

INTERNATIONAL MASTER IN DONATION AND TRANSPLANTATION OF ORGANS, TISSUES AND CELLS

2022-23 ONLINE EDITION

Presentation

Transplant Procurement Management (TPM) is an international educational program that provides demand-driven, high quality training that facilitates the transfer of knowledge and the development of professional competences as well as an excellent framework for networking worldwide.

The International Master in Donation and Transplantation of Organs, Tissues and Cells is a specific Master of Barcelona University that gathers the up to now efforts carried out by national and international organizations of this field. It takes advantage of the creation of the advanced European training framework, the use of internet, and collaboration agreements with several countries from Europe and USA.

The program includes **online training** and an **optional face to face internship** in a prestigious centre. Participants will have the opportunity to learn and to exchange knowledge with their colleagues, experts, tutors and the centres' staff. It is a modular master that can be done in different periods. Previous courses from TPM can be recognized.

Objectives

Its main goal is to bring together the knowledge, skills, and best practices which benefits healthcare professionals working as donor-transplant coordinators, tissue bankers and advanced cell therapies researchers by developing and updated educational program and issuing the Master University degree.

Specific objectives

- To provide healthcare professionals with the tools and resources that may support their work and the development of the multidisciplinary tasks in donor-transplant coordination, tissue banking and cell therapy programs.
- To facilitate the switch from the theoretical knowledge into the practice, through a critical reflection about their own experience.
- To optimize decision-making in the organ procurement process, to boost teamwork and to promote the use of communication technologies to share information, knowledge and best practices.
- To establish a consulting network with the participation of other allied international institutions to building up safe and quality transplant systems.
- To boost the increase in the donation rates and, consequently, in the transplantation rates among the countries represented by participants.

Skills and competences

General

- Promote the development of a strategic vision for the analysis of results and solving problems (e.g., how to increase donation rates).
- Develop skills: responsibility, motivation, empathy, flexibility, tenacity, enthusiasm, autonomy, creativity, and diplomacy.
- Acquire social communication skills, values (for example: how to resolve conflicts multidisciplinary).
- Planning and executing projects through self-study and search for tools and information.
- To encourage the development of attitudes of leadership and project management and equipment.
- Teamwork.
- Get started in the networking and international relations.

Specific

- Conduct the processes of organ, tissue, and cells donation. Be able to carry out programs of organ transplantation.
- Acquire skills and knowledge to carry out activities regarding tissue banks, cell cultures and cell therapies, and tissue transplants of stem cells.
- Develop systems for active detection of potential donors of organs, tissues and cells as well as their indicators and quality criteria.
- Identify situations of brain death and cardiac arrest and proper maintenance for the purpose of donation. Analyse the viability criteria of organs, tissues, and cells.
- Conduct a family interview to announce the death and raise donation, recognizing the state of psychological shock, denial and grief and know how to provide support for families.
- Planning a multi-organ and tissue extraction, knowing preservation methods and rules of distribution of organs and international platforms.
- Go into specifics of the donation and transplantation of living donor.
- Go into specifics of the donation and transplantation of donors with a beating heart.
- Learn the basics of immunology and immunosuppression concerning transplantation.
- Understand the specificities of organ transplantation and surgery.
- Encourage research and development of stem cell banks, tissues for research and cell cultures: pancreatic islets, hepatocytes, chondrocytes, neurological tissue, and reproductive tissue.
- Plan the operation and management of tissue banks for clinical use: tissue bank, blood, breast milk, amniotic membrane, cornea, bone, and vascular tissue.

Participants

Healthcare professionals, or other science related professionals, working or willing to work in the development of coordination and organization programs in national or local areas, in organ, tissue and cell donation and transplantation.

Structure

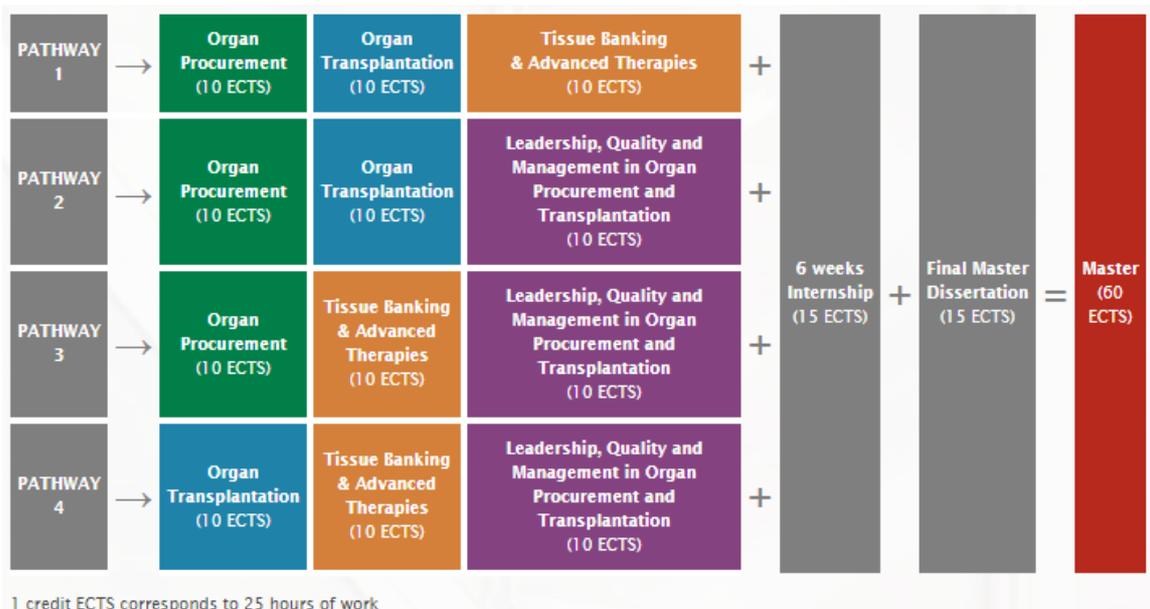
1500 hours that correspond to 60 ECTS credits from the Universitat de Barcelona. There are 4 different pathways. According to the itinerary chosen, students will follow 3 out of the following 4 online modules:

- Organ Procurement
- Leadership, Quality and Management in Organ Donation and Transplantation
- Organ Transplantation
- Tissue Banking and Advanced Therapies

To complete the master curriculum, the common modules are the following:

- Practicum
- Final Master Dissertation

Students must choose one out of these 4 pathways:



The modular structure allows the participant to take the Master in more than one academic year and to enroll the following modules separately. If a student enrolls in a module can be completed with a two-week internship.

Description of the modules

Organ Procurement

This training program covers the main aspects of the donation process:

- Donor detection and identification

Enable participants to learn the essential steps and most effective ways to identify potential or eligible organ donors and to enhance their referral to the Donor.

- Brain death diagnosis

Establish an understanding of the Brain Death definition and the requirements to accurately perform the clinical diagnosis and confirmatory testing.

- Donor management

Provide the opportunity to build skills and confidence in the BD donor's management, according to the most frequent pathophysiological changes occurred due to BD and targeted in the outcome graft survival and recipients best outcome.

- Family approach

Enable participants to build communication skills and confidence in breaking bad news and approaching potential donor families to obtain consent for organ donation.

- Organ retrieval and preservation and allocation criteria

Identify the different surgical techniques, the principles of organ preservation, solutions and techniques regularly used.

Identify the different criteria and systems that allow donated organs to be allocated equitably among transplant patients, seeking to achieve the best use of them.

- Donation after Circulatory Death (DCD)

Describes the categories and criteria, states the concept of warm ischemia, defines perfusion techniques, assess the viability of organs, and includes the ethical and legal aspects.

Leadership, Quality and Management in Organ Donation and Transplantation

The course aim is to expand the knowledge and understanding of donation practices, explore the impact of varying ethical frameworks, unique cultural needs, funding models and organizational structures and learn how to inspire health professionals, community, and nations in the donation concerns.

The course is designed to provide aspiring leaders, from developed and developing transplant and donation communities, the experience of learning from their peers and mentors, from similar and vastly dissimilar environments, how to serve their communities, recipients and donor families and fulfil the promises of donation and transplantation.

It will also allow confronting the challenges of donation of organs, tissues, and cell for transplantation by providing advanced leaders in donation, with examples of best practices in the science and business. The application of "business management" models and, in some cases, for-profit processing and supply

to hospitals has created an element of commercialism that can sit awkwardly with the donor or the donor family's motivation.

Contents:

- Organ procurement and transplant programs organization: Best practice models
- Management & leadership
- Teambuilding & empowerment
- Optimal cost-effective measures
- Engaging your staff: working with and through others
- Quality programs, quality indicators, standards and auditing in organ donation and transplantation
- Incorporating skills into practice

Organ Transplantation

This training program aims at providing the knowledge and competences needed for the successful clinical evaluation of the potential recipients of solid organs, as well as the waiting list criteria, and pre and post-transplant treatment.

The main goals of the module are:

- To improve participants' knowledge on acute and chronic kidney, liver, pancreas, heart and lung failure and adequately assess referred patients for transplantation.
- To provide participants with the knowledge of the principles of pre-op preparation (bench preparation), preparation of implant site (anatomic references including variations and anomalies), as well as common intra-operative challenges and variations.
- To identify and treat post-op complications: drug side-effects, infection, rejection, complications, recurrent disease.
- To provide knowledge on the surgical procedures (organ specific) and post-operative care of living donors.
- To improve short and long-term follow-up of the living donor with attention to physical and psycho-social well-being and to facilitate knowledge on living donor registries.

The topics of the course are:

- **General aspects**
 - Immunology basics and Immunosuppression
 - Infections and malignancies
 - Anesthesiology

- **Organ specific: Kidney, Liver, Pancreas, Heart, Lung**
 - Indications and Waiting List
 - Organ evaluation and surgical procedure (techniques and surgical complications)
 - Postoperative management and medical follow up (early/late & histopathology/radiology)
- **Living donation**
 - General aspects of living donation
 - Kidney and liver living donation
 - Living donor registries

Tissue Banking and Advanced Therapies

The banking of human tissues and cells has many facets and involves professionals with a wide range of skills and knowledge. They include experts with training in medical, technical, scientific, psychological, and communications fields. This course focuses on the many aspects of donation in cell and tissue banking in different economic, legal, and social contexts. The issues raised are relevant on a global stage. The donations from deceased and living donors may include bone marrow, cord blood, skin, cardiovascular, ocular, and musculoskeletal tissue, and amniotic membrane.

The professional requirements for the safety and quality of tissues and cells for transplantation have increased steadily over time and are reflected in the development of stringent regulations. The course provides an educational framework that will allow practitioners to establish optimal policies and practices for tissue and cell donation.

Online training contents:

- Tissue donor detection and selection criteria
- Ethical and regulatory issues in tissue banking
- Quality management in tissue banking
- Sterilization of tissue grafts
- Eye banking
- Cardiovascular banking
- Musculoskeletal banking
- Skin banking
- Advanced therapies
- Stem cells and cord blood banking
- Gamete banking
- Tissue living donation
- Tissue and eye banking today
- Legal, ethical, and regulatory aspects
- Quality management
- Traceability and biovigilance
- Detection, identification and suitability of tissue and eye donors
- Tissue and eye recovery and processing
- Facilities organization and design
- Clinical graft applications
 - Ocular and amniotic
 - Membrane
 - Skin
 - Cardiovascular
 - Musculoskeletal
- Hematopoietic stem cells
- Advanced therapies

Internship in an accredited centre

Participants will follow an online internship, including educational activities that take place in associated hospitals, an immersive visit to a transplant hospital with interactive glasses and live sessions with hospital's staff.

Face to face internship is optional, with the possibility to attend real cases in an accredited centre. The minimum weeks are 2.

Final Master Dissertation

Participants must write a dissertation based on the applicability of the knowledge and experience acquired during the training in their workplace and the internship. The contents must be practical and implementable in their workplace or professional career.

The dissertation constitutes the last evaluation test of the International Master in Donation and Transplantation of Organs, Tissues and Cells. Its aim is to promote the research spirit inside the participants and the application of the knowledge acquired in their working activity.

Evaluation

The evaluation guarantees that the participant has acquired an excellent level of contents' understanding. The internship will be evaluated by the tutor assigned and the Final Master Dissertation will be orally defended. Each Wednesday during the module period there will be a live session (12-15PM CET/CEST) that it is compulsory to attend. 80% of the live sessions must be accomplished in each module and internship to be pass the module, along with the complementary activities designed to achieve the goals of the program.

Calendar

ORGAN PROCUREMENT •Online: 3 rd Oct - 13 th Dec 2022
ORGAN TRANSPLANTATION •Online: 9 th Jan – 5 th March 2023
LEADERSHIP, QUALITY AND MANAGEMENT •Online: 6 th March – 2 nd April 2023
TISSUE BANKING & ADVANCED THERAPIES •Online: 11 th April – 11 th June 2023
INTERNSHIP •Online: January - March 2023 •Face to face internship between September 2022– July 2023 (optional)
FINAL MASTER DISSERTATION •Online. Oral defence: 15 th – 16 th June 2023

Language

English

Location

Medicine Faculty at Campus Clínic, Universitat de Barcelona (Casanova 143, 08036, Barcelona).

Pre-enrolment 2022-23

In order to be accepted, students must send their CV and a motivation letter to dyt@ub.edu. To be eligible for admission you need to have a Bachelor's degree or an equivalent first academic degree from an internationally recognized university.

Enrolment 2022-23

The accepted students must send all the documentation required to dyt@ub.edu:

- Digital photo
- Photocopy of the applicant's Spanish ID card (DNI), foreigner ID card (NIE) or passport.
- Legalized and certified photocopy of the bachelor's degree.
- Legalized and certified photocopy of an academic certificate listing the subjects completed.

More information: <http://www.tpm-master.org/>

Fee: 7500 euros

Optional face to face internship: 500 euros/week (minimum of 2 weeks)

You can either choose to take the Master in 1 or 2 academic years. An extra fee of 500 euros will be charged in case of delaying the master into a second year once the program started.

The fee includes:

- Official registration
- Educational material
- Practicum management
- Academic tuition throughout the course

Travel and lodging for attending the face-to-face parts of the program are not included.

More information: <http://www.tpm-master.org/>

STAFF

Director

R. Valero

Academic directors

R. Adalia, C. Ballesté, J. Colmenero, F. Diekmann, C. Fondevila, M. Istrate, A. Navarro, E. Oliver, D. Paredes, I. Revuelta, V. Torregrosa, A. Villamor, M. Sacchi.

Coordinator

D. Elies

E-learning tutor

A. Rudak

COLLABORATING ENTITIES

Associated medical centres for the internship

Banc de Sang i Teixits (Spain)
Clínica San Francisco (Spain)
European Homograft Bank (Belgium)
Fondazione Banca dei Tessuti di Treviso Onlus (Italy)
Fundació Puigvert (Spain)
H.U. 12 de Octubre (Spain)
C.H.U. A Coruña (Spain)
C. Barraquer (Spain)
H.U. de Bellvitge (Spain)
H. Clínic de Barcelona (Spain)
H.C.U. "Lozano Blesa" de Zaragoza (Spain)
H.U. Germans Trias i Pujol (Spain)
H.G.U. Gregorio Marañón (Spain)
H.U. Joan XXIII (Spain)
H. del Mar (Spain)
H.U. Miguel Servet (Spain)
Org. Catalana de Trasplantaments (Spain)
Of. de Coordinación de Trasplantes de Galicia (Spain)
Parc de Salut Mar (Spain)
H. Sant Joan de Déu (Spain)
Org. Nacional de Trasplantes (Spain)
H.U. Son Dureta (Spain)
H.U. Vall d'Hebron (Spain)
H.U. Virgen del Rocío (Spain)
H.U. Marqués de Valdecilla (Spain)
H.U. Puerta de Hierro Majadahonda (Spain)
H.U. Central de Asturias (Spain)
H.U. Dr. Josep Trueta (Spain)

Gift of Life Institute (EUA)
Life Source (EUA)
Nevada Donor Network (EUA)
Lifebanc (EUA)
UZ Leuven (Belgium)
National Center for Tissue and Cell Banking (Poland)
One Legacy (EUA)
Gift of Life Philadelphia (EUA)
H.U. y Politécnico La Fe de Valencia (Spain)

Supporting organizations

Asociación Española de Bancos de Tejidos (AEBT)
European Training Program on Organ Donation (ETPOD)
Fundació Josep Carreras
Grupo de Estudio de la Infección en el Trasplante (SEIMC- GESITRA)
Programa de Terapia Celular de la UB (TCUB)
Red Española de Terapia Celular (RED-TERCEL)
Sociedad Andaluza de Trasplante de Órganos y Tejidos (SATOT)
Sociedad Española de Cirugía Ortopédica y Traumatología (SECOT)
Sociedad Española de Medicina Intensiva, Crítica y Unidades Coronarias (SEMICYUC)
Sociedad Española de Terapia Génica y Celular (SETGYC)
Sociedad Española de Trasplante (SET)
Sociedad Madrileña de Trasplante (SMT)
Societat Catalana d'Anestesiologia, Reanimació i Terapèutica del dolor (SCARTD)
Societat Catalana de Cirurgia Ortopèdica i Traumatologia (SCCOT)
Societat Catalana de Medicina Intensiva i Crítica (SOCMIC)
Societat Catalana de Trasplantament (SCT)