

Postgraduate Diploma Biomedical Implants and In Vivo Devices





Postgraduate Diploma Biomedical Implants and In Vivo Devices

Course Modality: Online

Duration: 6 months

Certificate: TECH Technological University

24 ECTS Credits

Teaching Hours: 600 hours

Website: www.techtute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-biomedical-implants-in-vivo-devices

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01

Introduction

The latest advances in biomedical implants and in vivo device application can be found in this program, which provides the professional with the most updated knowledge in this field. Thus, thanks to this degree, the physician will be able to get up to date in aspects such as ceramic and metallic biomaterials, nanomaterials and their applications, diagnostic and surgical devices, the basics of biomechanics or reflectometry. And will do so through a 100% online teaching system that will allow you to combine your professional work with your studies, without annoying interruptions.



“

Delve, from the latest scientific postulates, into the most recent developments in biomedical implants and in vivo devices”

The most recent novelties on biomedical implants and the different in vivo devices have made it possible to address numerous pathologies in a very effective way. This type of implant has provided an answer to major clinical challenges, allowing the professional to accurately monitor patients. Thus, this Postgraduate Diploma in Biomedical Implants and In Vivo Devices offers a great opportunity to the physician who wishes to be updated in this important and complex field.

Throughout the degree, the professional will be able to get up to date with the mechanics of biofluids, types of biomaterials and their respective applications, medical devices and nanotechnology, biomaterials for tissue engineering and bioactive molecules, nanoparticles, stem cells and biosensors, among many other relevant issues.

The doctor will also be able to keep up to date thanks to a high-level teaching staff made up of specialists in this field who are familiar with the most advanced techniques in Biomedical Engineering. They will also have numerous multimedia resources, such as videos, theoretical and practical exercises and master classes. All this, through an online learning methodology specially designed for working professionals, since it allows them to combine their work with their studies.

This Postgraduate Diploma in Biomedical Implants and In Vivo 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 Biomedical Engineering
- ♦ 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.
- ♦ Practical exercises where self-assessment can be used 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



TECH's 100% online methodology will allow you to combine your professional work with this program, which offers you a complete update in the application of biomedical implants"



This program will bring you up to date on issues such as natural polymeric biomaterials or Tissue Engineering”

You will have the best teachers and the best didactic resources to facilitate your learning

The latest advances in nanotechnology and gene therapy applied to biomedical implants are here

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.

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 immersive training programmed to train in real situations.

This program is designed around Problem Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.



02

Objectives

The objective of this Postgraduate Diploma in Biomedical Implants and In Vivo Devices is to provide physicians with the latest advances in this growing area, so that they can integrate them into their professional practice. They will thus be able to respond to the many current challenges posed by certain complex pathologies that require very active and precise monitoring. Monitoring that only this type of implants and devices are capable of performing.





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Get up to date with this innovative degree, which will bring you, following the latest scientific evidence, the most recent discoveries in biomedical implants"



General Objectives

- Examine the different tissues and organs directly related to tissue engineering
- Analyze tissue balance and the role of the matrix, growth factors and the cells themselves in the tissue microenvironment
- Develop the basis of tissue engineering
- Analyze the relevance of biomaterials today
- Develop a specialized view of the types of biomaterials available and their main characteristics
- Examining the variety and use of biodevices

“

You have at your fingertips the most updated program on the market in this field of Biomedical Engineering”





Specific Objectives

Module 1. Biomechanics

- ♦ Generate specialized knowledge on the concept of biomechanics
- ♦ Examine the different types of movements and the forces involved in them
- ♦ Understanding the functioning of the circulatory system
- ♦ Develop biomechanical analysis methods
- ♦ Analyze muscle positions to understand their effect on resultant forces
- ♦ Evaluate common problems related to biomechanics
- ♦ Identify the main lines of action of biomechanics

Module 2. Biomaterials in Biomedical Engineering

- ♦ Analyze biomaterials and their evolution throughout history
- ♦ Examining traditional biomaterials and their uses
- ♦ Determine the biomaterials of biological origin and their applications
- ♦ Deepen the knowledge of polymeric biomaterials of synthetic origin
- ♦ Determine the behavior of biomaterials in the human body, with special emphasis on their degradation

Module 3. Biomedical Technologies: Biodevices and Biosensors

- ♦ Generate specialized knowledge in the conception, design, implementation and operation of medical devices through the technologies used in this field
- ♦ Determine the main technologies for rapid prototyping
- ♦ Discover the main fields of application: Diagnostic, therapeutic and supportive
- ♦ Establish the different types of biosensors and their use for each diagnostic case
- ♦ Deepen the understanding of the physical/electrochemical functioning of the different types of biosensors
- ♦ Examine the importance of biosensors in modern medicine

Module 4. Tissue Engineering

- ♦ Generate specialized knowledge on histology and functioning of the cellular environment
- ♦ Review the current status of tissue engineering and regenerative medicine
- ♦ Address the main challenges facing tissue engineering
- ♦ Present the most promising techniques and the future of tissue engineering
- ♦ Develop the main trends of the future of regenerative medicine
- ♦ Analyze the regulation of tissue engineered products
- ♦ Examine the interaction of biomaterials with the cellular environment and the complexity of this process

03

Course Management

This Postgraduate Diploma in Biomedical Implants and In Vivo Devices has the best teaching staff in the market, a group of professors composed of researchers and engineers up to date with the latest developments in this field. Thus, the physician who attends this program will have the most updated knowledge within their reach, guaranteeing a direct and effective update. In this way, the professional will be able to immediately put into practice all the new advances acquired throughout the degree.





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The best teaching staff, now at your disposal:
engineers, researchers, biotechnologists, etc.”

International Guest Director

Awarded by the Academy of Radiology Research for his contribution to the understanding of this area of science, Dr. Zahi A Fayad is considered a prestigious Biomedical Engineer. In this sense, most of his line of research has focused on both the detection and prevention of Cardiovascular Diseases. In this way, he has made multiple contributions in the field of Multimodal Biomedical Imaging, promoting the correct use of technological tools such as Magnetic Resonance Imaging or Positron Emission Computed Tomography in the health community.

In addition, he has an extensive professional background that has led him to occupy relevant positions such as the Director of the Institute of Biomedical Engineering and Imaging at Mount Sinai Medical Center, located in New York. It should be noted that he combines this work with his facet as a Research Scientist at the National Institutes of Health of the United States government. He has written more than 500 exhaustive clinical articles on subjects such as drug development, the integration of the most avant-garde techniques of Multimodal Cardiovascular Imaging in clinical practice or non-invasive in vivo methods in clinical trials for the development of new therapies to treat Atherosclerosis. Thanks to this, his work has facilitated the understanding of the effects of Stress on the immune system and Cardiac Pathologies significantly.

On the other hand, this specialist leads 4 multicenter clinical trials funded by the US pharmaceutical industry for the creation of new cardiovascular drugs. His objective is to improve therapeutic efficacy in conditions such as Hypertension, Heart Failure or Stroke. At the same time, it develops prevention strategies to raise public awareness of the importance of maintaining healthy lifestyle habits to promote optimal cardiac health.



Dr. A Fayad, Zahi

- ♦ Director of the Institute for Biomedical Engineering and Imaging at Mount Sinai Medical Center, New York
- ♦ Chairman of the Scientific Advisory Board of the National Institute of Health and Medical Research at the European Hospital Pompidou AP-HP in Paris, France
- ♦ Principal Investigator at Women's Hospital in Texas, United States
- ♦ Associate Editor of the "Journal of the American College of Cardiology"
- ♦ Ph.D. in Bioengineering from the University of Pennsylvania
- ♦ B.S. in Electrical Engineering from Bradley University
- ♦ Founding member of the Scientific Review Center of the National Institutes of Health of the United States government



Thanks to TECH, you will be able to learn with the best professionals in the world"

Management



Ruiz Díez, Carlos

- ◆ Researcher at the National Microelectronics Center of the CSIC.
- ◆ Researcher. Composting Research Group of the Department of Chemical, Biological and Environmental Engineering of the UAB.
- ◆ Founder and product development at NoTime Ecobrand, a fashion and recycling brand.
- ◆ Development cooperation project manager for the NGO Future Child Africa in Zimbabwe.
- ◆ Graduate in Industrial Technologies Engineering from Universidad Pontificia de Comillas ICAI.
- ◆ Master's Degree in Biological and Environmental Engineering from the Autonomous University of Barcelona.
- ◆ Master's Degree in Environmental Management from the Universidad Española a Distancia (Spanish Open University)

Professors

Rubio Rey, Javier

- ♦ Research Trainee in the Parkinson's disease project: Investigating the cofilin-1 and alpha-synuclein protein interaction under the direction of Dr. Richard Parsons at Kings College London
- ♦ Degree in Pharmacy from CEU San Pablo University.
- ♦ Degree in Biotechnology from CEU San Pablo University.
- ♦ Double Degree in Pharmacy and Biotechnology.

Vivas Hernando, Alicia

- ♦ Supply Chain and Network Optimization Analyst. Deloitte UK (Londres, Reino Unido)
- ♦ Researcher. École Polytechnique Fédérale de Lausanne (Lausanne, Switzerland).
- ♦ Researcher. Universidad Pontificia Comillas (Madrid, Spain).
- ♦ Corporate and International Development. Seguros Santalucía (Madrid, Spain).
- ♦ Degree in Industrial Technologies Engineering (Mechanical Specialty). Universidad Pontificia Comillas (Madrid, Spain).
- ♦ Professional Master's Degree in Industrial Engineering (Specialty Design). Universidad Pontificia Comillas (Madrid, Spain).
- ♦ Master in Materials Science and Engineering (Academic Exchange). École Polytechnique Fédérale de Lausanne (Lausanne, Switzerland).

Sirera Pérez, Ángela

- ♦ Technaid. Design and manufacture of specific parts for 3D printing..
- ♦ Use of Inventor CAD Design Software. Knowledge of the mechanics of lower limb exoskeletons for the rehabilitation of persons with reduced mobility.
- ♦ Nuclear Medicine. Clinical University of Navarra. Analysis of Nuclear Medicine images. Dose assessment of patients with PET brain studies. Research on the optimization of methionine activity.
- ♦ Degree in Biomedical Engineering from the University of Navarra

04

Structure and Content

The Postgraduate Diploma in Biomedical Implants and In Vivo Devices is structured in 4 modules dedicated to biomechanics, biomaterials in Biomedical Engineering, biosensors and Tissue Engineering. Thus, this program will delve into the latest developments in fields such as mechanical fundamentals, fluid mechanics, ceramic biomaterials, biomarkers, nanotechnology and stem cells.

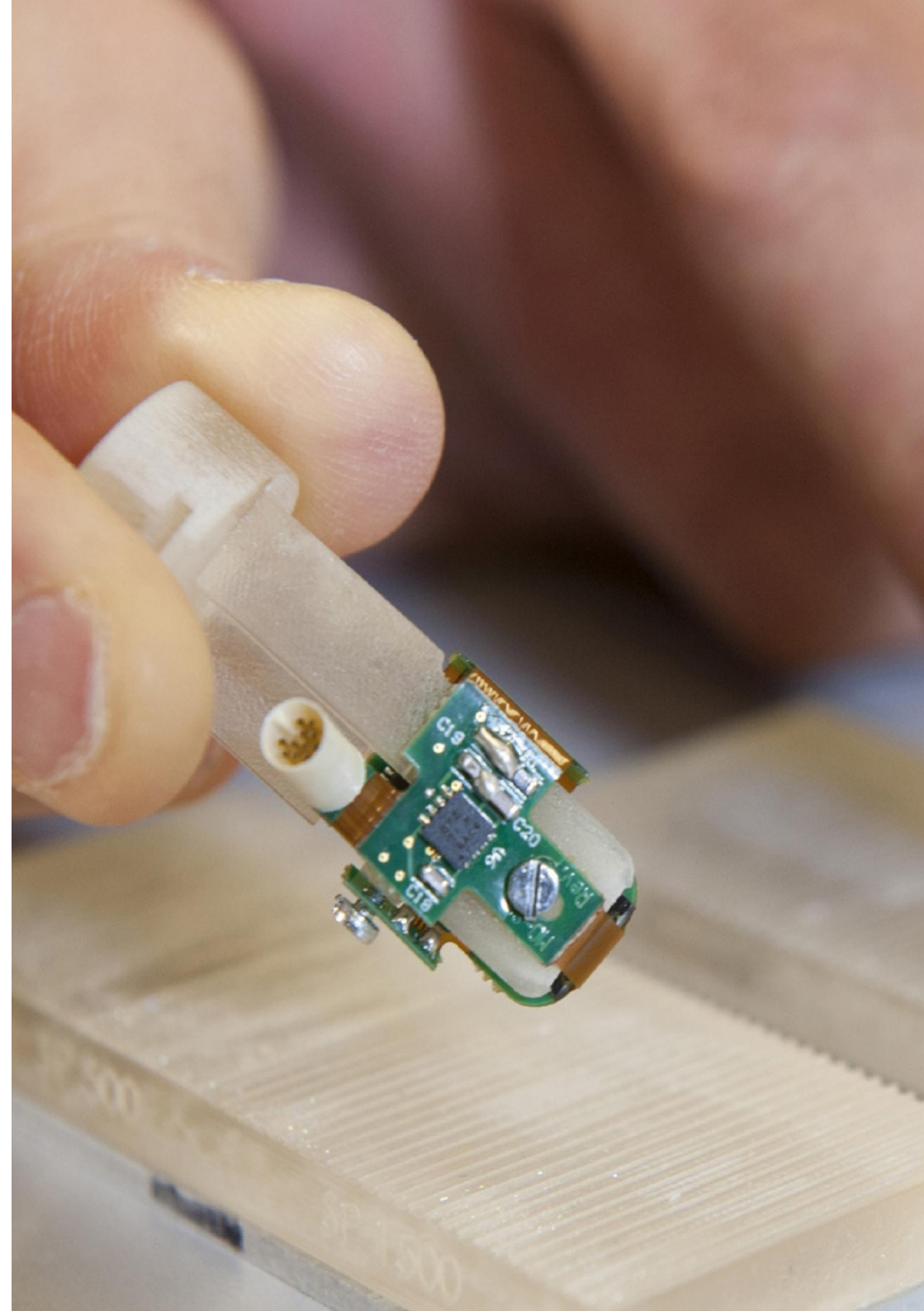


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The best biomedical implants syllabus can be found in this Postgraduate Diploma Don't miss this opportunity and get up to date”

Module 1. Biomechanics

- 1.1. Biomechanics
 - 1.1.1. Biomechanics
 - 1.1.2. Qualitative and Quantitative Analysis
- 1.2. Basic Mechanics
 - 1.2.1. Functional Mechanisms
 - 1.2.2. Basic Units
 - 1.2.3. The Nine Fundamentals of Biomechanics
- 1.3. Mechanical Fundamentals Linear and Angular Kinematics
 - 1.3.1. Linear Movement
 - 1.3.2. Relative Movement
 - 1.3.3. Angular Movement
- 1.4. Mechanical Fundamentals Linear Kinetics
 - 1.4.1. Newton's Law
 - 1.4.2. Principle of Inertia
 - 1.4.3. Energy and Work
 - 1.4.4. Stress Angle Analysis
- 1.5. Mechanical Fundamentals Angular Kinetics
 - 1.5.1. Torque
 - 1.5.2. Angular Momentum
 - 1.5.3. Newton's Angles
 - 1.5.4. Balance and Gravity
- 1.6. Fluid Mechanics
 - 1.6.1. Fluid
 - 1.6.2. Flows
 - 1.6.2.1. Laminar Flow
 - 1.6.2.2. Turbulent Flow
 - 1.6.2.3. Pressure-Velocity: the Venturi Effect
 - 1.6.3. Forces in Fluids



- 1.7. Human Anatomy Limitations
 - 1.7.1. Human Anatomy
 - 1.7.2. Muscles: Active and Passive Stress
 - 1.7.3. Mobility Range
 - 1.7.4. Mobility-Strength Principles
 - 1.7.5. Limitations in the Analysis
- 1.8. Mechanisms of the Motor System Bone, Muscle-Tendon and Ligament Mechanics
 - 1.8.1. Tissue Functioning
 - 1.8.2. Biomechanics of Bones
 - 1.8.3. Biomechanics of the Muscle-Tendon Unit
 - 1.8.4. Biomechanics of Ligaments
- 1.9. Mechanisms of the Motor System Mechanics of Muscles
 - 1.9.1. Mechanical Characteristics of Muscles
 - 1.9.1.1. Force-Speed Relationship
 - 1.9.1.2. Force-Distance Relationship
 - 1.9.1.3. Force-Time Relationship
 - 1.9.1.4. Traction-Compression Cycles
 - 1.9.1.5. Neuromuscular Control
 - 1.9.1.6. The Spine and Backbone
- 1.10. Mechanics of Biofluids
 - 1.10.1. Mechanics of Biofluids
 - 1.10.1.1. Transport, Stress and Pressure
 - 1.10.1.2. The Circulatory System
 - 1.10.1.3. Blood Characteristics
 - 1.10.2. General Problems in Biomechanics
 - 1.10.2.1. Problems in Nonlinear Mechanical Systems
 - 1.10.2.2. Problems in Biofluidics
 - 1.10.2.3. Solid-Liquid Problems

Module 2. Biomaterials in Biomedical Engineering

- 2.1. Biomaterials
 - 2.1.1. Biomaterials
 - 2.1.2. Types of Biomaterials and Application
 - 2.1.3. Biomaterial Selection
- 2.2. Metallic Biomaterials
 - 2.2.1. Types of Metallic Biomaterials
 - 2.2.2. Properties and Current Challenges
 - 2.2.3. Applications
- 2.3. Ceramic Biomaterials
 - 2.3.1. Types of Ceramic Biomaterials
 - 2.3.2. Properties and Current Challenges
 - 2.3.3. Applications
- 2.4. Natural Polymeric Biomaterials
 - 2.4.1. Interaction of Cells With Their Environment
 - 2.4.2. Types of Biomaterials of Biological Origin
 - 2.4.3. Applications
- 2.5. Synthetic Polymeric Biomaterials: In Vivo Behavior
 - 2.5.1. Biological Response to Foreign Bodies (FBR)
 - 2.5.2. In Vivo Behavior of Biomaterials
 - 2.5.3. Biodegradation of Polymers Hydrolysis
 - 2.5.3.1. Biodegradation Mechanisms
 - 2.5.3.2. Degradation by Diffusion and Erosion
 - 2.5.3.3. Hydrolysis Rate
 - 2.5.4. Specific Applications
- 2.6. Synthetic Polymeric Biomaterials: Hydrogels
 - 2.6.1. Hydrogels
 - 2.6.2. Classification of Hydrogels
 - 2.6.3. Hydrogel Properties
 - 2.6.4. Hydrogel Synthesis
 - 2.6.4.1. Physical Cross-Linking

- 2.6.4.2. Enzymatic Cross-Linking
- 2.6.4.3. Physical Cross-Linking
- 2.6.5. Structure and Swelling of Hydrogels
- 2.6.6. Specific Applications
- 2.7. Advanced Biomaterials: Intelligent Materials
 - 2.7.1. Shape Memory Materials
 - 2.7.2. Intelligent Hydrogels
 - 2.7.2.1. Thermo-Responsive Hydrogels
 - 2.7.2.2. PH Sensitive Hydrogels
 - 2.7.2.3. Electrically Actuated Hydrogels
 - 2.7.3. Electroactive Materials
- 2.8. Advanced Biomaterials: Nanomaterials
 - 2.8.1. Properties
 - 2.8.2. Biomedical Applications
 - 2.8.2.1. Biomedical Images
 - 2.8.2.2. Coatings
 - 2.8.2.3. Focused Ligands
 - 2.8.2.4. Stimulus-Sensitive Connections
 - 2.8.2.5. Bio markers
- 2.9. Specific Applications Neuroengineering
 - 2.9.1. The Nervous System
 - 2.9.2. New Approaches to Standard Biomaterials
 - 2.9.2.1. Soft Biomaterials
 - 2.9.2.2. Bioabsorbable Materials
 - 2.9.2.3. Implantable Materials
 - 2.9.3. Emerging Biomaterials Tissue Interaction
- 2.10. Specific Applications Biomedical Micromachines
 - 2.10.1. Artificial Micronadators
 - 2.10.2. Contractile Microactuators
 - 2.10.3. Small Scale Manipulation
 - 2.10.4. Biological Machines

Module 3. Biomedical Technologies: Biodevices and Biosensors

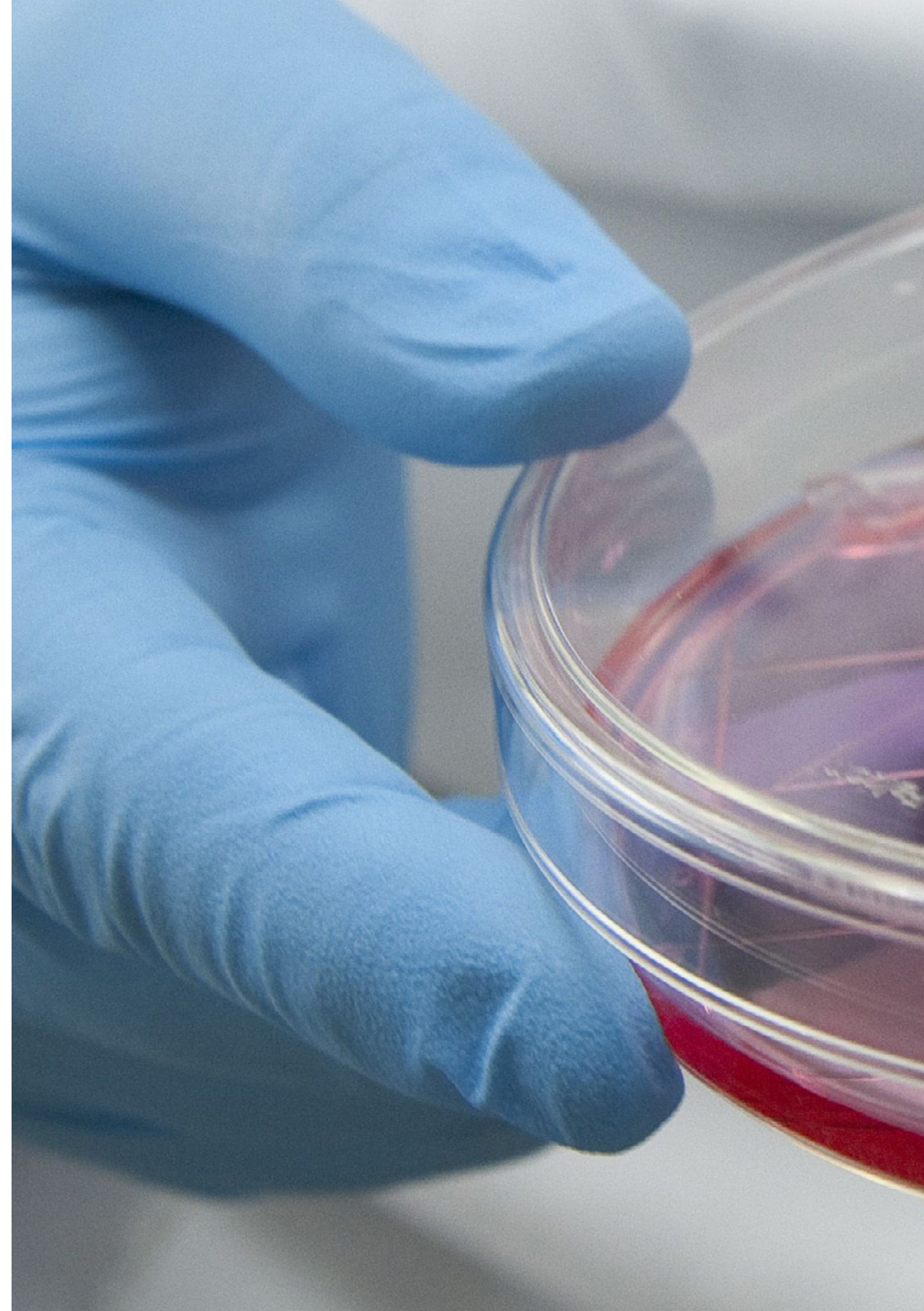
- 3.1. Medical Devices
 - 3.1.1. Product Development Methodology
 - 3.1.2. Innovation and creativity
 - 3.1.3. CAD Technologies
- 3.2. Nanotechnology
 - 3.2.1. Medical Nanotechnology
 - 3.2.2. Nanostructured Materials
 - 3.2.3. Nano-Biomedical Engineering
- 3.3. Micro and Nanofabrication
 - 3.3.1. Design of Micro and Nano Products
 - 3.3.2. Techniques
 - 3.3.3. Tools for Manufacturing
- 3.4. Prototypes
 - 3.4.1. Additive Manufacturing
 - 3.4.2. Rapid Prototyping
 - 3.4.3. Classification
 - 3.4.4. Applications
 - 3.4.5. Study Cases
 - 3.4.6. Conclusions
- 3.5. Diagnostic and Surgical Devices
 - 3.5.1. Development of Diagnostic Methods
 - 3.5.2. Surgical Planning
 - 3.5.3. Biomodels and Instruments Made With 3D Printing
 - 3.5.4. Device-Assisted Surgery
- 3.6. Biomechanic Devices

- 3.6.1. Prosthetists
- 3.6.2. Intelligent Materials
- 3.6.3. Orthotics
- 3.7. Biosensors
 - 3.7.1. Biosensor
 - 3.7.2. Sensing and Transduction
 - 3.7.3. Medical Instrumentation for Biosensors
- 3.8. Typology of Biosensors (I): Optic Sensors
 - 3.8.1. Reflectometry
 - 3.8.2. Interferometry and Polarimetry
 - 3.8.3. Evanescent Field
 - 3.8.4. Fiber Optic Probes and Guides
- 3.9. Typology of Biosensors (II): Physical, Electrochemical and Acoustic Sensors
 - 3.9.1. Physical Sensors
 - 3.9.2. Electrochemical Sensors
 - 3.9.3. Acoustic Sensors
- 3.10. Integrated Systems
 - 3.10.1. Lab-On-A-Chip
 - 3.10.2. Microfluidics
 - 3.10.3. Medical Application

Module 4. Tissue Engineering

- 4.1. Histology
 - 4.1.1. Cellular Organization in Higher Structures: Tissues and Organs
 - 4.1.2. Cellular Cycle Tissue Regeneration
 - 4.1.3. Regulation: Interaction With the Extracellular Matrix
 - 4.1.4. Importance of Histology in Tissue Engineering
- 4.2. Tissue Engineering
 - 4.2.1. Tissue Engineering
 - 4.2.2. Scaffolding
 - 4.2.2.1. Properties
 - 4.2.2.2. The Ideal Scaffolding
 - 4.2.3. Biomaterials for Tissue Engineering
 - 4.2.4. Bioactive Materials
 - 4.2.5. Cells
- 4.3. Stem Cells
 - 4.3.1. Stem Cells
 - 4.3.1.1. Potentiality
 - 4.3.1.2. Tests to Evaluate Potentiality
 - 4.3.2. Regulation: Niche
 - 4.3.3. Types of Stem Cells
 - 4.3.3.1. Embryonic
 - 4.3.3.2. IPS
 - 4.3.3.3. Adult Stem Cells
- 4.4. Nanoparticles
 - 4.4.1. Nanomedicine Nanoparticles
 - 4.4.2. Types of Nanoparticles
 - 4.4.3. Methods of Obtaining
 - 4.4.4. Bionanomaterials in Tissue Engineering
- 4.5. Genetic Therapy
 - 4.5.1. Genetic Therapy
 - 4.5.2. Uses: Gene Supplementation, Cell Replacement, Cellular Reprogramming
 - 4.5.3. Vectors for the Introduction of Genetic Material
 - 4.5.3.1. Viral Vectors
- 4.6. Biomedical Applications of Tissue Engineering Products Regeneration, Grafts and Replacements
 - 4.6.1. Cell Sheet Engineering
 - 4.6.2. Cartilage Regeneration: Joint Repair
 - 4.6.3. Corneal Regeneration

- 4.6.4. Skin Grafting for Major Burn Injuries
- 4.6.5. Oncology
- 4.6.6. Bone Replacement
- 4.7. Biomedical Applications of Tissue Engineering Products Circulatory, Respiratory and Reproductive System
 - 4.7.1. Cardiac Tissue Engineering
 - 4.7.2. Hepatic Tissue Engineering
 - 4.7.3. Lung Tissue Engineering
 - 4.7.4. Reproductive Organs and Tissue Engineering
- 4.8. Quality Control and Biosecurity
 - 4.8.1. NCF Applied to Advanced Therapy Drugs
 - 4.8.2. Quality Control
 - 4.8.3. Aseptic Process: Viral and Microbiological Safety
 - 4.8.4. Cell Production Unit: Characteristics and Design
- 4.9. Legislation and Regulation
 - 4.9.1. Current Legislation
 - 4.9.2. Authorization
 - 4.9.3. Regulation of Advanced Therapies
- 4.10. Future Perspectives
 - 4.10.1. Current Status of Tissue Engineering
 - 4.10.2. Clinical Needs
 - 4.10.3. Main Challenges at Present
 - 4.10.4. Focus and Future Challenges





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This Postgraduate Diploma combines the best teaching staff with the most updated contents and state-of-the-art didactic resources”

05

Methodology

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

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.



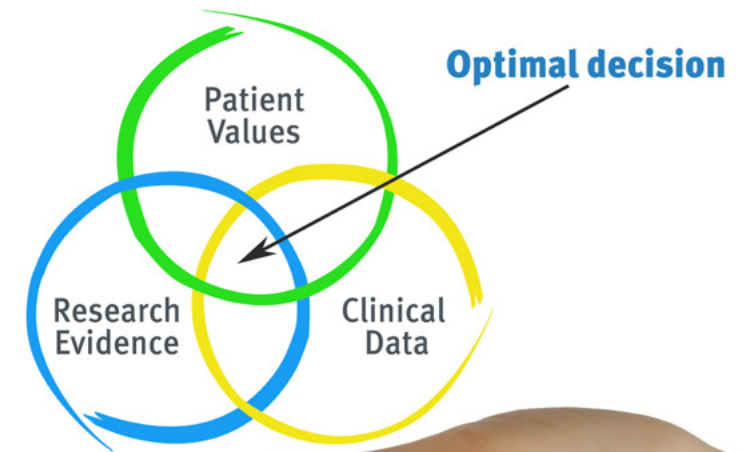
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Discover Re-learning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization".

At TECH we use the Case Method

What should a professional do in a given situation? 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 abundant scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.



According to Dr. Gervas, 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, trying to recreate the real conditions in the physician's professional practice.

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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. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
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.



Re-learning Methodology

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

This 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, a real revolution with respect to the mere study and analysis of cases.

Professionals will learn through real cases and by resolving 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, more than 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a high socioeconomic profile and an average age of 43.5 years old.

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 (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 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.



Surgical Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and 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 the videos as many times as you like.



Interactive Summaries

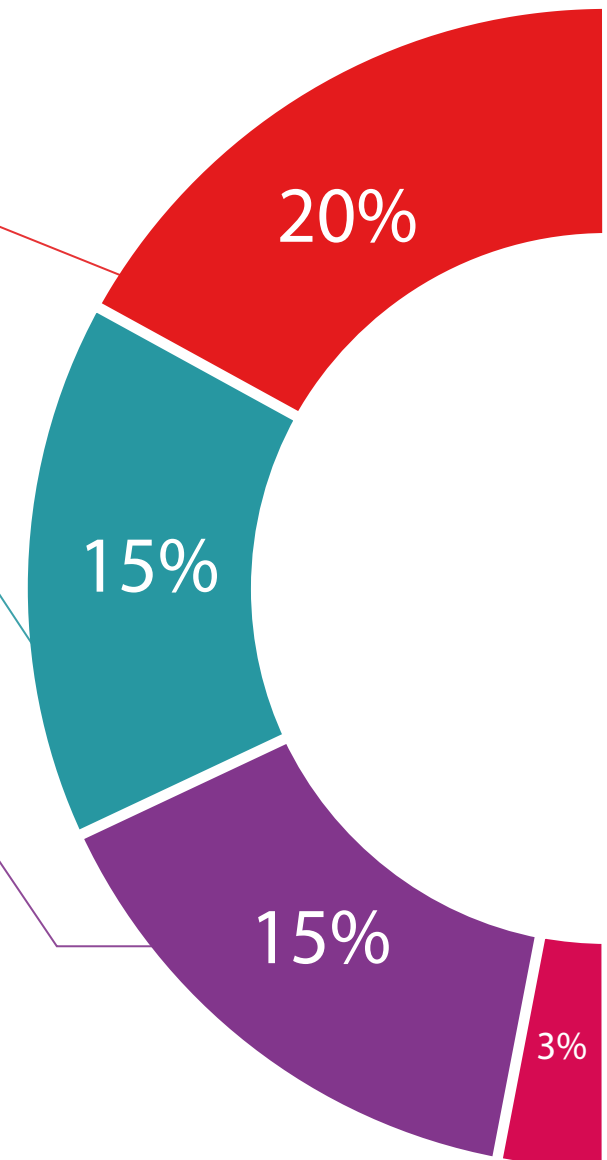
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

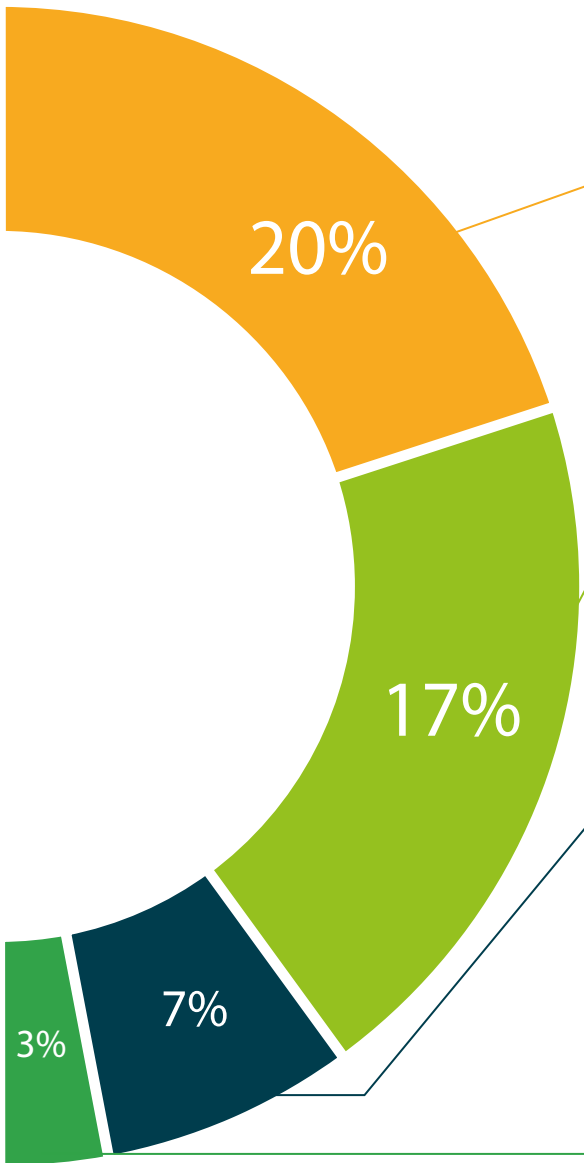
This exclusive multimedia content presentation training Exclusive system was awarded by Microsoft as a "European Success Story".



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.





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 your goals.



Classes

There is scientific evidence on the usefulness of learning by observing experts: The system termed Learning from an Expert strengthens knowledge and recall capacity, and generates confidence in the face of difficult decisions in the future.



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 Diploma in Biomedical Implants and In Vivo Devices guarantees, in addition to the most rigorous and up-to-date training, access to a Postgraduate Diploma issued by TECH Technological University.



“

Successfully complete this training program
and receive your university certificate
without travel or laborious paperwork”

This Postgraduate Diploma in Biomedical Implants and In Vivo Devices contains the most complete and up-to-date scientific program on the market.

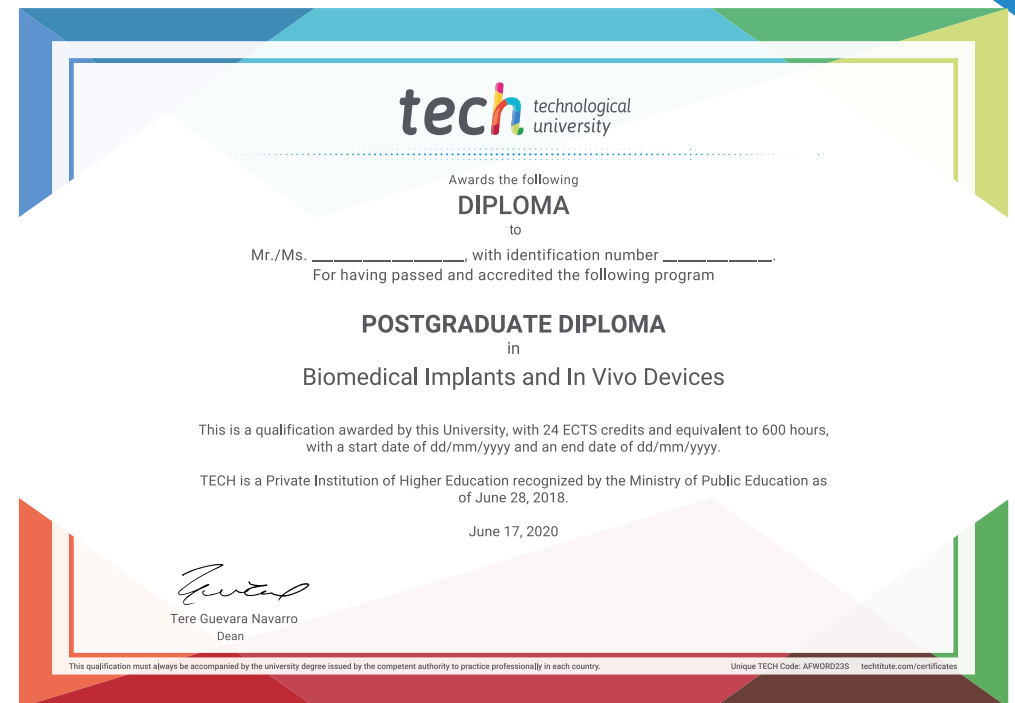
After you have passed the evaluations, you will receive your corresponding Postgraduate Diploma qualification issued by TECH Technological University.

This qualification contributes significantly to the professional's continuing education and enhances their training with a highly regarded university syllabus, and is 100% valid for all public examinations, professional careers and job vacancies.

Title: Postgraduate Diploma in Biomedical Implants and In Vivo Devices

ECTS: 24

Official Number of Hours: 600 hours



*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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education information tutors
guarantee accreditation teaching
institutions technology learning
community commitment
personalized service innovation
knowledge present quality
development languages
virtual classroom



Postgraduate Diploma
Biomedical Implants and
In Vivo Devices

Course Modality: Online

Duration: 6 months

Certificate: TECH Technological University

24 ECTS Credits

Teaching Hours: 600 hours

Postgraduate Diploma Biomedical Implants and In Vivo Devices

