

Academic Year/course: 2021/22

68421 - Introduction to microsurgery research

Syllabus Information

Academic Year: 2021/22

Subject: 68421 - Iniciación a la investigación en microcirugía

Faculty / School: 104 - Facultad de Medicina

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 scheduled during the 2^o semester of the master course. Is addressed to trainees in any surgical specialty

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

Indications and contraindications of the microsurgery techniques

Complications and how to solve them

2.2. Learning goals

Skills in microsurgery instruments handling and surgical technique

Basic microsurgical maneuvers

Management of main indications and contraindications of microsutures

Management of complications

Image magnification

Handling of small laboratory animals

2.3. Importance of learning goals

A minimum of skills and expertise are required to understand the possibilities of microsurgery and to develop a research project in this field

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)

Students should prepare and present a scientific work based on a previous analysis of scientific literature, critical analysis and proposal of possible improvements.

4. Methodology, learning tasks, syllabus and resources

4.1. Methodological overview

Lectures , from 16.00 h. to 20.00 h.

Students: Lectures will be scheduled for the whole group, for the practical learning students will be divided into groups following the number of registered students. A number of special groups will be created if necessary, wich will be announced at the beginning of the season.

Dates:

Lectures Second semestrer: 14, 21 and 28 of January (Medical school building B)

Experimental practice in lab.: 4, 11, 18 and 25 February (CIBA Building, Av. San Juan Bosco 15. 50009 Zaragoza)

Topics

- Introduction to 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, postop. management
- Instruments (needles, suture lines, needle holders, cut materials etc.)
- Applied microsurgery (vascular, eye surgery, neurosurgery etc.)
- Research in microsurgery: The rat as an animal model for microsurgery, microsurgical flaps, vascular control)

Practical Program:

-Basic microsurgery (magnification techniques, instruments, anatomy of the laboratory animals, dissection maneuvers, preparation for surgery)

4.2. Learning tasks

All the students will implement the following activities:

Classroom lectures:

- The surgical microscope
- Image magnification
- Microsurgical instruments
- Suture instruments
- Dissection techniques
- Animal handling legislation
- How to prepare the animal models for the operation
- Surgical Wounds
- Suture materials

Practical program

- Practice in animal models

4.3. Syllabus

The course will address the following topics:

- **Topics**

- Introduction to 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, postop. management
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- Applied microsurgery (vascular, eye surgery, neurosurgery etc.)
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Practical Program:

- Basic microsurgery (magnification techniques, instruments, anatomy of the laboratory animals, dissection maneuvers, preparation for surgery)

4.4. Course planning and calendar

Timetable.

All the activities will be scheduled during the 2º semester of the course:

Theoretical sessions: Classroom nº 4, building B, Faculty of Medicine.

Practices: CIBA building

Wednesday: 2, 9, 16, 23,30 March ? 6, 20 Abril

Coordinator Dr. A.Güemes aguemes@unizar.es

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

<http://psfunizar10.unizar.es/br13/privado/index.php>