

68421 - Introduction to microsurgery research

Syllabus Information

Academic Year: 2019/20

Subject: 68421 - Introduction to microsurgery research

Faculty / School: 104 -

Degree: 530 - Master's in Introduction to Medical Research

ECTS: 5.0

Year: 1

Semester: Second semester

Subject Type: Optional

Module: ---

1.General information

1.1.Aims of the course

To obtain first hand experience in microsurgery (clinical and experimental and research).

Having previous experience in basic research, students should be able to analyze research in microsurgery and also to propose new lines of work

1.2.Context and importance of this course in the degree

The course is addressed to specialist, residents and also nurses specially interested in microsurgery or in surgical research

1.3.Recommendations to take this course

A previous background in basic surgical techniques or experience in surgery is advisable

2.Learning goals

2.1.Competences

Knowledge in principles and fundamentals of microsurgery

Knowledge in basic microsurgery techniques

knowledge in experimental microsurgery

2.2.Learning goals

2.3.Importance of learning goals

3.Assessment (1st and 2nd call)

3.1.Assessment tasks (description of tasks, marking system and assessment criteria)

Attendance to lectures

Attendance to experimental works

Collaborative work (analyses of a research work or presentation of an original project of research work)

4.Methodology, learning tasks, syllabus and resources

4.1.Methodological overview

Lectures , from 16.00 h. to 20.00 h.

Num of students admitted: 20

Experimental practice in lab. (CIBA Building, Av. San Juan Bosco 15. 50009 Zaragoza)

Topics

Basic microsurgery

- The surgical microscope (description and handling)
- Image magnification
- Surgical instruments
- Suture materials
- Hemostasia
- Dissection techniques maneuvers
- Experimental animal handling (law regulations)
- How to prepare experimental surgery
- Wound management
- Instruments (needles, suture lines, needle holders etc.)

Special microsurgery

- Muscle tendinous surgery
- Technique of tendinous suture
- Muscle dissection and stitch
- Fascial suture techniques
- Drains

Maxillofacial microsurgery

- General maxillofacial surgery
- Flaps in maxillofacial surgery

Ophthalmology

- Cataracts and eye lens
- Intraocular lenses
- Glaucoma surgery

4.2.Learning tasks

4.3.Syllabus

The course will address the following topics:

Section 1. BASIC MICROSURGERY

- The Microsurgical microscope
- Microsurgical instruments
- Basic techniques of microsurgical dissection and point
- Determinant factors of animal experimentation. Legislation, handling conditions, stabling and sacrifice
- The needle and management

Section 2. SPECIAL MICROSURGERY

- Musculotendinous basic surgery
- Tendon suture
- Concept pull-out
- Basic Joint Surgery
- Synovial suture
- Human gynecological microsurgery in animal models and practical applications in human pathology
- Transplants. experimental applications
- Types of flaps used in oral and maxillofacial surgery
- Choosing vessels
- Ophthalmological microsurgery

4.4.Course planning and calendar

Timetable

- WEDNESDAY: 9, 16, 23, 30 January. 6, 13, 20, 27 February.

Further information concerning the timetable, classroom, assessment dates and other details regarding this course, will be provided on the first day of class or please refer to the Faculty of Medicine <https://medicina.unizar.es/>.

4.5. Bibliography and recommended resources

Microcirugía, técnicas operatorias. J Brian Boyd, Neil F. Jones. Editorial AMOLCA

Manual de microcirugía vasculo-nerviosa. Francisco Leyva Rodriguez. Editorial: Tabar Flores

Manual de microcirugía experimental en la rata. Carlos Vaquero Puerta. Ed: Universidad de Valladolid 2009

Colgajos en cirugía reparadora. Fuchan Wei, Samir Mardini. Elsevier 2011

Principles, techniques and application of microsurgery. Ti-Sheng Chang. Ed. World Scientific

Atlas of microvascular surgery. Berish Strauch. Ed. Wiley Blackwell