

Academic Year/course: 2022/23

## 26720 - Surgical Diagnoses and Therapy Procedures

### Syllabus Information

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**Academic Year:** 2022/23

**Subject:** 26720 - Surgical Diagnoses and Therapy Procedures

**Faculty / School:** 104 - Facultad de Medicina

**Degree:** 304 - Degree in Medicine

**ECTS:** 6.0

**Year:** 3

**Semester:** Second semester

**Subject Type:** Compulsory

**Module:**

## 1. General information

### 1.1. Aims of the course

The subject represents the first contact of the Medicine Degree student with the Surgical Clinic with the general objective of acquiring the necessary knowledge for subsequent learning of the rest of the subjects of Module III and practical use of Module V.

The approach of this subject is to provide the student with the medical-surgical language to carry out the medical act, offer the resources to acquire the abilities and skills for the collection of signs and symptoms and develop the clinical reasoning that enables him to carry out the diagnosis and orientation patient therapy.

The specific objectives are:

Access to the early diagnosis of the most frequent diseases susceptible to surgical treatment, also developing possible preventive measures.

Develop a capacity for analysis and synthesis of the data obtained in the clinical history and in the physical exploration of the patients, to initiate a well-founded working hypothesis that leads to a diagnostic judgment through an appropriate methodology.

To know the bases of surgical indications, developing their ability to critically discern the most appropriate therapeutic alternatives for each patient.

Understand the biological and technical foundations of surgical treatment and its impact on the pathophysiology and the whole of the sick person.

Develop their ability to use surgical information sources, also learning to assess outpatient and hospital care quality indices and the management of available resources.

Finally, with these objectives, what is intended is to achieve a comprehensive training of the student that should be the basis of the training of the current and future general practitioner, putting him in a position to be able to assess the new indications and surgical procedures that are emerging in the future within the inexorable evolution of Surgery.

These approaches and objectives are aligned with the following Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda (<https://www.un.org/sustainabledevelopment/es/>), in such a way that the acquisition of the results of Subject learning provides training and competence to contribute to some extent to its achievement.

3. Good health and well-being

4. Quality education

### 1.2. Context and importance of this course in the degree

Since the student has previously passed the subject of Semiology and fundamentals of pathophysiology (4th semester), he is in a position to recognize the main symptoms and signs of surgical disease in general and to contest surgical procedures within the therapeutic plan of diseases.

### 1.3. Recommendations to take this course

It is required to have passed the following subjects: Human Anatomy, Biology, Human Biochemistry, General Physiology, Morphology, Structure and Function I, Morphology, Structure and Function II and Semiology and Foundations of Physiopathology.

## 2. Learning goals

### 2.1. Competences

*Upon passing the subject, the student will be more competent to...*

#### **BASIC AND GENERAL**

*CB1 - Students have demonstrated possession and understanding of knowledge in an area of ??study that is based on general secondary education, and is usually found at a level that, although supported by advanced textbooks, also includes some aspects involving knowledge from the forefront of their field of study*

*CB2 - That students know how to apply their knowledge to their work or vocation in a professional way and possess the skills that are usually demonstrated through the elaboration and defense of arguments and the resolution of problems within their area of ??study*

*CB3 - That students have the ability to gather and interpret relevant data (normally within their area of ?? study) to make judgments that include a reflection on relevant issues of a social, scientific or ethical nature*

*CB4 - That students can transmit information, ideas, problems and solutions to both a specialized and non-specialized audience*

*CB5 - That students have developed those learning skills necessary to undertake further studies with a high degree of autonomy*

#### **SPECIFIC**

*CE68 - Assess the risk/benefit ratio of diagnostic and therapeutic procedures*

*CE69 - Know the indications for biochemical, hematological, immunological, microbiological, pathological and imaging tests*

*CE80 - Know the general principles of anesthesia and resuscitation*

*CE83 - Know the pathophysiology of wounds (including burns, frostbite and other types of wounds). Cicatrization. Surgical bleeding and thromboembolic prophylaxis*

*CE84 - Know the general surgical indications, the preoperative risk and the postoperative complications. Transfusions and transplants*

*CE89 - Manage disinfection and sterilization techniques*

*CE95 - Practice elementary surgical procedures: cleaning, hemostasis and wound suture*

#### **TRANSVERSAL**

- 1. Capacity for analysis and synthesis*
- 2. Organization and planning capacity*
- 3. Information management capacity*
- 4. Troubleshooting*

5. *Decision making*
6. *Teamwork*
7. *Critical reasoning*
8. *Ethical commitment*
9. *Autonomous learning*
10. *Adaptation to new situations*
11. *Motivation for quality*

## **2.2. Learning goals**

The student, to pass this course, must demonstrate the following results...

Acquire sufficient foundations to be able to correctly carry out the anamnesis and adequately assess the basic surgical semiology of the most frequent diseases in the surgical field.

Knowing how to request and interpret the most pertinent complementary tests for each patient, both those that are essential to make the diagnosis (imaging tests, biochemical determinations, etc.), as well as those that are essential to assess surgical risk, guided at all times by ethical criteria effective, efficient and economical.

Know how to request and guide the general preoperative study and the specific studies when required by the disease suffered by the patient or the type of operation that is intended to be performed.

Explain the general functioning of a Surgery Service and know how to assess the type of relationships that must exist in these Services between doctors, nursing staff, patients and family members.

Know how to explain to patients the "informed consent" of the most common surgical procedures.

Learn to behave appropriately in the operating room, knowing the techniques of asepsis and antisepsis and being interested in the intraoperative monitoring of patients, as well as in the different methods of anesthesia.

Understand and know how to perform basic cardiorespiratory resuscitation maneuvers, also knowing advanced resuscitation techniques.

Know how to handle intravenous infusions and know all those instrumental techniques that are usually performed in surgical services: punctures, sutures, drainage, etc.

Knowing how to correctly assess the simplest postoperative procedures, in order to be able to progressively evaluate the most common general complications and the essential maneuvers to achieve early diagnosis and effective treatment.

You must know how to perform the elementary cures of surgical wounds or wounds of other origin, assessing them correctly and carrying out the basic maneuvers to achieve their healing.

Be trained to solve clinical problems related to basic surgery, trauma, infections, tumors and transplants, and therefore to start in their day in the different pathologies that are currently studied within the Surgical Specialties

## **2.3. Importance of learning goals**

The results of the learning are transcendental because they enable the student to be able to face the study of the rest of the subjects that includes the Human Clinical Training and the performance of the professional profiles that the students will be able to exercise from the medical-surgical point of view, both in Health Care Primary as Specialized.

In addition, teamwork, the current stronghold of Science, will contribute to strengthening the interprofessional relationships necessary for the comprehensive training of future doctors.

## **3. Assessment (1st and 2nd call)**

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

## Evaluación

The student must demonstrate that he has achieved the expected learning outcomes through the following assessment activities

### Theoric exam:

At the end of the academic period, within the official examination period stipulated by the University, students will take a final test of the subject. The exam will consist of a multiple-choice questionnaire, based on the program of the subject. It will consist of 40 multiple choice questions (plus 3 reserve questions) with 5 possible answers, only 1 valid answer, failed answers do not penalize.

The maximum score obtained in this test will be 9 points.

The evaluation of the final exam will suppose up to 9 points of the total of the subject (grade of 0 to 9 points, out of 10 of the total). The remaining point can be obtained for the scientific work carried out (assessment of the work from 0 to 1 point)

In order to pass the subject, it is essential to obtain a minimum of 28 correct questions in this theoretical exam. Students who do not exceed the minimum number of questions for the theoretical exam will not be able to add the score obtained for the work.

### Evaluation of the exam:

28 correct answers..... 5 points

29 correct answers .....5.33

30 correct answers .....5.66

....

38 correct answers ..... 8.30

39 correct answers .....8.63

40 correct answers ..... 9

### Seminars, Workshops and Clinical Practices

Attendance at small group activities (clinical practices, seminars, and workshops) is compulsory; students who do not attend will not be graded in the final exam of the subject.

If a student does not attend these activities, she must make them up under penalty of not being able to be evaluated at the end. These activities will be assessed by: attendance and active participation in them, final exam and the presentation of a paper.

Attendance at small group activities will be maintained for successive exam calls for both the same academic year (September call) and the following ones.

### Scientific work

As part of the activities of small groups of the subject, students will carry out a scientific work of those proposed at the beginning of the semester.

The scientific works will be tutored by a responsible professor and will deal with aspects related to the theoretical and practical agenda. The format of the work will be free (written work, oral presentation, video presentation, etc.), although each tutor responsible for the work will establish the evaluation criteria at the beginning of the course.

At the beginning of the course, the Department of Surgery will present the presentation criteria and the way in which the groups of students are assigned.

To carry out the scientific work, the students enrolled in the subject will be grouped into work groups of 5 students (although the number of students per group may vary according to the work tutor). The works will be proposed, according to the syllabus of the subject or of the seminars/workshops, although not strictly.

The assessment of scientific work is from 0 to 1 point, which will correspond to 10% of the total score for the subject. The final grade obtained in the scientific work may be saved for successive exam sessions if the student has not passed the minimum number of answers for the theoretical exam.

### Expression of the results

The results obtained by the student are graded according to a numerical scale with expression of a decimal and its corresponding qualitative qualification (art. 5 of R.D. 1125/2003).

0 ----- 4.9 Fail (S.S)

5.0 ----- 6.9 Approved (AP)

7.0 ----- 8.9 Remarkable (NT)

9.0 ----- 10 Outstanding (SB)

Honors (MH) are exceptional notes that will be awarded to students who have achieved the highest scores, the number of honors awarded may not exceed the maximum number contemplated by the general university regulations. When necessary, a specific exam may be called for this purpose among the students selected for their best grades (students who have obtained outstanding grades), if the number of students with similar grades exceeds the number of enrollments that can be granted.

Dates and time for global evaluations

Time: From 8 a.m. to 8 p.m.

1st Evaluation: June

2nd Evaluation: July

## 4. Methodology, learning tasks, syllabus and resources

### 4.1. Methodological overview

The methodology followed in this course is oriented towards the achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as

- Classroom lessons
- Clinical practice
- Seminars and workshops
- Scientific work
- Tutorials

#### Activities:

Face to face activities

- Big groups activities (45 %)
- Small groups activities (45 %)
  - Seminars
  - Workshops
  - Clinical practice
  - Tutorials

- Evaluation

Non face to face activities (55 %)

### 4.2. Learning tasks

The course includes the following learning tasks:

**Face to face learning activities** (45%).

- **Big Groups learning activities** (Classroom activities)

The subject is divided into 5 major sections subdivided into 23 lessons. Section-1 corresponds to 'Fundamentals of surgery', distributed in 7 lessons. Those lessons include basic concepts of surgery that allow the students to introduce in the classically so-called 'surgical diseases', the study of diseases susceptible to surgical treatment.

Sections 2, 3 y 4 deals, respectively, all the 3 commonest processes in the field of surgery that should be acquainted by the general practitioners: 'Trauma' (7 lessons), 'Infections' (4 lessons) and 'Tumors' (1 lesson). Finally, section -5 deals with 'Transplantation' (1 lesson). Due to the great advance in basic and clinical knowledge in transplant surgery and surgical research (1 lesson)

- **Small groups learning activities**

The students must accomplish, during the semester, the small group activities. All the students will be allocated to one of the 12 groups of activities. The first week includes Hospital practice, the second week includes seminars and workshops activities.

**Week-1**

	Monday	Tuesday	Wednesday	Thursday	Friday
11.00-14.00 h.	Clinics	Clinics	Clinics	Clinics	Clinics

## Week-2

	Monday	Tuesday	Wednesday	Thursday	Friday
11.00-14.00 h.	Seminar-1	Seminar-2	Seminar-3	Seminar-4	Seminar-5

## Hospital practice

The students will accomplish a week of Hospital practice aiming at becoming familiar with the operation room, the hospitalization wards, and the outpatient clinic

Every student with access to personal data or patients clinical records is required to keep confidentiality of the information.

All the students will be advised about the risks that the hospital and the laboratory practice, seminars and workshops can carry out and their consequences, including the handling of potentially dangerous materials and also what to do in case of an accident. All the students must sign a written compromise engagement of fulfilling all the security rules, otherwise, they could not complete the period of practice.

For more information please refer to Risk Prevention Unit, section: Students information <http://uprl.unizar.es/estudiantes.html>

## Non-face to face learning activities (55%)

This corresponds to the autonomous and personal time dedicated to the program lessons, seminars, and workshops or scientific work preparation.

### \*Tutorials

Tutorials will be personal appointments, it corresponds to a face to face activity. Appointments should be requested to the corresponding professor asking for the date (day and hour) and also could be non-face to face contacts (via email or other electronic tools). Appointments should be scheduled during office time (8.00 h. to 15.00 h.).

In groups, tutorials could also be scheduled, conducted by the correspondent professors in charge of seminars and workshops.

At the beginning of the academic semester, students could ask for a tutor assignment. The aim of the tutor's assignment is to obtain appropriate academic guidance.

## 4.3. Syllabus

The course will address the following topics:

The program of the subject is divided into 5 large Blocks:

0. Introduction, course presentation

Block-1: Generalities

1. History of Surgery
2. Asepsis and antisepsis, the operating block
3. General, regional and local anesthesia
4. Hemostasis, hemorrhage control in surgery
- 5- Preparation for surgery, assessment of surgical risk
6. General preparatory care, immediate postoperative care
7. General surgical technique
8. Spectrum of current surgery (MOS, minimally invasive, Fast Track)
9. Nutrition in the surgical patient

Block-2: Injuries

10. Biological response to surgical aggression, trauma and infection. Systemic inflammatory response syndrome and multiple organ dysfunction
11. States of shock
12. Bruises and wounds, healing, scar pathology
13. Wounds of special etymologies
14. Injuries caused by explosive effect, crush syndrome and compartment syndrome
15. Injuries caused by heat, burns. electrical injuries
16. Injuries caused by cold, frostbite
17. Evaluation and treatment of the polytraumatized patient
18. Damage Control Surgery
19. General principles of plastic surgery, decubitus ulcers

### Block-3: Infections

20. Surgical infection
21. Local infection, felons and abscesses
22. Distant infections
23. Serious soft tissue infections

### Block-4: Oncology

24. Surgical Oncology
25. Surgical Aspects of Breast Cancer
26. Surgical Aspects of Soft Tissue Tumors

### Block-5: Transplants and research

27. Organ and tissue transplants
28. Research in surgery

- Small group activities

### Seminars/workshops.

The content of the Seminars/workshops will be related to the learning objectives and the basic agenda of the general program of the subject. They will be carried out through computer presentations, clinical cases, skills and active participation of the student.

Each Seminar/Workshop will be held in groups of 20-22 students. Its schedule and distribution of students will appear in advance on the bulletin board of the Department of Surgery, Gynecology and Obstetrics.

The Department of Surgery has organized the following seminars/workshops for 6th semester students taking the course

- Seminar 1. Operating room
- Seminar 2. Wound management
- Seminar 3. Airway control
- Seminar 4. Anesthesia procedures
- Seminar 5. Control of external hemorrhage

### Practices/resolution of clinical cases.

Students will carry out hospital clinical practices, in contact with the surgical environment (operating rooms, hospitalization rooms, outpatient consultations). The students will be distributed in the different hospital services according to the transversal organization chart of the 6th semester.

Duration: 5 days of internships during the corresponding week (Monday to Friday) throughout the semester, at 11:15 a.m. at 2:30 p.m.

### **4.4. Course planning and calendar**

#### Calendar of on-site activities and students scientific work presentation

- Classroom lessons: 3 classroom lessons (lectures) every week (Monday, Tuesday, Wednesday), from the 8.00 h. to 8.50 h.
- Seminars and workshops: 5 seminars and workshops along the one week period of the small group activities (from 11.30 h. to 14.00 h.)
- Clinical practice: 5 days of clinical practice along the one week period of clinical practice (from 11.30 h. to 15.00 h.)
- Students scientific work: All the students will develop a scientific work that will be presented at the end of the semester (before the final exam)

Final exams: <https://medicina.unizar.es/tercer-curso#horario5>

Final evaluation June

Final evaluation July

#### **4.5. Bibliography and recommended resources**

<http://psfunizar10.unizar.es/br13/egAsignaturas.php?codigo=26720>