

Master in Reconstructive Microsurgery

University Postgraduate Degree

2-Year Educational Program (65 ECTS)

International Faculty:

Tokyo University Hospital, Tokyo - Japan

Institut Gustave Roussy, Paris - France

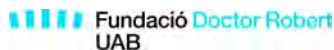
Gent University Hospital, Gent - Belgium

European Institute of Oncology, Milan - Italy

Helsinki University Hospital, Helsinki - Finland

Queen Victoria Hospital, East Grinstead - UK

Hospital de la Santa Creu i Sant Pau, Barcelona - Spain



PROGRAM CONTENTS

(Course 2011-12)

Module 1: Introduction: essential concepts in microsurgery

Module 2: Microvascular surgery training in rats

Module 3: Fresh cadaver dissection: training in microsurgical flaps

Module 4: Live animal model (Meishan pig): dissection techniques of perforator flaps and supramicrosurgery

Module 5: Clinical training in head and neck microsurgical reconstruction

Module 6: Clinical training on breast microsurgical reconstruction

Module 7: Clinical training on limb microsurgical reconstruction

Module 8: Supramicrosurgery

For further information or registration:

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2nd MASTER IN RECONSTRUCTIVE MICROSURGERY

PRESENTATION

Microsurgery has become a standard part of all tissue transfer techniques and is an essential component in the most advanced reconstructive procedures, such as vascular anastomoses, lymphatic microsuture and neurorrhaphies. Over the last ten years, the exponential growth in the use of microsurgical techniques, especially in plastic surgery, clearly indicates that a skilled microsurgical team is indispensable in all major hospitals.

This *1st Master in Reconstructive Microsurgery* offers comprehensive, specific training in fields such as breast surgery, head and neck reconstruction, limb salvage and supramicrosurgery. The programme includes specific training modules that cover both theoretical and practical aspects. The acquisition of high level skills is guaranteed to all trainees. This master's degree is officially recognised by the Universitat Autònoma of Barcelona.

This degree programme is addressed to plastic surgeons, surgical specialists without experience in microsurgery, and experienced microsurgeons who want to widen their range of competences and learn new skills.

The training program will be individually tailored to the needs of each student. A high level of performance is expected, however, and quality instruction is guaranteed.

Faculty supervisory updating sessions will be held every 3 years to discuss complex and challenging clinical cases, new developments and close interaction between trainees and faculty will be encouraged.

LEARNING OUTCOMES

- Master and apply suture techniques in microvascular surgery and neurography
- Analyse and determine the most suitable microsurgical technique for a particular case.
- Preoperatively plan all types of microsurgical flaps: myocutaneous flaps, muscular flaps, bone flaps, axial-cutaneous flaps and perforator flaps.
- Perform microsurgical techniques in all major fields: breast reconstruction, head and neck surgery, and limb salvage.
- Carry out postoperative follow up of microsurgical flaps: Monitoring techniques.
- Approach and perform microsurgical flap salvage techniques.
- Resolve complications and sequelae of reconstructive procedures.
- Plan and perform limb reimplantation procedures.
- Learn and implement supramicrosurgery techniques.

Analyse needs and indications for transplantation.

WHO IS IT FOR

This Master is designed for plastic surgeons and other surgical specialists for whom microsurgery has become an essential component of their practice.

MASTER DIRECTOR

Dr. Jaume Masià

Hospital de Sant Pau (Universitat Autònoma de Barcelona). Barcelona, Spain.

EDUCATIONAL COORDINATORS

- Dr. Frederic Kolb (Institut Gustave Roussy, Paris – France)
- Prof. Isao Koshima (Tokyo University Hospital, Tokyo – Japan)
- Dr. T.C. Teo (Queen Victoria Hospital, East Grinstead – UK)
- Dr. Gemma Pons (Hospital de Sant Pau, Barcelona – Spain)
- Dr. Cristina Garusi (European Institute of Oncology, Milan – Italy)
- Dr. Sinikka Suominen (Helsinki University Hospital, Helsinki – Finland)
- Dr. Koenraad Van Landuyt (Gent University Hospital, Gent – Belgium)

MASTER'S DEGREE

Candidates who successfully complete the full course will be awarded a Master's Degree recognised by the Universitat Autònoma of Barcelona. This degree is a 65 ECTS Master (ECTS: European Credits Transfer System) (1 ECTS = 25 hours in student's work). To be awarded this Master's Degree, trainees must complete all the modules, pass the practical assessment and present a clinical practice report.

To obtain a Postgraduate Diploma in Reconstructive Microsurgery (35 ECTS), trainees must study M1 + M2 + M3 + M4 + M8 +M9 modules, plus M5 or M6 or M7.

A *Certificate* will be awarded to trainees who complete a single module.

Master's Degree in Reconstructive Microsurgery	65 ECTS	M1 + M2 + M3 + M4 + M5 + M6 + M7 + M8 + M9
Diploma in Head & Neck Reconstructive Microsurgery	35 ECTS	M1 + M2 + M3 + M4 + M5 + M8
Diploma in Breast Reconstructive Microsurgery	35 ECTS	M1 + M2 + M3 + M4 + M6 + M8
Diploma in Reconstructive Microsurgery of the Lower Limb	35 ECTS	M1 + M2 + M3 + M4 + M7 + M8

METHODOLOGY

The presential part of this Master's degree is given in eight modules of five-day training courses held throughout the first year. Some of the practical training courses are also presential in different hospitals but others can be conducted in the participant's own centre, with periodic assessment of the Faculty member directing the study. Emphasis will be given to practical skills in microsurgical techniques, and will include diagnosis, therapeutic options, decision-making concerning techniques, and recognition and management of risks and complications.

PROGRAMME TEACHING PLAN

Module M1. Introduction: Essential concepts in microsurgery.

Theoretical introduction to the basic concepts of microsurgery.

- History of microsurgery
- Microscope and microsurgical instruments
- Selection of suture material for microsurgical procedures
- Basic skills in microsurgery
- Advanced skills in microsurgery
- Preoperative microsurgical planning

- Microsurgical flap monitoring
- Microsurgical flap salvage
- Refinements in microsurgical reconstruction

Module M2. Workshop: Microvascular surgery training using a small animal model (rats).

Intensive training course on basic microsurgical skills using a small animal model (rat).

- Microsurgical suture practice on surgical gloves
- Epineural and perineural suture of the sciatic nerve
- End-to-end suture of the carotid artery and femoral artery
- End-to-end suture of the jugular vein and femoral vein
- Aorto-iliac end-to-end suture
- End-to-side suture between femoral artery and vein
- “In situ” groin flap
- Distant groin flap to the neck

Module M3. Workshop: Fresh cadaver dissection: microsurgical flap training

Flap dissection training using a fresh cadaver model.

- Anterolateral Thigh Flap (ALTF)
- Deep Inferior Epigastric Perforator flap (DIEP)
- Superficial Inferior Epigastric Artery flap (SIEA)
- Superior Gluteal Artery Perforator flap (SGAP)

- Inferior Gluteal Artery Perforator flap (IGAP)
- Superficial Circumflex Inguinal Perforator flap (SCIP)
- Thoracodorsal Artery Perforator flap (TAP)
- Osteocutaneous peroneal artery perforator flap
- Propeller flaps based on peroneal and tibial perforators
- Internal saphenous perforator flap

**Module M4. Workshop using a live animal model (Meishan pig):
dissection techniques in perforator flaps and supramicrosurgery**

Intensive course on dissection of perforator flaps in live animals (Meishan pig) and basic supramicrosurgical skills training Perforator flap anatomy.

- Preoperative planning of perforator flaps
- Dissection technique of perforator flaps
- Fundamentals of microsurgical techniques
- Raising gluteal and dorsal perforator flaps
- Transferring perforator flaps to recipient vessels
- “Free Style” perforator flaps on live animal model

Module M5. Clinical training on head and neck microsurgical reconstruction

Head and neck microsurgical reconstruction procedures will be performed and students will attend in small groups. The programme will include live webcast surgery and students interactive participation will be encouraged.

- Oncological criteria in head and neck tumors
- Reconstructive alternatives in head and neck surgery: form, function and aesthetics
- Evaluation and indications for pedicled flap versus free flap
- Anterolateral thigh perforator flap (ALTF)
- Thoracodorsal artery perforator flap (TAP)
- Deep inferior epigastric perforator flap (DIEP) with Taylor extension
- Free fibula flap and free osteocutaneous peroneal flap for bone reconstruction.
- Deep circumflex iliac artery perforator flap with iliac crest for bone reconstruction
- Radial arm flap.

Module M6. Clinical training on breast microsurgical reconstruction

Small groups of students will attend microsurgical breast reconstruction procedures. Live webcast surgery will also be shown and students' interactive participation will be encouraged

- Oncological criteria in breast tumors.
- Reconstructive planning in breast tumors.
- Breast reconstruction with implant vs autologous tissue reconstruction

- Immediate and delayed reconstruction.
- Breast reconstruction with DIEP flap
- Breast reconstruction with SIEA flap
- Breast reconstruction with TAP flap
- Breast reconstruction with SGAP flap
- Breast reconstruction with IGAP flap
- Breast reconstruction with fat grafting
- Breast reconstruction with transverse myocutaneous gracilis flap (TMG)

Module M7. Clinical training in microsurgical reconstruction of the lower limb

Small groups of students will attend lower limb microsurgical reconstruction procedures. Live webcast surgery will be shown and interactive participation will be facilitated.

- Oncological criteria in lower limb tumours.
- Reconstructive alternatives in lower limb surgery: form, function and aesthetics.
- Reconstruction following high energy lower limb trauma
- Reconstructive approaches in chronic osteomyelitis of the lower limb
- Reconstruction of lower limb defects with latissimus dorsi muscle flap
- Reconstruction of lower limb defects with ALT flap

- Reconstruction of lower limb defects with TAP flap
- Reconstruction of lower limb defects with radial arm flap.
- Reconstruction of lower limb defects with fibular flap or osteocutaneous peroneal flap
- Reconstruction of lower limb defects with SCIP flap
- Re-implants

Module M8. Supramicrosurgery

- Assessment and surgical treatment of lymphoedema
- Lympho-venous anastomosis
- Vascularised lymphatic node transfer
- Free vascularised nerve flaps
- Microsurgical nanoflaps

Module M9. Microsurgical clinical training follow up in different centers

The programme includes a practical training module with feedback from facilitators. During this period, students will intervene in real cases involving reconstructive microsurgery. They will present cases to the other students and faculty to clarify doubts and evaluate the surgery.

- Joint review of the microsurgical technique
- Presentation and discussion of complex clinical cases

- Resolution of immediate and delayed post-surgical complications involving the flaps
- Optimisation of technique, tailored to each student

EVALUATION

Clinical and practical assessments will be carried out.

Minimal requirements to be awarded the Master's degree are:

- Attendance of at least 80% in scheduled classes
- A grade of at least 70% of multiple choice exam of each module
- Surgical efficiency and efficacy of at least 80 %
- Research report
- A grade of at least 70% in the theoretical assessment of clinical cases

Practical work will be assessed during the presential course in module M9. Faculty will assess the therapeutic approach, the suitability of the chosen procedure and the quality of the oral presentation of clinical cases.

SCHEDULE

Master's degree

First course: June 2011 to March 2012

Second course: March to November 2012

Diploma

June 2011 to March 2012

MODULE	DATE
M1 Introduction. Essential concepts in microsurgery	June 2011
M4 Workshop using a live animal model (Meishan pig): dissection techniques in perforator flaps and supramicrosurgery	June 2011
M3 Workshop: Fresh cadaver dissection: microsurgical flap training	June 2011
M5 Clinical training on head and neck microsurgical reconstruction	October 2011
M2 Workshop: Microvascular surgery training using a small animal model (rats)	October 2011
M6 Clinical training on breast microsurgical reconstruction	November 2011
M7. Clinical training in microsurgical reconstruction of the lower limb	January 2012
M8 Supramicrosurgery	March 2012
M9. Clinical training	March to November 2012. This will include the stage (1-4 weeks) where feedback will be

	given on practical sessions, and the final assessment (December 2012)
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FACULTY

Prof. Isao Koshima (Tokyo University Hospital, Tokyo – Japan)

Dr. T.C. Teo (Queen Victoria Hospital, East Grinstead – UK)

Dr. Frederic Kolb (Institut Gustave Roussy, Paris – France)

Dr. Cristina Garusi (European Institute of Oncology, Milan – Italy)

Dr. Sinikka Suominen (Helsinki University Hospital, Helsinki – Finland)

Prof. Phillip Blondeel (Gent University Hospital, Gent – Belgium)

Dr. Koenraad Van Landuyt (Gent University Hospital, Gent – Belgium)

Dr. Joan Pi Folguera (Hospital Parc Taulí, Sabadell – Spain)

Dr. Carlos Tejerina (Hospital Clínico, Valencia – Spain)

Dr. Enric Cáceres (Hospital del Mar, Barcelona – Spain)

Dr. César Casado (Hospital de La Paz, Madrid – Spain)

Dr. Helena Bascuñana (Hospital de Sant Pau, Barcelona – Spain)

Dr. Joan Majó (Hospital de Sant Pau, Barcelona – Spain)

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Dr. Susana López (Hospital de Sant Pau, Barcelona – Spain)

Dr. Manuel Fernández (Hospital de Sant Pau, Barcelona – Spain)

Dr. Carmen Vega (Hospital de Sant Pau, Barcelona – Spain)

Dr. Jaume Masià (Hospital de Sant Pau, Barcelona – Spain)

NUMBER OF STUDENTS ACCEPTED

A maximum of 20 and a minimum of 9 students will be accepted to the Master program. The number of students admitted to the Diploma program will depend on the number of students enrolled in the Master.

LOCATION

Barcelona – Spain: M2, M5, M6, M7, M8, M9

Paris – France: M1, M3 and M4

Depending on student's preferences and availability of centres, the practical sessions (M9) will take place at the following reference hospitals:

- Hospital de la Santa Creu i Sant Pau (Barcelona – Spain)
- Queen Victoria Hospital (East Grinstead - UK)
- Institut Gustave Roussy (Paris – France)
- European Institute of Oncology (Milan – Italy)
- Helsinki University Hospital (Helsinki – Finland)
- Gent University Hospital (Gent – Belgium)
- Tokyo University Hospital (Tokyo – Japan)

DURATION

2 years

CREDITS

A total of 65 ECTS (European Credits System Transfer) will be awarded. The ECTS is a student-centred system based on the student workload required to achieve the objectives of a program. 1 ECTS is equivalent to 25 learning hours.

UPDATING COURSES

Knowledge networking... Update sessions will be held every three years to discuss clinical cases, to stay abreast of current knowledge and to present new techniques and tools. The philosophy of these sessions is to establish a specialised working group with effective communication between former students and faculty.

REGISTRATION

Application deadline: 30th April 2011

ELEGIBILITY

- For the Master Degree: Specialists in plastic surgery and final-year plastic surgery residents
- For the Post-graduate Diploma: Specialists in General Surgery, Gynaecology, Orthopaedics, ENT and Maxillofacial Surgery

Selection criteria will be based on:

- Curriculum vitae
- Referees (2 referee letters are required)

TUITION FEES

Master degree 10.000 €

Diploma degree 6.000 €

The Master's degree fees are payable in two instalments of 6.000 € and 4.000 €.

INFORMATION

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