

# Professional Master's Degree Reconstructive Plastic Surgery





## Professional Master's Degree Reconstructive Plastic Surgery

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Global University
- » Credits: 60 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/medicine/professional-master-degree/master-reconstructive-plastic-surgery](http://www.techtute.com/us/medicine/professional-master-degree/master-reconstructive-plastic-surgery)

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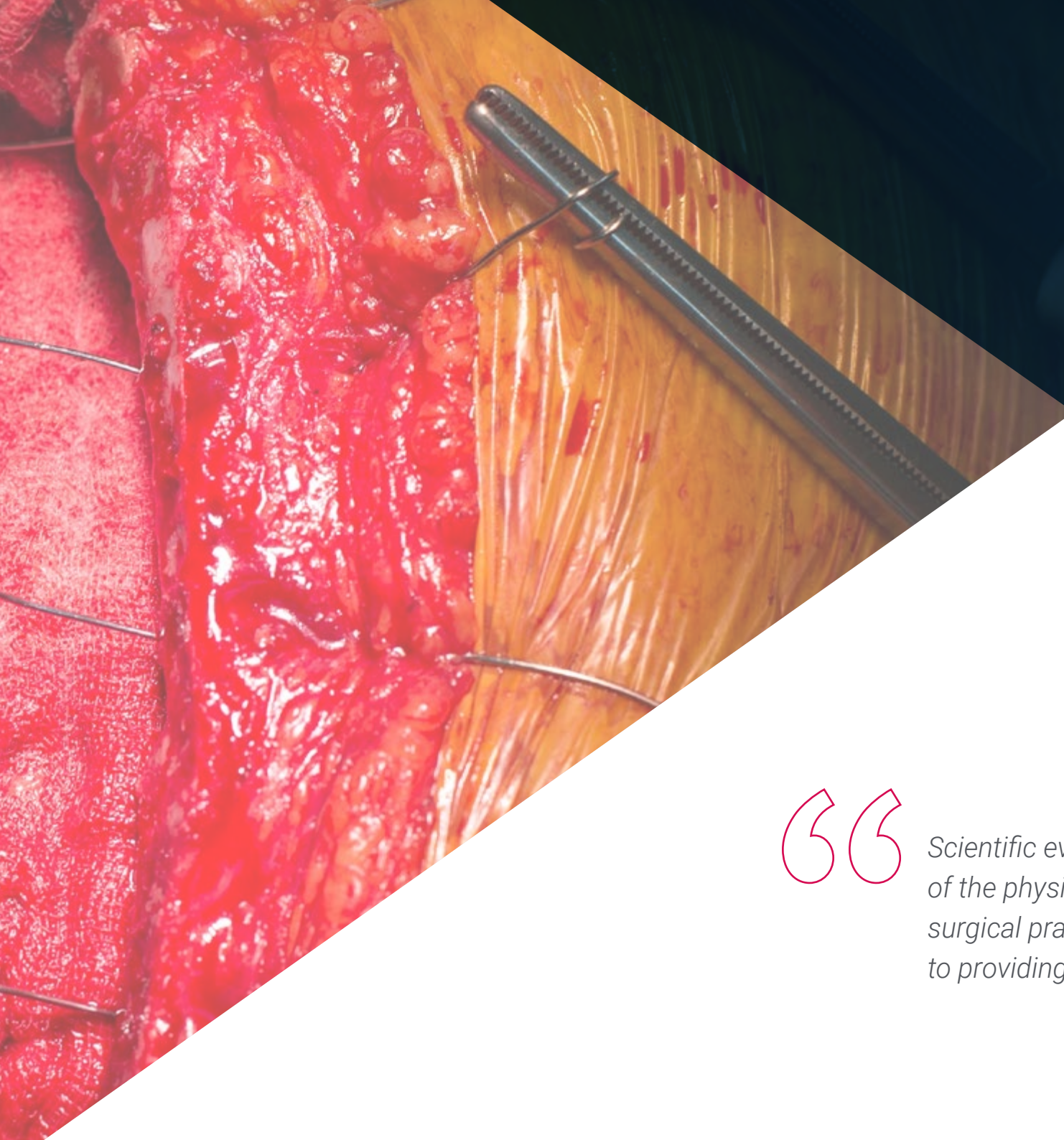
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# 01

# Introduction

Surgery is one of the medical specialties that has advanced the most over the years, and this forces professionals in this field to keep themselves permanently trained and up to date in order to provide an accurate and effective response to patients. This is even more evident in the case of Reconstructive Plastic Surgery, as new scientific evidence is published almost every day, which modifies the criteria for action and makes for safer and more efficient procedures. With this in mind, the professionals at TECH have designed this program that aims to equip surgeons with up-to-date knowledge in reconstructive procedures, thereby making them much more reputable professionals whose expertise will be sought after by healthcare institutions.





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*Scientific evidence and constant education of the physician increase the quality of surgical practice. Keeping up to date is key to providing better care to our patients”*

Reconstructive Plastic Surgery has experienced exceptional development in recent years. This branch of Plastic Surgery, which deals with the repair of abnormal body structures caused by congenital irregularities of development or growth, damage caused by trauma or accidents, infections, or tumor diseases, which may include amputations or extensive ablations, is undoubtedly booming and requires fully qualified and prepared professionals to respond to the needs of patients in this regard.

This is why TECH's Professional Master's Degree in Reconstructive Plastic Surgery offers specialized knowledge in this field and aims to promote the acquisition of new knowledge through a multidisciplinary approach that helps physicians in their daily practice and enables them to practice in different scenarios.

To achieve this, this high-level educational program has university and clinical specialists with extensive experience in the fields of Reconstructive Plastic Surgery, Maxillofacial Reconstructive Plastic Surgery, Cosmetic Gynecology and Infectious Diseases, a field of special importance in the monitoring and treatment in the postoperative period. This team of professionals will take the lead in preparing students to become prestigious surgeons in this field.

In terms of content, the Professional Master's Degree in Reconstructive Plastic Surgery facilitates the acquisition of specialized knowledge about the latest advances in this field of work and consolidates the current postulates in this branch of study. All this will be of great help to the professionals, since it will allow them to solve multiple problems that arise in the practice of medical care.

Likewise, the program expands the field of research related to Reconstructive Plastic Surgery, ensuring first-class theoretical-practical learning based on real experiences, as a result of the practical experience of the professors who teach the program.

Everything through a 100% online program that makes it easier to balance studies with the rest of the daily activities in the surgeon's life. Therefore, physicians will only need an electronic device (Smartphone, Tablet or PC) with an Internet connection to open up a wide range of knowledge that will enable them to position themselves as a professional of reference in the sector.

This **Professional Master's Degree in Reconstructive Plastic Surgery** contains the most complete and up-to-date Scientific Program on the market. The most important features of the program include:

- Development of more than 80 clinical cases, recorded with POV (Point of View) systems from different angles, presented by experts in surgery and other specialties
- 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
- Presentation of practical workshops on procedures and techniques
- An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course
- Action protocols and clinical practice guidelines, which cover the most important latest developments in this specialist area
- All of this will be complemented by theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- Special emphasis on evidence-based medicine and research methodologies in surgical procedures
- Content that is accessible from any fixed or portable device with an Internet connection



*The Professional Master's Degree in Reconstructive Plastic Surgery contains the most complete and up-to-date scientific program on the market"*

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*This Professional Master's Degree may be the best investment you can make when selecting a refresher program, for two reasons: in addition to updating your knowledge of Reconstructive Plastic Surgery, you will obtain a qualification from TECH Global University”*

The teaching staff includes a team of healthcare professionals, who bring their experience to this program, as well as renowned specialists from leading scientific societies.

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

This program is designed around Problem-Based Learning, by means of which the surgeon must try to solve the different professional practice situations that arise during the course. For this purpose, you will be assisted by an innovative interactive video system created by renowned experts in the field of Reconstructive Plastic Surgery, with extensive teaching experience.

*It is the best educational program on the market for its quality-price ratio.*

*Improve your surgical practice with this specialized program.*



# 02 Objectives

The most prestigious professionals in the field of Reconstructive Plastic Surgery have designed this comprehensive refresher program with the aim of ensuring that physicians in the sector are up to date with new scientific and technical knowledge in the field of reconstructive cosmetic surgery. This program, which aims to update surgeons' professional skills and promote the acquisition of new skills and abilities, will be the professional's main asset when it comes to successfully entering a sector that continues to demand specialized professionals in this field.







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*This program will generate a sense of security in the performance of surgical practice and help you grow professionally”*



## General Objectives

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- ♦ Study theoretical principles of Reconstructive Surgery
- ♦ Develop specialized knowledge about the different techniques and their uses in medical practice
- ♦ Evaluate the psychological aspects of Reconstructive Surgery patients
- ♦ Correctly approaching the resolution of facial lesions
- ♦ Assess the different reconstructive options for eyebrows, eyelids, nose, ear and lips
- ♦ Examine the theoretical basis for facial soft tissue reconstruction
- ♦ Analyze the use of prosthetic material in facial reconstruction
- ♦ Identify the different types of facial fractures
- ♦ Establish treatment plans for different types of facial fractures
- ♦ Examine the theoretical basis for the management of facial fractures
- ♦ Specify alternatives for surgical resolution of facial fractures
- ♦ Analyze the main reconstructive techniques in congenital malformations
- ♦ Study the main thoracic congenital malformations
- ♦ Analyze the anatomy of the thoracic region from a surgical approach
- ♦ Develop breast reconstruction techniques
- ♦ Develop specialized theoretical and practical knowledge on the care of patients with cleft lip and palate
- ♦ Analyze the protocols for multidisciplinary management of patients with cleft lip and palate
- ♦ Determine multidisciplinary treatment of patients with cleft lip and palate
- ♦ Analyze the physiological implications affecting abdominal reconstruction
- ♦ Approach the anatomy of the region from a surgical approach
- ♦ Compile the main flaps and their uses in abdominal wall reconstruction
- ♦ Determine the most common causes of pathologies that require the use of Reconstructive Surgery
- ♦ Provide an overview of the current state of the art techniques for reconstruction of sequelae in burn patients
- ♦ Increase specialized knowledge in relation to new techniques
- ♦ Fundamentals of the most advanced techniques in Reconstructive Plastic Surgery
- ♦ Propose updates that contribute to the current practice of Reconstructive Surgery in the treatment of burn patients
- ♦ Address truncal anesthesia techniques
- ♦ Analyze tendon suturing techniques
- ♦ Evaluate the flaps used in limb reconstruction
- ♦ Introduce limb replanting techniques
- ♦ Developing types and techniques of bone grafting
- ♦ Provide an overview of the status of genital reconstruction
- ♦ Develop specialized knowledge on new techniques and advances in the field of Genital Reconstruction
- ♦ Propose updates that can contribute to the current practice of Reconstructive Surgery
- ♦ Analyze surgical site infections
- ♦ Identify current predisposing factors in surgical site infections
- ♦ Compile preventive measures for surgical site infections
- ♦ Propose the adequate management of surgical site infections



## Specific Objectives

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- ♦ Examine the historical background of Reconstructive Surgery
- ♦ Analyze the evolution of Reconstructive Surgery
- ♦ Determine the characteristics of the skin and its relevance in Reconstructive Surgery
- ♦ Address the use of the most relevant techniques for Reconstructive Surgery
- ♦ Show the usefulness of microsurgery in Reconstructive Surgery
- ♦ Justify the use of flaps in Reconstructive Surgery
- ♦ Specify the usefulness of the use of grafts in Reconstructive Surgery
- ♦ Delve into the importance of understanding the psychological aspect of Reconstructive Plastic Surgery patients
- ♦ Analyze possible solutions for eyebrow lesions
- ♦ Specify the surgical options for eyelid surgery
- ♦ Determine the correct steps in nasal reconstruction
- ♦ Examine the most advanced surgical techniques for pinna reconstruction
- ♦ Propose useful techniques in post-traumatic facial reconstruction
- ♦ Introduce the common causes of facial injuries and their surgical solution
- ♦ Identify common tumors conducive to facial reconstruction
- ♦ Systematically and comprehensively examine the patient with facial fractures
- ♦ Define the etiology of facial fractures
- ♦ Provide accurate diagnoses in the facial trauma patient
- ♦ Assess appropriate alternatives for the resolution of various facial traumas

- ♦ Propose treatment plans according to the particular characteristics of each case
- ♦ Support the design of treatment plans based on the knowledge obtained
- ♦ Develop the ideal reconstructive surgical treatment in the facial trauma patient
- ♦ Identify the complications generated in the management of patients with facial trauma
- ♦ Examine the characteristics of the most frequent congenital syndromes in thoracic reconstruction
- ♦ Compile the reconstructive theoretical bases applicable to thoracic reconstruction
- ♦ Analyze breast surgical anatomy for reconstruction of the thoracic region
- ♦ Identify the most frequent pathologies in reconstruction of the thoracic region
- ♦ Determine the primary steps for breast reconstruction
- ♦ Propose the use of muscle flaps for thoracic and breast reconstruction
- ♦ Establish the possible techniques for chest wall reconstruction
- ♦ Examining the anatomical characteristics of patients with cleft lip and palate
- ♦ Define the etiological factors of cleft lip and palate
- ♦ Present the classification of cleft lip and palate
- ♦ Propose treatment plans according to the particular characteristics of each case
- ♦ Establish the advantages and disadvantages of the various surgical techniques for the correction of cleft lip and palate
- ♦ Support the design of treatment plans based on the knowledge obtained
- ♦ Develop criteria for the use of reconstructive techniques in the abdominal wall
- ♦ Demonstrate the use of synthetic material for abdominal wall reconstruction



- ♦ Establish steps for planning abdominal wall repair
- ♦ Propose useful techniques for the reconstruction of the abdominal wall
- ♦ Introduce the anatomical basis for the choice of abdominal flaps
- ♦ Specify the importance of the initial choice of the correct reconstructive technique
- ♦ Identify factors affecting the success of the reconstructive option
- ♦ Review the most recent papers and publications
- ♦ Determine the most frequent benefits and/or complications of current techniques
- ♦ Examine the effectiveness of current techniques
- ♦ Propose aspects of improvement in the field of currently used aesthetic or reconstructive surgeries, including skin culture for grafting treatment
- ♦ Assessing the psychological impact of these surgical actions on the people undergoing surgery
- ♦ Examine upper and lower limb regional anesthetic block techniques
- ♦ Analyze the new tendon sutures proposals
- ♦ Determine the types and techniques of flaps used in upper limb reconstruction
- ♦ Generate specialized knowledge on musculoskeletal reconstruction and neural repair in limb replantation
- ♦ Examine finger and upper and lower limb replantation techniques
- ♦ Develop the types and techniques used in the different types of bone grafts and osteoinductive materials
- ♦ Review the most recent papers and publications
- ♦ Determine the most frequent benefits and/or complications of current techniques
- ♦ Examine the effectiveness of current techniques
- ♦ Propose new actions to improve the currently used aesthetic or reconstructive genital surgeries
- ♦ Assessing the psychological impact of these surgical actions on the people undergoing surgery
- ♦ Develop current aspects of microbiology applied to surgical site infections
- ♦ Analyze the pathophysiological aspects and classification of surgical site infections
- ♦ Identify risk factors and severity in surgical site infections
- ♦ Compile effective preoperative, operative and postoperative preventive measures
- ♦ Establishing antibiotic prophylaxis and its main aspects
- ♦ Generate strategies for pharmacological and surgical management of SSIs
- ♦ Examine the most frequent infections associated with the most commonly used materials in Reconstructive Surgery

# 03 Skills

After passing the assessments on the Professional Master's Degree in Reconstructive Plastic Surgery, the physician will have acquired the professional skills required for a quality and up-to-date surgical practice based on the latest scientific evidence. These new skills acquired and highly demanded by both public and private health institutions, will be the point of reference to take into account when analyzing the professional curriculum of the surgeon because, in addition to having been acquired with the best teaching staff and the best content, they have the support of a great academic institution.





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*With this program you will be able to master the new diagnostic and therapeutic procedures in the Reconstructive Plastic Surgery of patients of each and every one of its different aspects"*



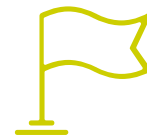
## General Skills

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- ♦ Possess and understand knowledge that provides a basis or opportunity to be original in the development and/or application of ideas, often in a research context
- ♦ Know how to apply acquired knowledge and problem-solving skills in new or unfamiliar environments within broader (or multidisciplinary) contexts related to the field of study
- ♦ Integrate knowledge and face the complexity of making judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities linked to the application of their knowledge and judgments
- ♦ Know how to communicate their conclusions, knowledge and reasons to specialized and non-specialized audiences in a clear and unambiguous way
- ♦ Acquire the learning skills that will enable further studying in a largely self-directed or autonomous manner
- ♦ Develop within the profession in terms of working with other health professionals, acquiring skills to work as a team
- ♦ Recognize the need to maintain your professional skills and keep them up to date, with special emphasis on autonomous and continuous learning of new information
- ♦ Develop the capacity for critical analysis and research in your professional field







## Specific Skills

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- ♦ Know, from a historical perspective, the fundamental aspects of Reconstructive Surgery
- ♦ Know how to apply the newest and most current techniques
- ♦ Develop specialized knowledge for the correct decision making depending on the case presented
- ♦ Acquire specialized knowledge in diagnosis, design of treatment plans and the most appropriate surgical techniques for the resolution of the same
- ♦ Know in depth the surgical techniques and timing applied to thoracic surgery
- ♦ Understand the theoretical bases on the protocols of action and the different surgical techniques for facial reconstruction of patients with cleft lip and palate
- ♦ Know in depth the main pathologies that cause deterioration of the abdominal wall, as well as the main flaps for its repair
- ♦ Consolidate, update and expand knowledge in dermal reconstruction in burn patients
- ♦ Know how to approach limb reconstruction focusing on local anesthetic techniques, tendon reconstruction, limb replantation and the use of bone flaps and grafts as treatment options
- ♦ Consolidate, update and expand knowledge of genital reconstruction
- ♦ Know how to deal with mutilations, congenital or acquired problems that can be treated surgically
- ♦ Know the current trends in the behavior of microorganisms, current preventive measures and the wide range of existing treatments that are continuously updated

# 04

# Course Management

The creation of the materials has been carried out by a team of expert professionals in the surgical field, who carry out their professional activity in leading hospitals, transferring the experience gained in their jobs throughout their careers to this program. Likewise, this great teaching team also includes a series of specialists who complete the contents of the Professional Master's Degree in an interdisciplinary and transversal manner, which will help the student to acquire complete knowledge that takes into account each and every one of the important factors in Reconstructive Plastic Surgery.



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*TECH offers you the best teaching staff in the market with a single purpose: to enable you and guide you towards success in your practice as a plastic surgeon"*

## International Guest Conductor

Peter Henderson, M.D. is a reconstructive surgeon and microsurgeon based in New York City who focuses on breast reconstruction and lymphedema treatment. He is Chief Executive Officer and Director of Surgical Services for Henderson Breast Reconstruction. In addition, he is an Associate Professor of Surgery (Plastic and Reconstructive Surgery) and Director of Research at the Icahn School of Medicine at Mount Sinai.

Dr. Henderson received a Bachelor of Fine Arts degree from Harvard University, a medical degree from Weill Cornell Medical College and an MBA from the Stern School of Business at New York University.

He completed his residencies in general surgery and plastic surgery at NewYork-Presbyterian/Weill Cornell. He then completed a fellowship in reconstructive microsurgery at Memorial Sloan Kettering Cancer Center. In addition, he was Chief of Research in the Laboratory of Bioregenerative Medicine and Surgery during his residency in general surgery.

Through a variety of surgical approaches and techniques, he is committed to helping patients restore, maintain or improve their function and appearance. Dr. Henderson's clinical care is supported by his research and scholarly activities in the field of microsurgery and breast reconstruction.

Dr. Henderson is a Fellow of the American College of Surgeons and a member of many professional societies. He is a recipient of the Dicran Goulian Award for Academic Excellence in Plastic Surgery and the Bush Award for Excellence in Vascular Biology. He has authored or co-authored over 75 peer-reviewed publications and textbook chapters, as well as over 120 research abstracts, and has guest lectured nationally and internationally.



## Dr. Henderson, Peter

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- Director of Surgical Services at Henderson Breast Reconstruction
- Director of Research at Icahn School of Medicine at Mount Sinai
- Chief of Research, Laboratory of Bioregenerative Medicine and Surgery at Memorial Sloan Kettering Cancer Center
- M.D. from Weill Cornell Medical College
- Bachelor of Fine Arts from Harvard University
- Bush Award for Excellence in Vascular Biology

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

## Management



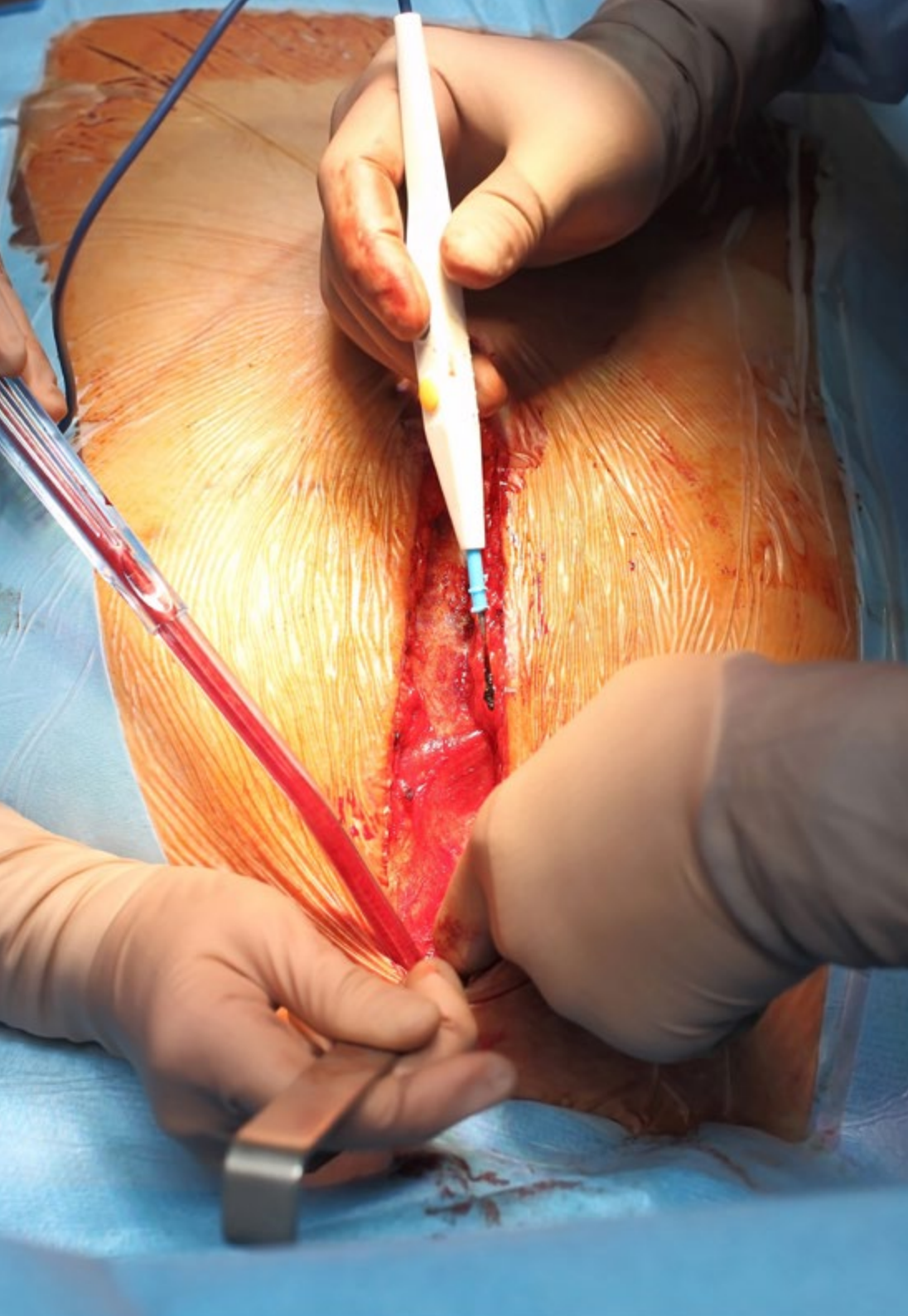
### Dr. Castro de Rojas, Ligia Irene

- ♦ Doctor specialized in Obstetrics and Gynecology
- ♦ Professor of Morphophysiology I and II at the Experimental School of Nursing, Faculty of Medicine, Central University of Venezuela
- ♦ Medical School Counselor
- ♦ Medical sonographer
- ♦ Resident physician at the Palo Negro outpatient clinic
- ♦ General Practitioner at Policlínica Coromoto



### Dr. Piña Rojas, Juan Luis

- ♦ Plastic and reconstructive surgeon. Maracay Central Hospital
- ♦ Secretary of Academic Affairs, 2004-2005 period, Student Center, La Morita branch, Carabobo University
- ♦ Chief Resident 2012-2014 Postgraduate of Plastic Surgery at Central Hospital of Maracay
- ♦ Academic Teaching Coordinator 2016-2018 postgraduate course in Plastic Surgery, Central Hospital of Maracay
- ♦ Postgraduate resident doctor of the 1st level in the department of Surgery at Central Hospital of Maracay from March 3, 2008 to December 2010. (Position earned by credential competition)
- ♦ Academic Teaching Coordinator 2016-2018 postgraduate course in Plastic Surgery, Central Hospital of Maracay



## Professors

### Dr. Piña Aponte, Enzo Raúl

- ◆ Oral and Maxillofacial Surgeon
- ◆ Oral and Maxillofacial Surgeon in private clinic
- ◆ Postgraduate Professor of Oral and Maxillofacial Surgery UC-IVSS
- ◆ Assistant of the service of Oral and Maxillofacial Surgery of Dr. Atilio Perdomo, at the University Hospital Dr. Angel Larralde; Valencia, Edo. Carabobo
- ◆ Undergraduate Teaching, Subject Comprehensive Adult Clinic II
- ◆ Rotation of Oral Surgery, 5th year, School of Dentistry, Carabobo University. Valencia, Edo. Carabobo

### Dr. Rivas Zambrano, Aura Lorena

- ◆ Specialist in Pediatric Infectious Diseases
- ◆ Medical School. Carabobo University, Venezuela. Promotion position: #2. Magna Cum Laude
- ◆ Pediatrics Residency Maracay Central Hospital. Carabobo University, Venezuela
- ◆ Pediatric Infectious Diseases Residency, José Manuel de los Ríos Children's Hospital. Venezuela
- ◆ Pediatric Infectiologist. Maracay Central Hospital. Venezuela
- ◆ Professor of Pediatric Infectious Diseases. Carabobo University. Venezuela
- ◆ Lecturer in National and Regional Congresses and Conferences

# 05

# Structure and Content

The structure of the syllabus has been designed by a team of professionals knowledgeable about the implications of medical training in the approach to the patient, aware of the relevance of current affairs and committed to quality teaching through new educational technologies.







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*This Professional Master's Degree contains the most complete and up-to-date scientific program on the market”*

## Module 1. Reconstructive Plastic Surgery

- 1.1. History of Reconstructive Surgery
  - 1.1.1. Beginnings of Reconstructive Surgery
  - 1.1.2. Key Figures in Reconstructive Surgery
  - 1.1.3. Historic Sites
- 1.2. Evolution of Reconstructive Surgery
  - 1.2.1. World War I
  - 1.2.2. World War II
  - 1.2.3. Modern Age
- 1.3. Skin and Skin Blood Flow
  - 1.3.1. Skin Anatomy
  - 1.3.2. Dermatomes
  - 1.3.3. Skin Blood Flow
  - 1.3.4. Phases of Healing
- 1.4. Grafts
  - 1.4.1. Concepts
    - 1.4.1.1. Integration Phases
  - 1.4.2. Types
    - 1.4.2.1. Cutaneous
    - 1.4.2.2. Compounds
  - 1.4.3. Classification
  - 1.4.4. Uses
  - 1.4.5. Postoperative Care
- 1.5. Flaps
  - 1.5.1. Concepts
  - 1.5.2. Types
    - 1.5.2.1. Cutaneous
    - 1.5.2.2. Fasciocutaneous
    - 1.5.2.3. Muscular
  - 1.5.3. Classification
  - 1.5.4. Uses
  - 1.5.5. Postoperative Care
- 1.6. Microsurgery in Reconstructive Plastic Surgery
  - 1.6.1. Concepts
  - 1.6.2. Types
    - 1.6.2.1. Arterial Anastomosis
    - 1.6.2.2. Venous Anastomosis
    - 1.6.2.3. Lymphatic Vessel Microsurgery
    - 1.6.2.4. Peripheral Nerve Microsurgery
  - 1.6.3. Uses
    - 1.6.3.1. Free Flaps
    - 1.6.3.1. Reimplantation Surgeries
  - 1.6.4. Postoperative Care
- 1.7. Tissue Expanders
  - 1.7.1. Concepts
  - 1.7.2. Indications
  - 1.7.3. Applications
  - 1.7.4. Surgical Technique
  - 1.7.5. Postoperative Care
- 1.8. Psychological Aspects of Reconstructive Surgery Patients
  - 1.8.1. Assessment
  - 1.8.2. Behaviour
- 1.9. Medical-Legal aspects of Reconstructive Surgery
  - 1.9.1. Legal Framework
  - 1.9.2. Informed Consent
  - 1.9.3. Importance of the Clinical History
- 1.10. Rehabilitation in Reconstructive Surgery
  - 1.10.1. Current Rehabilitation Techniques
  - 1.10.2. Use of Post-Surgical Bandages and Girdles
  - 1.10.3. Use of Ultrasound and Post-Surgical Drains



## Module 2. Facial Reconstruction

- 2.1. Ciliary Region Reconstruction
  - 2.1.1. Surgical Anatomy
  - 2.1.2. Tumor Lesions
    - 2.1.2.1. Benign
    - 2.1.2.2. Malign
  - 2.1.3. Trauma Lesions
  - 2.1.4. Surgical Techniques
    - 2.1.4.1. Primary Summaries
    - 2.1.4.2. Z-Plasties
    - 2.1.4.3. Flaps
    - 2.1.4.4. Tattoos
- 2.2. Eyelid Reconstruction
  - 2.2.1. Surgical Anatomy
    - 2.2.1.1. Upper Eyelid
    - 2.2.1.2. Lower Eyelid
  - 2.2.2. Tumor Lesions
    - 2.2.2.1. Benign
    - 2.2.2.2. Malign
  - 2.2.3. Trauma Lesions
  - 2.2.4. Ectropion and Entropion
  - 2.2.4. Surgical Techniques
    - 2.2.4.1. Upper Eyelid
      - 2.2.4.1.1. Primary Synthesis
      - 2.2.4.1.2. Flaps
      - 2.2.4.1.3. Grafts
    - 2.2.4.2. Lower Eyelid
      - 2.2.4.2.1. Primary Synthesis
      - 2.2.4.2.2. Flaps
      - 2.2.4.2.3. Grafts

- 2.3. Nasal Reconstruction
  - 2.3.1. Surgical Anatomy
  - 2.3.2. Tumor Lesions
    - 2.3.2.1. Benign
    - 2.3.2.2. Malign
  - 2.3.3. Trauma Lesions
  - 2.3.4. Surgical Techniques
    - 2.3.4.1. Primary Synthesis
    - 2.3.4.2. Local Flaps
    - 2.3.4.3. Distance Flaps
    - 2.3.4.4. Grafts
- 2.4. Pinna Reconstruction
  - 2.4.1. Surgical Anatomy
  - 2.4.2. Tumor Lesions
    - 2.4.2.1. Benign
    - 2.4.2.2. Malign
  - 2.4.3. Trauma Lesions
  - 2.4.4. Congenital Lesions
    - 2.4.4.1. Anotia
    - 2.4.4.2. Microtia
    - 2.4.4.3. Macrotia
  - 2.4.5. Surgical Techniques
    - 2.4.5.1. Primary Synthesis
    - 2.4.5.2. Local Flaps
    - 2.4.5.3. Distance Flaps
    - 2.4.5.4. Grafts
- 2.5. Upper Lip Reconstruction
  - 2.5.1. Surgical Anatomy
  - 2.5.2. Tumor Lesions
    - 2.5.2.1. Benign
    - 2.5.2.2. Malign
  - 2.5.3. Trauma Lesions
  - 2.5.4. Surgical Techniques
    - 2.5.4.1. Primary Synthesis
    - 2.5.4.2. Local Flaps
    - 2.5.4.3. Distance Flaps
    - 2.5.4.4. Grafts
- 2.6. Lower Lip Reconstruction
  - 2.6.1. Surgical Anatomy
  - 2.6.2. Tumor Lesions
    - 1.6.2.1. Benign
    - 1.6.2.2. Malign
  - 2.6.3. Trauma Lesions
  - 2.6.4. Surgical Techniques
    - 2.6.4.1. Primary Synthesis
    - 2.6.4.2. Local Flaps
    - 2.6.4.3. Distance Flaps
    - 2.6.4.4. Grafts
- 2.7. Face Transplant
  - 2.7.1. History
  - 2.7.2. Technique
  - 2.7.3. Psychological Aspects
- 2.8. Use of Facial Prosthetic Material
  - 2.8.1. Indications
  - 2.8.2. Types
  - 2.8.3. Complications
- 2.9. Medical-Legal Aspects of Reconstructive Surgery
  - 2.9.1. Legal Framework
  - 2.9.2. Informed Consent
  - 2.9.3. Importance of the Clinical History
- 2.10. Rehabilitation in Reconstructive Surgery
  - 2.10.1. Current Rehabilitation Techniques
  - 2.10.2. Use of Post-Surgical Bandages and Girdles
  - 2.10.3. Use of Ultrasound and Post-Surgical Drains

## Module 3. Facial Fracture Reconstruction

- 3.1. Initial Assessment of the Maxillofacial Trauma Patient
  - 3.1.1. ABCDE in the Polytraumatized Patient
  - 3.1.2. Clinical Examination
    - 3.1.2.1. Facial Upper Third
    - 3.1.2.2. Midface
    - 3.1.2.3. Lower Third of the Face
  - 3.1.3. Imaging Examination
- 3.2. Mandibular Fractures
  - 3.2.1. Epidemiology and Etiology
  - 3.2.2. Mandibular Fracture Classification
  - 3.2.3. Mandibular Fracture Diagnosis
    - 3.2.3.1. Clinical Assessment
    - 3.2.3.2. Imaging Assessment
  - 3.2.4. General Treatment Principles
    - 3.2.4.1. Closed Handling Indications
    - 3.2.4.2. Open Handling Indications
  - 3.2.5. Mandibular Fracture Treatment
    - 3.2.5.1. Closed Handling Techniques
    - 3.2.5.2. Open Handling Techniques
  - 3.2.6. Complications
- 3.3. Condylar Fractures
  - 3.3.1. Etiology
  - 3.3.2. Condylar Fracture Classification
  - 3.3.3. Condylar Fracture Diagnosis
    - 3.3.3.1. Clinical Assessment
    - 3.3.3.2. Imaging Assessment
  - 3.3.4. General Treatment Principles
    - 3.3.4.1. Closed Handling Indications
    - 3.3.4.2. Open Handling Indications
  - 3.3.5. Condylar Fracture Treatment
    - 3.3.5.1. Closed Handling Techniques
    - 3.3.5.2. Open Handling Techniques
  - 3.3.6. Complications
- 3.4. Maxillary Fractures
  - 3.4.1. Etiology
  - 3.4.2. Maxillary Fracture Classification
  - 3.4.3. Mandibular Fracture Diagnosis
    - 3.4.3.1. Clinical Assessment
    - 3.4.3.2. Imaging Assessment
  - 3.4.4. Anatomical Considerations for Treatment
  - 3.4.5. Maxillary Fracture Treatment
    - 3.4.5.1. Closed Handling Techniques
    - 3.4.5.2. Open Handling Techniques
  - 3.4.6. Palatal Fractures
    - 3.4.6.1. Palatine Fracture Classification
    - 3.4.6.2. Palatine Fracture Treatment
  - 3.4.7. Complications
- 3.5. Nasal Fractures
  - 3.5.1. Etiology
  - 3.5.2. Nasal Fracture Classification
  - 3.5.3. Nasal Fracture Diagnosis
    - 3.5.3.1. Clinical Assessment
    - 3.5.3.2. Imaging Assessment
  - 3.5.4. Nasal Fracture Treatment
    - 3.5.4.1. Closed Handling
    - 3.5.4.2. Open Management
  - 3.5.6. Complications
- 3.6. Naso-Orbital Ethmoid (NOE) Fractures
  - 3.6.1. Etiology
  - 3.6.2. NOE Fracture Classification

- 3.6.3. NOE Fracture Diagnosis
  - 3.6.3.1. Clinical Assessment
  - 3.6.3.2. Imaging Assessment
- 3.6.4. NOE Fracture Treatment
  - 3.6.4.1. Closed Handling Techniques
  - 3.6.4.2. Open Handling Techniques
- 3.6.5. Orbital Wall Fractures
  - 3.6.5.1. Orbital Wall Fracture Classification
  - 3.6.5.2. Orbital Wall Fracture Diagnosis
  - 3.6.5.3. Orbital Wall Fracture Treatment
- 3.6.6. Complications
- 3.7. Orbitozygomatic Fractures
  - 3.7.1. Etiology
  - 3.7.2. Orbitozygomatic Fracture Classification
  - 3.7.3. Orbitozygomatic Fracture Diagnosis
    - 3.7.3.1. Clinical Assessment
    - 3.7.3.2. Imaging Assessment
  - 3.7.4. General Treatment Principles
  - 3.7.5. Orbitozygomatic Fracture Treatment
    - 3.7.5.1. Closed Handling Techniques
    - 3.7.5.2. Open Handling Techniques
  - 3.7.6. Complications
- 3.8. Zygomatic Arch Fractures
  - 3.8.1. Zygomatic Arch Classification
  - 3.8.2. Zygomatic Arch Diagnosis
  - 3.8.3. Zygomatic Arch Treatment
  - 3.8.4. Complications
- 3.9. Frontal Fractures
  - 3.9.1. Epidemiology
  - 3.9.2. Frontal Fracture Classification
  - 3.9.3. Frontal Fracture Diagnosis
    - 3.9.3.1. Clinical Assessment
    - 3.9.3.2. Imaging Assessment

- 3.9.4. Anatomical Considerations
- 3.9.5. General Treatment Principles
- 3.9.6. Frontal Fracture Treatment
- 3.9.7. Complications
- 3.10. Panfacial Bone Fractures
  - 3.10.1. Initial Assessment
  - 3.10.2. General Treatment Principles
  - 3.10.3. Anatomical Considerations
  - 3.10.4. Treatment Sequence
  - 3.10.5. Complications

## Module 4. Chest Wall Reconstruction

- 4.1. Surgical Anatomy of the Thorax
  - 4.1.1. Bones
  - 4.1.2. Cartilage
  - 4.1.3. Muscle
  - 4.1.4. Organs
- 4.2. Congenital Thoracic
  - 4.2.1. Poland Syndrome
  - 4.2.2. Jeune Syndrome
  - 4.2.3. Spondylothoracic Dysplasia
- 4.3. Thoracic Malformations
  - 4.3.1. Pectus Excavatum
  - 4.3.2. Pectus Carinatum
  - 4.3.3. Syndromes Affecting the Sternum
  - 4.3.4. Syndromes Affecting the Rib Cage
- 4.4. Breast Reconstruction
  - 4.4.1. Surgical Anatomy of the Breast
  - 4.4.2. Breast Cancer
  - 4.4.3. Breast Reconstruction after Cancer
    - 4.4.3.1. Partial
    - 4.4.3.2. Total

- 4.4.4. Reconstruction with Prosthetic Material
  - 4.4.4.1. Breast Implant
  - 4.4.4.2. Tissue Expanders
  - 4.4.4.3. Mesh
- 4.5. Thoracic Reconstruction with Latissimus Dorsi Flap
  - 4.5.1. Surgical Anatomy
  - 4.5.2. Surgical Technique
  - 4.5.3. Uses
  - 4.5.4. Complications
- 4.6. Chest Wall Reconstruction with a Transverse Rectus Abdominis Myocutaneous (TRAM) Flap
  - 4.6.1. Surgical Anatomy
  - 4.6.2. Surgical Technique
  - 4.6.3. Uses
  - 4.6.4. Complications
- 4.7. Nipple-Areolar Complex Reconstruction
  - 4.7.1. Surgical Anatomy
  - 4.7.2. Surgical Techniques
  - 4.7.3. Complications
- 4.8. Chest Wall Reconstruction with Free Flaps
  - 4.8.1. Indications
  - 4.8.2. Contraindications
  - 4.8.3. Techniques
- 4.9. Chest Wall Reconstruction with a Latissimus Dorsi Flap
  - 4.9.1. Surgical Anatomy
  - 4.9.2. Surgical Technique
  - 4.9.3. Uses
  - 4.9.4. Complications
- 4.10. Rehabilitation in Chest Wall Reconstruction Surgery
  - 4.10.1. Respiratory Therapy
  - 4.10.2. Use of Corsets and Bandages
  - 4.10.3. Lymphatic Drainage
  - 4.10.4. Use of Ultrasound

## Module 5. Cleft Lip and Palate Reconstruction

- 5.1. Labiopalatal Clefts
  - 5.1.1. Embryology
  - 5.1.2. Morphological
    - 5.1.2.1. Cleft Lip Anatomy
    - 5.1.2.2. Cleft Palate Anatomy
  - 5.1.3. Epidemiology
  - 5.1.4. Etiopathogenesis
- 5.2. Nomenclature and Classification of Cleft Lip and Palate
  - 5.2.1. Clinical Importance of Classifications
  - 5.2.2. Embryological Classifications
  - 5.2.3. Anatomical Classifications
- 5.3. Non-Surgical Multidisciplinary Management of the Patient with Cleft Lip and Palate
  - 5.3.1. Evolution Over Time
  - 5.3.2. Psychosocial Aspects
    - 5.3.2.1. Parent Management
  - 5.3.3. Multidisciplinary Assessment
    - 5.3.3.1. Healthy Child Check-up
    - 5.3.3.2. Assessment by Subspecialties
- 5.4. Surgical Management of Unilateral Labial Clefts
  - 5.4.1. Anesthetic Considerations
  - 5.4.2. Anatomic Considerations
  - 5.4.3. Chronological Sequence of Treatment
  - 5.4.4. Surgical Techniques for Unilateral Cleft Cheiloplasty
- 5.5. Surgical Management of Bilateral Cleft Lip
  - 5.5.1. Anatomical Considerations
  - 5.5.2. Chronological Sequence of Treatment
  - 5.5.3. Surgical Techniques for Bilateral Cheiloplasty
- 5.6. Surgical Management of Cleft Palate
  - 5.6.1. Anesthetic Considerations
  - 5.6.2. Anatomical Considerations
  - 5.6.3. Chronological Sequence of Treatment
  - 5.6.4. Palatoplasty

- 5.6.5. Vomer Flap
- 5.6.6. Pharyngeal Flap
- 5.7. Surgical Management of Alveolar Clefts
  - 5.7.1. Surgical Objectives
  - 5.7.2. Orthodontic-Surgical Sequence
    - 5.7.2.1. Orthopedic and Orthodontic Considerations
  - 5.7.3. Types of Grafts
    - 5.7.3.1. Autogenous Grafts
    - 5.7.3.2. Allogenic grafts
    - 5.7.3.3. Implants
  - 5.7.4. Surgical Techniques
  - 5.7.5. Post-Operative Care
  - 5.7.6. Complications
- 5.8. Surgical Management of Sequelae
  - 5.8.1. Alveolar Fissures and Alveolar Fistulas
  - 5.8.2. Lip Deformities
  - 5.8.3. Nasal Deformities
  - 5.8.4. Palatal Fistulas
  - 5.8.5. Velopharyngeal Incompetence and Insufficiency
- 5.9. Chronological Sequence of Treatment
  - 5.9.1. Pre-surgery Preparation
  - 5.9.2. Cheiloplasty
  - 5.9.3. Palatoplasty
  - 5.9.4. Alveoloplasty
  - 5.9.5. Orthognathic Surgery
  - 5.9.6. Implant Surgery
  - 5.9.7. Rhinoplasty and Related Aesthetic Corrections
- 5.10. Legal Aspects
  - 5.10.1. Legal Framework
  - 5.10.2. Informed Consent
  - 5.10.3. Importance of the Clinical History

## Module 6. Abdominal Wall Reconstruction

- 6.1. Abdominal Cavity Physiology
  - 6.1.1. Concepts
  - 6.1.2. Theoretical Principles
  - 6.1.3. Update
- 6.2. Surgical Anatomy of the Abdominal Wall
  - 6.2.1. Musculature
  - 6.2.2. Blood Flow
  - 6.2.3. Innervation
- 6.3. Abdominal Wall Defects
  - 6.3.1. Congenital
  - 6.3.2. Acquired
- 6.4. Abdominal Wall Pathology
  - 6.4.1. Traumatic
  - 6.4.2. Tumorous
- 6.5. Use of Synthetic Material for Abdominal Wall Reconstruction
  - 6.5.1. Types
  - 6.5.2. Indications
  - 6.5.3. Complications
- 6.6. Abdominal Wall Reconstruction with a Rectus Abdominis Flap
  - 6.6.1. Surgical Anatomy
  - 6.6.2. Surgical Technique
  - 6.6.3. Uses
- 6.7. Abdominal Wall Reconstruction with a Tensor Fascia Lata Flap
  - 6.7.1. Surgical Anatomy
  - 6.7.2. Surgical Technique
  - 6.7.3. Uses
- 6.8. Abdominal Wall Reconstruction with Free Flaps
  - 6.8.1. Latissimus Dorsi
  - 6.8.2. Tensor Fascia Lata



- 6.9. Rehabilitation in Abdominal Reconstruction Surgery
  - 6.9.1. Use of Corsets and Bandages
  - 6.9.2. Lymphatic Drainage
  - 6.9.3. Use of Ultrasound
- 6.10. Dermolipectomy as an Associated Procedure in Abdominal Wall Reconstruction
  - 6.10.1. Types
  - 6.10.2. Clinical Cases
  - 6.10.3. Surgical Options

## Module 7. Burn Reconstructive Surgery

- 7.1. Burns Patients
  - 7.1.1. General and Surgical Treatment
  - 7.1.2. Hydration, Monitoring of Renal and Tissue Perfusion
  - 7.1.3. Protection against Infections
- 7.2. Grafts
  - 7.2.1. Graft Reconstruction Indications
  - 7.2.2. In Vitro Skin Culture
  - 7.2.3. Surgical Techniques
- 7.3. Heat Burns
  - 7.3.1. Burn Types, Regions
  - 7.3.2. Treatment and Considerations Prior to Reconstruction
  - 7.3.3. Use of Grafts and Flaps in Pathological Scars
- 7.4. Electrical Burns
  - 7.4.1. Burn Type, Systemic Impact
  - 7.4.2. Consequence and Prognosis
  - 7.4.3. Current Restorative Surgery
- 7.5. Radiation Burns
  - 7.5.1. Types and Consequences of Radiation
  - 7.5.2. General Treatment
  - 7.5.3. Current Reconstructive Techniques

- 7.6. Face and Neck Burns
  - 7.6.1. Preliminary Behavior and Treatment
  - 7.6.2. Reconstructive and Cosmetic Surgeries
  - 7.6.3. Current Reconstruction and Treatment Techniques
- 7.7. Upper Limb Burns
  - 7.7.1. Reconstructive Surgery of the Arm and Forearm
  - 7.7.2. Reconstructive Surgery of the Hand
  - 7.7.3. Update in Hand Treatment and Surgery
- 7.8. Lower Limb Burns
  - 7.8.1. Reconstructive Surgery of the Leg and Thigh
  - 7.8.2. Reconstructive Surgery of the Foot
  - 7.8.3. New Trends in Reconstructive Surgery
- 7.9. Genital Burns
  - 7.9.1. Treatment and Reconstruction of External Genitalia
  - 7.9.2. Implants and Grafts in the Female Genital Area
  - 7.9.3. Implants and Grafts in the Male Genital Area
- 7.10. General Aspects about the Legal Implications of Genital Reconstructive Surgery
  - 7.10.1. Importance of Taking a Complete and Thorough Medical History
  - 7.10.2. Importance of Patient Psychological Assessment
  - 7.10.3. Informed Consent: Legal Implications
  - 7.10.4. Liability Insurance

## Module 8. Limb Reconstruction

- 8.1. Truncal Anesthesia
  - 8.1.1. Upper Limb Regional Anesthesia
    - 8.1.1.1. Blocks Above the Elbow
    - 8.1.1.2. Blocks Below the Elbow
  - 8.1.2. Lower Limb Regional Anesthesia
    - 8.1.2.1. Quadratus Lumborum Blocks
      - 8.1.2.1.1. Anterior Lumbar Plexus Block
    - 8.1.2.2. Psoas Compartment Block
  - 8.1.3. Complications

- 8.2. Tendon Suturing Techniques
  - 8.2.1. New Proposals
    - 8.2.1.1. Without Grip, with Grip and Lock
    - 8.2.1.2. Internal vs. External
    - 8.2.1.3. Peripheral Circumferential
  - 8.2.2. Tendon Repair
  - 8.2.3. Tendon Shortening
- 8.3. Upper Limb Flap
  - 8.3.1. Soft Tissue Reconstruction of the Hand
    - 8.3.1.1. Local and Regional Flaps
      - 8.3.1.1.1. Radial Antebrachial
      - 8.3.1.1.2. Posterior Arterial Interosseous
  - 8.3.2. Soft Tissue Reconstruction of the Forearm, Arm and Elbow
    - 8.3.2.1. Local and Regional Flaps
      - 8.3.2.1.1. Side of the Arm
      - 8.3.2.1.2. Latissimus Dorsi
- 8.4. Upper Limb Free Flap
  - 8.4.1. Radial Forearm
  - 8.4.2. Inguinal
  - 8.4.4. Superficial Inferior Epigastric Artery
  - 8.4.4. Scapula
  - 8.4.5. Anterolateral Thigh
  - 8.4.6. Side of the Arm
- 8.5. Lower Limb Flap
  - 8.5.1. Cutaneous Muscle Flap
  - 8.5.2. Bipedicled Fasciocutaneous Flap
  - 8.5.3. Gastrocnemius Muscle
  - 8.5.4. Soleus Muscle Flap
  - 8.5.5. Reverse Sural Artery Flap
    - 8.5.5.1. Posterior Tibial Artery Perforator Flap
    - 8.5.5.2. Calcaneal Lateral Artery Flap
    - 8.5.5.3. Medial Plantar Artery Flap
    - 8.5.5.4. Dorsum of the Foot





- 8.6. Lower Limb Free Flap
  - 8.6.1. Rectus Abdominus
  - 8.6.2. Gracilis Muscle
  - 8.6.3. Latissimus Dorsi
  - 8.6.4. Anterolateral Thigh
  - 8.6.5. Radial Forearm
  - 8.6.6. Risk Factors Associated with Rejection
- 8.7. Replantation of Limbs I
  - 8.7.1. Musculoskeletal Reconstruction of Replantation Limbs
  - 8.7.2. Neural Reconstruction and Recovery in Limb Replantation
  - 8.7.3. Management of Complications After Limb Replantation
  - 8.7.4. Replantation in Children and Adolescents
- 8.8. Limb Replantation II
  - 8.8.1. Thumb Replantation
  - 8.8.2. Finger Replantation
  - 8.8.3. Radiocarpal Joint Replantation
  - 8.8.4. Arm and Forearm Replantation
  - 8.8.5. Lower Limb Replantation
- 8.9. Bone Graft
  - 8.9.1. Autografts
    - 8.9.1.1. Vascularized
    - 8.9.1.2. Non-Vascularized
  - 8.9.2. Allografts
  - 8.9.3. Xenografts
  - 8.9.4. Osteoinductive Materials
- 8.10. Post-Surgical Rehabilitation of Reconstructive Limb Surgery
  - 8.10.1. Physiotherapy and Hydrotherapy
  - 8.10.2. Use of Lymphatic Drainage and Ultrasound
  - 8.10.3. Hyperbaric Chamber Therapy

## Module 9. Genital Reconstruction

- 9.1. Female Genital System Anatomy and Physiology
  - 9.1.1. Female Genital System Abnormalities
  - 9.1.2. Congenital Anomalies: Vaginal Atresia, Nymphal Atresia
  - 9.1.3. Acquired Anomalies, Post-Oncological Treatment, Post-Traumatic Surgery
  - 9.1.4. Pelvic Floor
- 9.2. Vaginoplasties
  - 9.2.1. Post-Radiation Reconstructive Vaginoplasties
  - 9.2.2. Post-Trauma Reconstructive Vaginoplasties
  - 9.2.3. Use of Grafts and Flaps in Vaginoplasties
  - 9.2.4. Vaginal Prosthesis Use
  - 9.2.5. Vaginal Dilators Post-Surgery
- 9.3. Cures and Reconstruction in Vaginal Prolapses
  - 9.3.1. Anterior Prolapse
  - 9.3.2. Posterior Prolapse
  - 9.3.3. Urethral Care
- 9.4. Labiaplasty
  - 9.4.1. Labia Majora Labiaplasty
  - 9.4.2. Nymphectomies
  - 9.4.3. Radiofrequency Surgery and CO2 Laser
- 9.5. Hymenoplasty
  - 9.5.1. Post Intentional Hymenectomy
  - 9.5.2. Post Intentional Hymenectomy
  - 9.5.3. Hymen Reconstruction
- 9.6. Genital Mutilation, Clitoridectomy and Infibulation
  - 9.6.1. Clitoral Reconstruction
  - 9.6.2. Labia Majora and Nymphatic Reconstruction
  - 9.6.3. Clitoroplasty
  - 9.6.4. Reconstructive Surgery in Gender Reassignment

- 9.7. Male Genital System
  - 9.7.1. Congenital and Acquired Abnormalities
  - 9.7.2. Phimosis, Circumcision, Aesthetic Penile Surgeries
  - 9.7.3. Frenulum Breve
- 9.8. Testicular Implant
  - 9.8.1. Types of Prosthesis
  - 9.8.2. Surgical Techniques
- 9.9. Aesthetic or Reconstructive Surgery of the Scrotum
  - 9.9.1. Indications for Scrotal Reconstruction
  - 9.9.2. Surgical Techniques
- 9.10. Legal Implications of Genital Reconstructive Surgery
  - 9.10.1. Importance of Taking a Complete and Thorough Medical History
  - 9.10.2. Importance of Patient Psychological Assessment
  - 9.10.3. Informed Consent: Legal Implications
  - 9.10.4. Liability Insurance

## Module 10. Surgical Site Infections in Reconstructive Surgery

- 10.1. Applied Microbiology
  - 10.1.1. Microorganisms of the Host's Normal Flora
  - 10.1.2. Differences between Colonization and Infection
    - 10.1.2.1. Pathogenesis of Microorganisms Involved in Infection
    - 10.1.2.2. Role of Biofilms
  - 10.1.3. Identification of the Causal Microorganism
    - 10.1.3.1. Sample Collection and Transfer
    - 10.1.3.2. Identification of Typical and Atypical Microorganisms
    - 10.1.3.3. Assessment of Antibiogram and Resistance Patterns
- 10.2. Inflammatory and Immune Response Factors in the Surgical Patient
  - 10.2.1. Updating of Concepts
    - 10.2.1.1. Cellular Mechanisms of the Inflammatory Response
    - 10.2.1.2. Adequacy and Dysregulation of the Immune-Inflammatory Response
  - 10.2.2. Utility of the Inflammatory Response in the Assessment of the Surgical Patient
  - 10.2.3. Main Parameters of the Inflammatory Response
    - 10.2.3.1. Biomarkers in Clinical Practice

- 10.3. Surgical Site Infection
  - 10.3.1. Updated Definitions and Classifications
    - 10.3.1.1. Surveillance of SSI and Risk Indexes
  - 10.3.2. Risk Factors
    - 10.3.2.1. Endogenous or Non-Modifiable
    - 10.3.2.2. Exogenous or Modifiable
  - 10.3.3. Severity Classification of SSI
    - 10.3.3.1. ASEPSIS Score
- 10.4. Effectiveness of Preoperative Surgical Site Infection Prevention Measures:
  - 10.4.1. Hand Hygiene
  - 10.4.2. Decontamination
  - 10.4.3. Dressing, Handling and Movement in the Surgical Field
- 10.5. Effectiveness of Intraoperative Measures for Surgical Site Prevention
  - 10.5.1. Non-Parenteral Antimicrobial Prophylaxis
  - 10.5.2. Appropriate Control and Accepted Glycemia Limits
  - 10.5.3. Body Temperature Optimization
  - 10.5.5. Oxygenation
  - 10.5.5. Antiseptic Prophylaxis
  - 10.5.6. Prosthetic Arthroplasty
    - 10.5.2.6.1. Risk vs. Benefits of Blood Transfusions
    - 10.5.2.6.2. Intra-Articular Corticosteroid
    - 10.5.2.6.3. Anticoagulation
    - 10.5.2.6.5. Anti-Biofilm Measures
- 10.6. Postoperative Measures to Prevent Infection
  - 10.6.1. Wound Care
  - 10.6.2. Antimicrobial Dressings
  - 10.6.3. Surgical Cleaning of Infected Surgical Sites
- 10.7. Antibiotic Prophylaxis
  - 10.7.1. Trends in Microbiology
    - 10.7.1.1. Colonization and Resistance
  - 10.7.2. Allergy to Beta-Lactams
  - 10.7.3. Administration Updates
    - 10.7.3.1. Start Time
    - 10.7.3.2. Dosage
    - 10.7.3.3. Duration
    - 10.7.3.4. Redosing
- 10.8. Antimicrobial Treatment and Control of Focus in the Surgical Patient
  - 10.8.1. Treatment Duration
  - 10.8.2. Empirical Regimen According to Surgical Site and Type of Infection
    - 10.8.2.1. Large-Positive Spectrum, Types of Antimicrobial Agents
    - 10.8.2.2. Gram-Negative Spectrum Types of Antimicrobial Agents
  - 10.8.3. Surgical Control of the Site
    - 10.8.3.1. Relevance of Percutaneous and Endoscopic Management
    - 10.8.3.2. Surgical Site Control Maneuvers
- 10.9. Surgical Site Infection According to Procedures
  - 10.9.1. Face and Neck Surgeries
  - 10.9.2. Breast Surgeries
  - 10.9.3. Skin and Integument Surgeries
  - 10.9.9. Limb Arthroplasties
- 10.10. Surgical Site Infection according to Prosthetic Biomaterials
  - 10.10.1. Metals
  - 10.10.2. Ceramics
  - 10.10.3. Polymers



*A unique, key and decisive  
experience to boost your  
professional development”*

06

# 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 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 an abundance of 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. 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, trying to recreate the real conditions in the physician's professional 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. 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.



## 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 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 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, 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 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 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 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.





#### 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 on the usefulness of learning by observing experts. The system known as 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.



# 07 Certificate

The Professional Master's Degree in Reconstructive Plastic Surgery guarantees you, in addition to the most rigorous and updated training, access to a Professional Master's Degree issued by TECH Global University.



“

*Successfully complete this program  
and receive your university degree  
without travel or laborious paperwork”*

This program will allow you to obtain your **Professional Master's Degree diploma in Update on Intensive Care Medicine** endorsed by **TECH Global University**, the world's largest online university.

**TECH Global University** is an official European University publicly recognized by the Government of Andorra ([official bulletin](#)). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

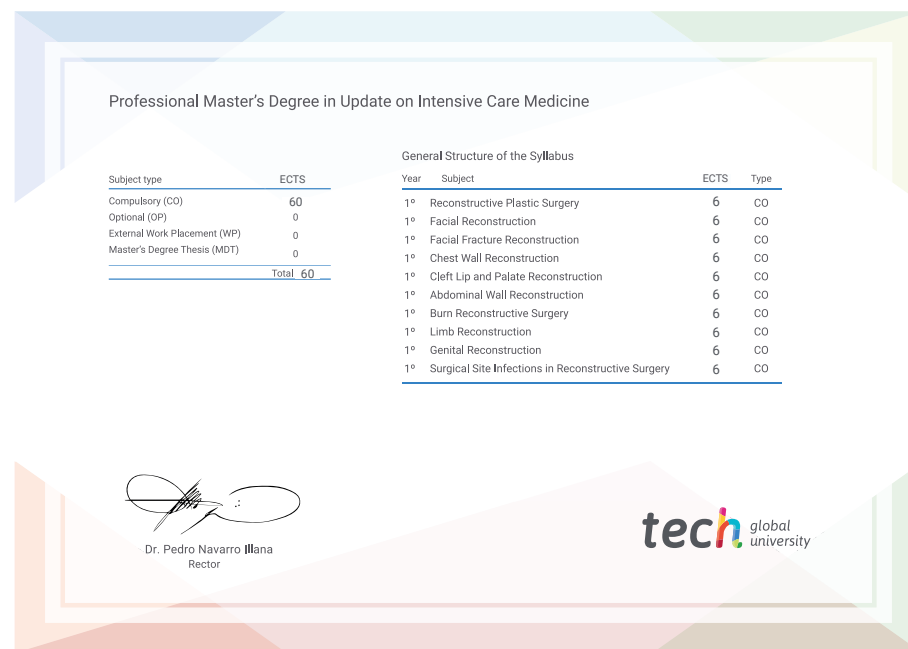
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Professional Master's Degree in Update on Intensive Care Medicine**

Modality: **online**

Duration: **12 months**

Accreditation: **60 ECTS**



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



future

health confidence people

education information tutors

guarantee accreditation teaching

institutions technology learning

community commitment

personalized service **tech** global university

knowledge present quality

online training  
Reconstructive Plastic Surgery

development languages

virtual classroom

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Global University
- » Credits: 60 ECTS
- » Schedule: at your own pace
- » Exams: online

# Professional Master's Degree Reconstructive Plastic Surgery

