedicine and Telehealth.

The program's teaching staff includes professionals from the sector who contribute their work experience to this program, in addition to 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.

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Objectives

The objectives of this Postgraduate Certificate course are to provide students with a guaranteed specialization in all the details of Telemedicine, delving into the latest tools for establishing high-value e-Health devices in the doctor-patient relationship. To this end, they will be updated in the use of ICT in the health sector, which will allow them to evaluate the technological infrastructure needed in this area. All this and more thanks to a study methodology that incorporates important educational innovations that are positioned as one of the great assets of the program.

The objectives of TECH are clear: to turn you into the computer scientist of the future that the health sector needs"

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 methodologies 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 telemedicinea

◆ 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

By achieving these objectives you will analyze all the future trends and challenges that Telemedicine must face"

Course Management

Since Telemedicine and E-Health devices have become an area of growing interest where students can obtain the success they seek in their careers, TECH has gone all out in its choice of faculty. In this sense, it has incorporated professors who have excelled in fields with so much potential such as Biomechanics or Biomedical Engineering, making great contributions to Telemedicine. Therefore, the expectations of the students will be more than satisfied.

Your academic path will be even more valuable thanks to the advice of experts in Biomechanics or Biomedical Engineering"

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
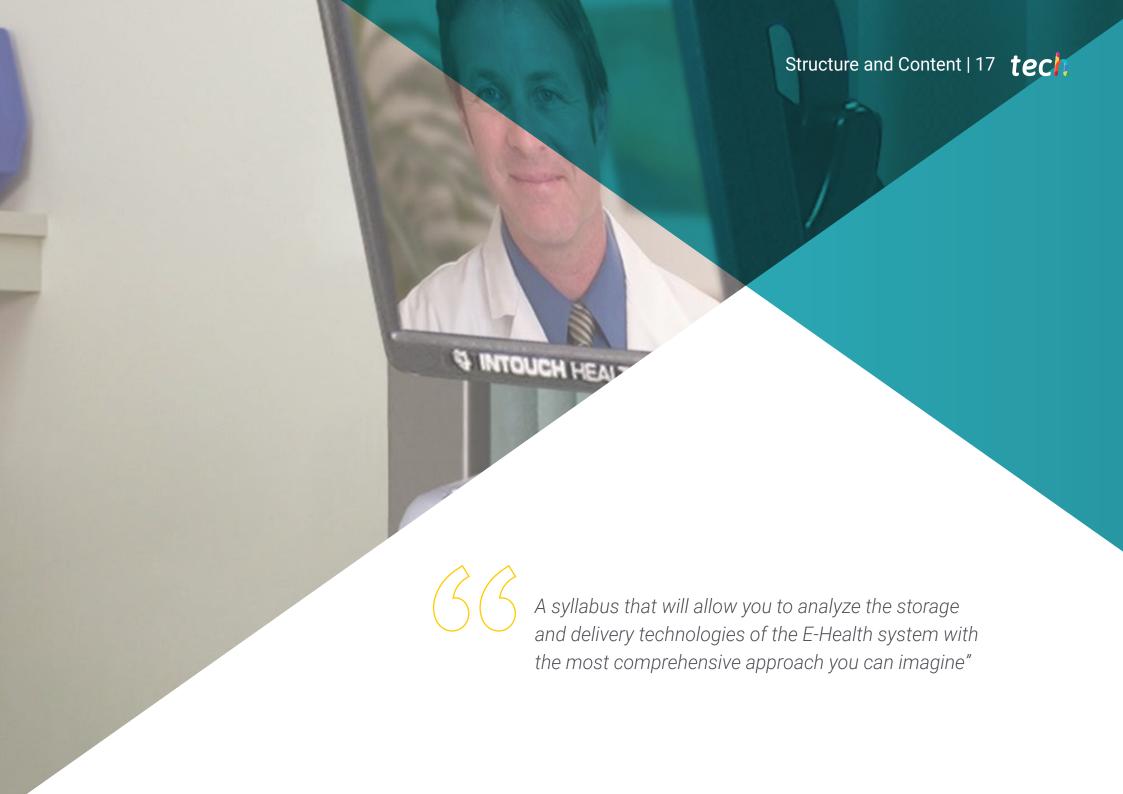- MBA and Leadership in Healthcare and Medical Technology Companies

Professors

Dr. Somolinos Simón, Francisco Javier

- Biomedical Engineering Researcher at the Bioengineering and Telemedicine Group of the Polytechnic University of Madrid GBTUPM
- 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
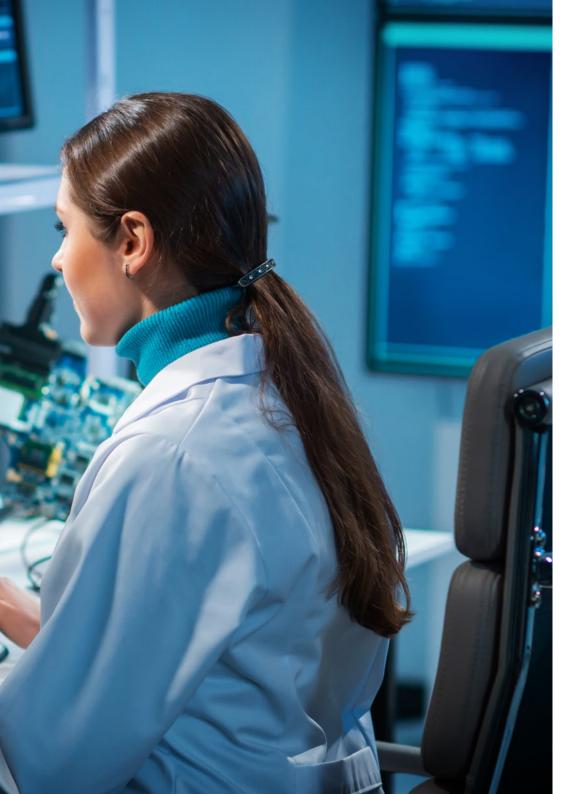- Master's Degree in Management and Development of Biomedical Technologies from Carlos III University of Madrid

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Structure and Content

When designing this syllabus, TECH has taken into special consideration the current impact of ICT in medical services. Additionally, the contents have been supervised by the experts of the teaching team so that they include all the concepts of benefit to the students. But the best part is that the academic experience goes far beyond memorization, allowing the student to internalize each idea with ease thanks to its reiteration in multiple multimedia formats. Some of them are interactive diagrams, computer procedures on video or case studies.

A syllabus that will allow you to analyze the storage and delivery technologies of the E-Health system with the most comprehensive approach you can imagine"

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
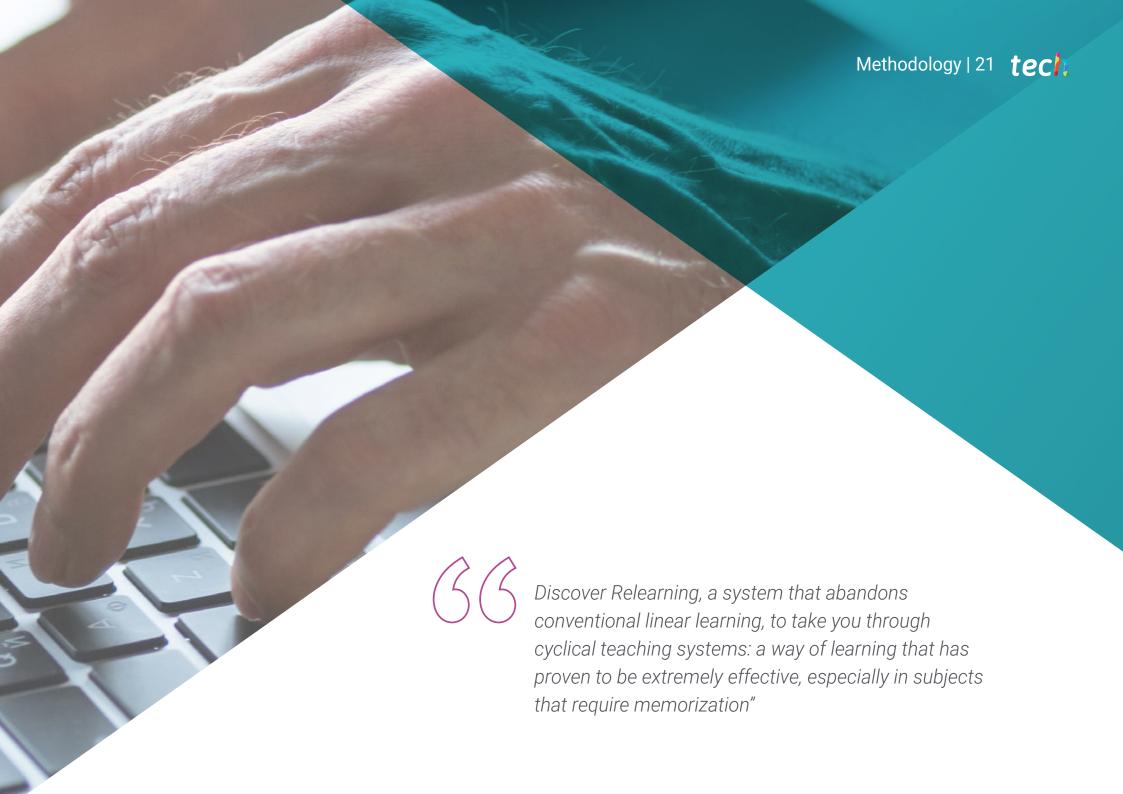
Methodology

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"

Case Study to contextualize all content

Our program offers a revolutionary approach to developing skills and knowledge. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

" *At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world"*

You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.

The student will learn to solve complex situations in real business environments through collaborative activities and real cases.

A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and professional reality is taken into account.

" Our program prepares you to face new challenges in uncertain environments and achieve success in your career"

The case method has been the most widely used learning system among the world's leading Information Technology schools for as long as they have existed. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question that you are presented with in the case method, an action-oriented learning method. Throughout the course, students will be presented with multiple real cases. They will have to combine all their knowledge and research, and argue and defend their ideas and decisions.

Relearning Methodology

TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

> *In 2019, we obtained the best learning results of all online universities in the world.*

At TECH you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Relearning.

Our university is the only one in the world authorized to employ this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best online university indicators.

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)

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. This methodology has trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, and financial markets and instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

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

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.

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 highly 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.

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.

Practising Skills and Abilities

They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.

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.

30%

10%

8%

20%

25%

4%

3%

Case Studies

Students will complete a selection of the best case studies chosen specifically for this program. Cases that are presented, analyzed, and supervised by the best specialists in the world.

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".

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.

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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 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 N° 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

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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