

## Organ and Tissue Transplants

Code: 103603  
ECTS Credits: 3

Degree	Type	Year	Semester
2502442 Medicine	OT	5	0
2502442 Medicine	OT	6	0

### Contact

Name: Juan Morote Robles  
Email: Juan.Morote@uab.cat

### Use of Languages

Principal working language: catalan (cat)  
Some groups entirely in English: No  
Some groups entirely in Catalan: Yes  
Some groups entirely in Spanish: No

### Prerequisites

It is absolutely necessary to have achieved sufficient knowledge in:  
General and specific anatomy of the different organs and systems.  
General and specific physiology of different organs and systems.  
Cell biology, biochemistry and molecular biology.  
and it is advisable to have begun in the knowledge of the study of the different medical and surgical pathologies and in the clinical practice.  
The student will acquire the commitment to preserve the confidentiality and professional secret of the data to which he can access because of the learning in the welfare services. Also to maintain an attitude of professional ethics in all its actions.

### Objectives and Contextualisation

The subject, under the mention of Clinical Surgery, is scheduled for the fifth year of the Degree of Medicine, once the basic knowledge about the structure and function of the human body has been obtained and of introducing itself to the knowledge of the " Study of the different medical and surgical pathologies and in clinical practice

Its general objective is to introduce the student to the world of the transplant of organs and tissues. Although many of the concepts have been able to be described in other subjects, the social, ethical, legal and medical problems make it convenient to frame from a global point of view.

The specific training objectives are that the student be able to know the laws that regulate the transplant in our country and our environment, detect the different sources of organs, describe the basic principles of obtaining and maintaining the organs, defining the Concepts of biological identity and rejection, describe the modulation of the immune response, list the indications and the main technical characteristics and the complications of each of the organic transplants, the conditions for the establishment of a body of organs, objectively discuss the problems ethics and the clinical application of transplants, know the main lines of basic and clinical research and the problems that are pending in the field of the transplant.

### Competences

- Medicine
- Be able to work in an international context.

- Convey knowledge and techniques to professionals working in other fields.
- Critically assess and use clinical and biomedical information sources to obtain, organise, interpret and present information on science and health.
- Demonstrate an understanding of the fundamentals of action, indications, efficacy and benefit-risk ratio of therapeutic interventions based on the available scientific evidence.
- Demonstrate sufficient supervised clinical experience in hospitals or other healthcare centres, and familiarity with patient-centred care management and the correct use of tests, medicines and other resources of the healthcare system.
- Demonstrate understanding of the importance and the limitations of scientific thought to the study, prevention and management of diseases.
- Design and manage programmes and projects in the field of health.
- Engage in professional practice with respect for patients' autonomy, beliefs and culture, and for other healthcare professionals, showing an aptitude for teamwork.
- Establish a diagnostic approach and a well thought-out strategy for action, taking account of the results of the anamnesis and the physical examination, and the results of the appropriate complementary tests carried out subsequently.
- Listen carefully, obtain and synthesise relevant information on patients' problems, and understand this information.
- Maintain and sharpen one's professional competence, in particular by independently learning new material and techniques and by focusing on quality.
- Maintain and use patient records for further study, ensuring the confidentiality of the data.
- Recognise the role of complexity, uncertainty and probability in decision-making in medical practice.
- Recognize one's role in multi-professional teams, assuming leadership where appropriate, both for healthcare provision and for promoting health.
- Use information and communication technologies in professional practice.

## Learning Outcomes

1. Anticipate and compare information for good decision-making.
2. Apply basic surgical manoeuvres in practice with simulated models.
3. Back decision-making with the best scientific evidence.
4. Be able to work in an international context.
5. Build diagnostic and therapeutic algorithms based on the best scientific evidence, taking into account the facilities available.
6. Calculate the surgical risk indices, both general and by apparatus, and adjust the indications accordingly.
7. Choose content in accordance with the rules of evidence-based medicine.
8. Choose the best possible research design to respond to the hypothesis put forward.
9. Convey knowledge and techniques to professionals working in other fields.
10. Critique original or review scientific papers.
11. Define the statistical methodological bases.
12. Describe biomedical bibliographic databases and ways to filter the information provided.
13. Encourage the search for answers to the questions that arise during surgery.
14. Establish a working hypothesis and its objectives.
15. Evaluate the appropriate scientific methodology for a biomedical paper.
16. Formulate and discuss the results obtained.
17. Gather information and select the most important facts about the patient, both in normal visits and emergencies.
18. Identify funding sources and set up a budget.
19. Identify the ethical bases for decision-making in the field of surgery.
20. Identify the legal bases for creating, maintaining and using databases that contain medical information.
21. Integrate all pre-operative information for decision-making.
22. Justify decisions taken based on the information obtained.
23. Maintain and sharpen one's professional competence, in particular by independently learning new material and techniques and by focusing on quality.
24. Make a critical analysis of the objectives to be achieved with surgery, contrasting this with the adverse effects that may be involved.
25. Manage the information available and set levels of discussion in multidisciplinary groups.

26. Participate in the whole process of patient-care, from diagnosis to aftercare.
27. Present results orally or in writing.
28. Provide the bases for preparing clinical guides and constructing diagnostic and therapeutic algorithms.
29. Transmit the information on the surgical procedure to be performed and draw up a document of informed consent.
30. Use information and communication technologies in professional practice.
31. Use the specific bibliographic sources that will help to develop further one's knowledge.

## Content

1. History, concepts and type of transplants.
2. Immunosuppression. Concepts applied to transplantation. Drugs and patterns of immunosuppression.
3. Obtención de órganos y tejidos. The organ donor. Brain death Selection of organs. Ethical concepts.
4. Coordination of transplants.
5. Surgical techniques for the removal and preservation of organs.
6. Renal transplantation. Indications, preparation, immunosuppression guidelines and results.
7. Renal transplantation. Surgical technique and complications.
8. Liver transplantation. Indications, preparation, immunosuppression guidelines and results.
9. Liver transplantation. Surgical technique and complications.
10. Pancreatic transplant. Indications, preparation, immunosuppression guidelines and results. Surgical technique and complications.
11. Pulmonary transplantation. Indications, preparation, immunosuppression guidelines and results.
12. Pulmonary transplantation. Surgical technique and complications.
13. Cardiac transplantation. Indications, preparation, immunosuppression guidelines and results. Surgical technique and complications.
14. Intestinal transplantation. Indications, preparation, immunosuppression guidelines and results. Surgical technique and complications.
15. Tissue transplantation. The tissue banks.

## Methodology

This Guide describes the framework, contents, methodology and general rules of the subject, in accordance with the current curriculum. The final organization of the subject with respect to the number and size of groups, distribution in the calendar and dates of examinations, specific criteria for evaluation and review of exams, will be specified in each of the hospital teaching units (UDH), which will be explained through their web pages and the first day of class of each subject, through the professors responsible for the subject in the UDH.

For the present year, the professors designated by the departments as responsible for the subject at the Faculty level and the UDH are:

Responsible department (s):

Head of Faculty: Joan Morote Robles - jmorote@vhebron.net

Responsible UDHSP

Josep Maria Padró Fernández jpadro@santpau.cat

Responsible UDHVH

Joan Morote Robles jmorote@vhebron.net

Responsible UDGtiP Responsables UDHPT

NO OFFER IS NOT OFFERED

General teaching methodology:

DIRECTED TEACHING TYPES: (~ 20% Classroom theory theory; clinical laboratory practices, clinical case seminars and clinical assistance practices)

Theory (TE typology). Group size: enrollment group. Scheduled sessions 15 (1 h per session).

SUPERVISED TEACHING TYPES (~ 20-25%. Practical care without guidelines, supervised practices, virtual classes

PRACTICAL ASSISTANCE WITHOUT GUIDELINES

Period of unregulated curricular practices corresponding to studies in the field of health, during which the students experience in a real context and acquire specific skills under the direct supervision of the UAB

professors or of external professionals involved. The attendance count is not foreseen in directed activities, although this practicum can involve individual or group work meetings with UAB faculty. Therefore, only students' follow-up and evaluation are computed. Computation is also implicit in the preparation.

AUTONOMOUS WORK (50-55% total 37.5-41.25 hours)

Comprehensive reading of texts and articles, study and realization of schemes, summary and conceptual assimilation of the contents. Preparation of presentations and deliveries.

EVALUATION (5% total 3.75 hours):

## Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
THEORY (TE)	15	0.6	1, 3, 6, 5, 11, 20, 19, 18, 21, 22, 16, 27
Type: Supervised			
ANSWERING PRACTICE ASSISTANT (PRASS)	19	0.76	2, 24, 9, 25, 26, 28, 17, 4, 29
Type: Autonomous			
WORK LABOR / PERSONAL STUDY / READING OF ARTICLES / INTEREST REPORTS	39	1.56	10, 24, 9, 14, 25, 19, 27, 17, 29, 31

## Assessment

It will be necessary for the student to attend 80% of the supervised and supervised activities and present a syllabus of their activities. A continuous assessment will be made and finally there will be an objective multiple choice test.

## Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Continuous evaluation: Assistance and active participation in classes and seminars	30%	0	0	1, 2, 15, 5, 11, 12, 25, 19, 21, 22, 23, 27, 28, 4
Syllabus_Practicum	30%	1	0.04	1, 24, 9, 25, 19, 21, 23, 16, 29
Written evaluation through multiple choice objective tests / restricted questions essay tests	40%	1	0.04	1, 2, 3, 15, 6, 5, 10, 11, 12, 24, 9, 8, 14, 25, 20, 19, 18, 13, 21, 22, 23, 26, 16, 17, 7, 29, 31, 30

## Bibliography

Bibliografia específica

1. López Navidad A, Kulisevsky J, Caballero F. El donante de órganos y tejidos: evaluación y manejo. Spring-Verlag Ibérica. Barcelona, 1997.
2. Manyalic M, Cabrer C. Transplant Coordination Manual. TPM-Les Heures-Universitat de Barcelona-Fundació Bosch Gimpera. Barcelona, 2001.

3. Küss R, Bourget P. Una historia ilustrada del trasplante de órganos. Rueil-Malmaison: Laboratoires Sandoz, 1992..
4. Neuberger J, Adams D. Immunology of liver transplantation. Edward Arnold, 1993.
5. Flye MW. Principles of organ transplantation. WB Saunders. Philadelphia, 1989.
6. Flye MW. Atlas of organ transplantation. WB Saunders. Philadelphia, 1995.
7. Henriksen AJ, Simmons RL, Finch ME, Ascher NL. Manual of vascular access, organ donation and transplantation. Springer, 1984.
8. Kremer B, Broelsch CE, Henne-Bruns D. Atlas of Liver, Pancreas and Kidney Transplantation. Georg Thieme Verlag. Stuttgart, 1994.
9. Caralps A, Gil-Vernet JM, Vives J. Cirugía del trasplante renal. Ed Toray SA. Barcelona, 1983.

#### Bibliografía de consulta

1. Arias M, Campistol JM, Matesanz R, Morales JM, Ortega F. Trasplante renal. Editorial Médica Panamericana. Madrid, 2007.
2. Asfar S, Zhong R, Grant D. Small bowel transplantation. Surg Clin North Am October 1994; 74 (5): 1197-1210.
3. Asher NL, Hansen JA, Strom T. Year Book of Transplantation 1992. San Luis: Mosby Year Book, 1992.
4. Berenguer J, Parrilla P. Trasplante Hepático. Elba S.A. Madrid, 1999.
5. Bussutil RW, Klintmaln G. Transplantation of the liver.: WB Saunders. Philadelphia, 1995.
6. Calne RY, ed. Liver Transplantation. Grune & Straton. New York, 1983.
7. Carpentier A, Farge D, eds. Transplantation D'organes. Flammarion. Paris, 1992.
8. Cerilli GJ. Organ transplantation and replacement.: Lippincot. Philadelphia, 1988.
9. Cuervas Mons V, del Castillo Olivares JL. Introducción al trasplante de órganos y tejidos.: ELBA Madrid, 1994.
10. Cuervas Mons V. Trasplante hepático. Sandoz Pharma. Barcelona, 1993.
11. Dousset B, Houssin D. Greffes du foie chez l'enfant. Rev Pract Jun 1994; 44 (11): 1500-1507.
12. Lake JR, ed. Advances in Liver Transplantation. Gastrl Clin N Am June 1993; 22: 213-473.
13. Makowka L. The handbook of transplantation management. Austin: RG Landes, 1991.
14. Moreno González E, Gómez Sanz R. Presente y futuro del trasplante de órganos abdominales. Jarpyo ed., 1997.
15. Roit I, Brostoff J, Male D. Immunology. 3ª ed. Gower Medical Publishing. New York, 1993.
16. Salvatierra O, Lum CT, eds. History of the American Society of Transplant Surgeons. Minneapolis: Stanton Publication Services for the American Society of Transplant Surgeons, 1994.
17. Starzl TE. El hombre puzzle. JR Prous Edotores, Barcelona, 1994.
18. Starzl TE, Shapiro R, Simmons RI. Atlas of organ transplantation. Gower Medical Publishing. New York, 1992.
19. Starzl TE, Demetris AJ. Liver transplantation: A 31-year perspective. Curr Probl Surg. February 1990; pt I 51-116.
20. Starzl TE, Demetris AJ. Liver transplantation: A 31-year perspective. Curr Probl Surg. March 1990; pt II: 119-178.
21. Starzl TE, Demetris AJ. Liver transplantation: A 31-year perspective. Curr Probl Surg. April 1990; pt III: 183-240.
22. Talbot-Wright R, Carretero P. Manual del trasplante renal. Editorial Médica Panamericana. Madrid, 1998.
23. Willians JW. Hepatic Transplantation. WB Saunders. Philadelphia, 1990.

#### Recursos d'Internet

Organització Catalana de Trasplantament: <http://www10.gencat.cat/catsalut/ocatt/es/htm/index.htm>

Organización Española de Trasplante: <http://www.ont.es/Paginas/default.aspx>

European Society of Organ Transplantation: <http://www.esot.org/>

American Society of Transplant Surgeons: <http://www.astso.org/>

European Liver Transplant Registry: <http://www.eltr.org/>

---

Scientific Registry of Transplant Recipients: <http://www.ustransplant.org/>

United Network for organ sharing: <http://www.unos.org/>

International Society for Heart & Lung Transplantation: <http://www.ishlt.org/>

International Pancreas Transplant Registry : <http://www.iptr.umn.edu/>

Intestinal Transplant Association: <http://www.intestinaltransplant.org/>