UAB
Universitat Autònoma de Barcelona

# Integrated Learning in Medicine III

Code: 106921
ECTS Credits: 4

**2024/2025**

| Degree | Type | Year |
|---|---|---|
| 2502442 Medicine | OB | 3 |

## Contact

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## Teachers

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## Teaching groups languages

You can view this information at the end of this document.

## Prerequisites

It is advisable for the student to have achieved basic skills in cell biology, biochemistry and molecular biology, biophysics, anatomy, physiology and the general and specific microscopic structure of the different human apparatuses and systems.
It is recommended that the student has acquired basic skills in biostatistics and epidemiology.

Sufficient knowledge of the psychological bases of health and disease states is advisable, as well as an adequate level of knowledge in interpersonal communication and English.
The student will acquire the commitment to preserve the confidentiality and professional secrecy of the data that she may have access due to the learning of the assistance services. Also by maintaining an attitude of professional ethics in all their actions.

## Objectives and Contextualisation

Integrated Learning in Medicine III (AIM III) is a subject that is taught in the second semester of the third year of the Degree in Medicine. Like the rest of the AIMs, it is a transversal subject that aims to develop some basic skills for professional activity and scientific thinking of medical graduates. It is intended to provide comprehensive training in medical knowledge, so that the biological and pathophysiological bases of medicine and clinical disciplines are not considered isolated subjects without continuity. During the course of the AIMs, an attempt should be made to develop some basic transversal skills for professional activity and scientific thinking of medical graduates: evidence-based argumentation, ability to ask the most appropriate questions,

analysis and interpretation of data, and application of principles. pathophysiology in understanding disease. Generic self-learning skills will also be developed, such as teamwork, oral and written communication, reading and information search, including new information technologies.
During the teaching period, students will have to solve problem cases, the content of which will vary in each academic year. The work will be carried out based on small groups and with the collaboration of a tutor responsible for each case and tutors responsible for the different third-year subjects involved in the development of the case. The subject will be developed in the problem-based learning format and combines tutorial sessions with autonomous work by the student. In the presentation session of each case, the characteristics of the work to be carried out will be explained. Students will have to attend the scheduled tutorials and consult all the sources they deem appropriate to solve the syndromic problem raised, which will be presented to the entire class in the last closing session of the case.
The general training objectives of the subject are:
• Learn basic skills in medical practice Acquire the scientific bases of basic procedures in clinical medicine
• Integrate knowledge and content worked on in the rest of the core subjects of the third year. Apply this knowledge to real situations based on simulated clinical cases. Develop syndromic and clinical diagnostic skills as well as therapeutic procedures.
• Develop generic self-learning skills: temporary organization of autonomous work, teamwork, information search, including new information technologies, critical analysis of information.
• Acquire the ability to prepare and present biomedical papers.

## Competences

- Accept one's role in actions to prevent or protect against diseases, injuries or accidents and to maintain and promote health, on both personal and community-wide levels.
- 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 understanding of the manifestations of the illness in the structure and function of the human body.
- Demonstrate understanding of the structure and function of the human organism in illness, at different stages in life and in both sexes.
- 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.
- Indicate the basic diagnosis techniques and procedures and analyse and interpret the results so as to better pinpoint the nature of the problems.
- Indicate the most suitable treatment for the most prevalent acute and chronic processes, and for the terminally ill.
- Listen carefully, obtain and synthesise relevant information on patients' problems, and understand this information.
- Obtain and prepare a patient record that contains all important information and is structured and patient-centred, taking into account all age and gender groups and cultural, social and ethnic factors.
- Organise and plan time and workload in professional activity.
- Perform a general and a system-by-system physical examination appropriate to the patient's age and sex, in complete and systematic way, and a mental evaluation.
- Recognise the professional values of excellence, altruism, sense of duty, compassion, empathy, honesty, integrity and commitment to scientific methods.
- Recognise, understand and apply the doctor's role as a manager of public resources.
- 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.
- Write patient records and other medical documents that can be understood by third parties.

## Learning Outcomes

1. Accept other viewpoints (lecturers, colleagues, etc.) regarding the problem or topic at hand.
2. Acquire the principles and values of good medical practice, both in health and in illness.
3. Apply analytic tests in accordance with their cost efficiency.
4. Assess organised attempts by society to achieve better health for all citizens.
5. Assess physical incapacity, and its impact on patients and their families.
6. Assess the efficiency of the main therapeutic interventions.
7. Assess the importance of every sign and symptom in the current illness.
8. Assess the need, indications, contraindications, chronology, risk, benefits and costs of each examination.
9. Assess the relationship between efficacy and risk in the main therapeutic interventions.
10. Assess the semiological value of laboratory tests used in the most common human pathologies.
11. Be self-critical and reflect on one's own learning.
12. Compare one's own opinions with those of colleagues and other healthcare professionals as a basis for teamwork.
13. Conduct the interview correctly to obtain significant clinical data.
14. Convey knowledge and techniques to professionals working in other fields.
15. Critically assess the results of complementary examinations, taking their limitations into account.
16. Describe the basic features of planning and scheduling in healthcare.
17. Describe the elements that should be considered when determining the reasons for a consultation and those of the patient's therapeutic itinerary.
18. Distinguish normality from pathological alterations on performing a physical examination.
19. Distinguish situations that require hospitalisation and those that require intensive care.
20. Establish a method for complementary examinations, in accordance with the standard process and the diagnostic expectations.
21. Establish a therapeutic action plan considering the needs of patients and their family and social environment, and involving all members of the healthcare team.
22. Explain that health requires the commitment of the whole of society.
23. Explain the legislation that regulates the use and confidentiality of analysis results.
24. Explain the mechanisms by which illness affects the different systems of the human body at different stages in life and in both sexes.
25. Gather meaningful psychosocial data.
26. Gather, choose and record important information patient supplied by patients and accompanying persons.
27. Identify serious clinical situations.
28. Identify sources of information on analytic tests for patients and professionals and critically evaluate their content.
29. Identify symptoms of anxiety, depression, psychosis, toxics consumption, delirium and cognitive deterioration.
30. Identify the affectation of medical and surgical diseases of the genital system.
31. Identify the affectation on organs and systems of medical and surgical diseases of the blood, cardiovascular system, respiratory system digestive system and musculoskeletal system.
32. Identify the most efficient analytic tests for prevention, diagnosis and control of treatment for the most common human pathologies.
33. Identify the physical, chemical, environmental, psychological, social and occupational and carcinogenic factors, and the factors associated with food habits and drug use, that determine the development of the disease.
34. Indicate and interpret the basic techniques and procedures for laboratory diagnosis, diagnostic imaging and others.
35. Indicate suitable therapeutic interventions for the main health problems.
36. Inform on the results of analytic tests.
37. Obtain, in an appropriate way, clinical samples needed for laboratory tests.
38. Order signs and symptoms to perform a differential syndromic diagnosis.
39. Organise and plan time and workload in professional activity.
40. Summarise and order information on the problems of the sick.
41. Use biomedical databases.
42. Use information and communication technologies in professional practice.

## Content

ORGANIZATION OF CASES AND SUBJECTS

Subjects of the Human Clinical Training Module

Physiopathology and clinical semiology: 4 or 5 cases of major clinical syndromes

Subjects of the Diagnostic and Therapeutic Procedures and Social Medicine Module, Communication Skills and Initiation to Research

- Bases of surgery
- Medical microbiology and parasitology
- clinical radiology
- Structural and molecular pathology
- general pharmacology
- medical immunology
- Epidemiology

DISTRIBUTIVE BLOCKS

Presentation and solution of 4 or 5 cases referring to major clinical syndromes, of the type:

- Changes in body temperature
- Pain
- Constitutional syndrome
- Respiratory system syndromes: acute and chronic respiratory failure, pulmonary condensation, pleural syndromes.
- Syndromes of the cardiocirculatory system: heart failure, coronary insufficiency, pericardial syndrome, syncope, intermittent claudication
- Syndromes of the digestive system: icteric syndrome, liver failure, portal hypertension syndrome, ascitic syndrome, digestive bleeding, diarrheal syndrome.
- Syndromes of the nephrourological system: urinary syndrome, acute and chronic renal failure, nephritic syndrome, nephrotic syndrome.
- Syndromes of the nervous system: sensory and motor syndromes, peripheral paralysis syndrome, pyramidal syndrome, spinal cord syndromes, meningeal syndrome, comatose syndrome, cerebellar syndrome, and vestibular syndrome.
- Syndromes of the musculoskeletal system: arthritic syndrome and arthritic syndrome.
- Hematological syndromes: anemic syndrome, medullary hyper and hypofunction, adenopathic syndrome.
- Endocrine and metabolic syndromes: thyroid hyper and hypofunction, parathyroid hyper and hypofunction, adrenal hyper and hypofunction, hyperglycemia and hypoglycemia.
- In the development of the case, aspects of diagnostic and therapeutic procedures and Social Medicine, Communication Skills and Initiation to Research are included.

Examples of possible clinical cases (to be specified each course by those responsible for the cases):

Case: Epigastric discomfort and weight loss. Constitutional syndrome (N. pancreas)

Case: Diarrhea and abdominal pain of long evolution. Maldigestion (Chronic Pancreatitis)

Case: Black stools and drowsiness. (Liver failure and portal hypertension)

Case: Acute abdominal pain, jaundice and fever. (Acute cholecystitis)

Case: Abdominal pain and urinary discomfort. (Acute pyelonephritis)

Case: Cough, expectoration with blood and anorexia. Hemoptysis (lung tumor)

Case: Pain in the left side of the thorax and asthenia. (pleuritic syndrome)

Case: Fever difficulty breathing. Respiratory failure (pneumonia, COPD, heart pulmonale)

Case: Sudden shortness of breath and heart murmur. Left heart failure (Ao stenosis)

Case: Tightness and pain in the chest and dyspnea. (Coronary ischemia, heart failure)

Case: Acute diarrhea and scanty urine. (Prerenal Renal Failure)

Case: Generalized swelling (Nephrotic Syndrome)

Case: Tiredness and paleness. Anemic syndrome (iron deficiency and clone neoplasia)

## Activities and Methodology

| Title | Hours | ECTS | Learning Outcomes |
|---|---|---|---|
| Type: Directed | | | |
| PROBLEM-BASED LEARNING (PBL) | 20 | 0.8 | 1, 2, 3, 12, 16, 17, 18, 19, 14, 21, 20, 30, 23, 22, 11, 33, 24, 29, 31, 28, 32, 27, 34, 35, 36, 37, 38, 39, 13, 25, 26, 40, 41, 42, 15, 10, 4, 6, 5, 8, 9, 7 |
| Type: Autonomous | | | |
| Personal study, reading articles, reports of interest... | 76.25 | 3.05 | 1, 2, 3, 12, 16, 17, 18, 19, 14, 21, 20, 30, 23, 22, 11, 33, 24, 29, 31, 28, 32, 27, 34, 35, 36, 37, 38, 39, 13, 25, 26, 40, 41, 42, 15, 10, 4, 6, 5, 8, 9, 7 |

This Guide describes the framework, contents, methodology and general rules of the subject, in accordance with the current study plan. The final organization of the subject in terms of the number and size of groups, distribution in the calendar and exam dates, specific evaluation criteria and examination review, will be specified in each of the Hospital Teaching Units ( UDH), which will explain this through their web pages and on the first day of class of each subject, through the professors responsible for the subject at the UDH.

For the current academic year, the professors designated by the Departments as responsible for the subject at Faculty and UDH level are:

Responsible department(s): Multidepartmental.

Head of Faculty: Gustavo Tapia (gustavo.tapia@uab.cat)

UDH managers

UD Vall d'Hebron: Jaume Alijotas Reig (jaume.alijotas@vallhebron.cat)
UD Germans Trias and Pujol: Gustavo Tapia (gustavo.tapia@uab.cat).
UD Sant Pau: Joaquin López-Contreras González (jlcontreras@santpau.cat)

UD Parc Taulí: Marta Navarro Vilasaró (mnavarro@tauli.cat)

TUTORS AND SESSIONS:

A.- TUTORS: each case will have a tutor responsible for it. He will be responsible for the preparation and initial presentation of the case, the specific tutoring and the closing. In addition, in each case there will be different

professors involved in the development of the case, from the different subjects involved (clinical pharmacology, basics of surgery, medical microbiology and parasitology, clinical radiology, structural and molecular pathology, medical immunology, epidemiology ...)

B.- SESSIONS:

B.1.- PRESENTATION OF THE CASE: the tutor responsible for the case will prepare a presentation in powerpoint or similar with the summary of the clinical +/- analytical +/- radiological information on the virtual campus, as well as the aspects to be worked on by the students in person in session 1.

B.2.- SESSIONS 1 and 2: problem solving sessions. The students will be able to discuss the different aspects of the clinical cases with the tutors responsible for each subject involved. In session 1, the aspects raised in the "presentation of the case" will be discussed, and the students will be provided with the aspects to work on for session 2.

The duration of these sessions will depend on the number of cases to be worked on. Thus, if 5 cases are to be worked on, sessions 1 and 2 will be 1 hour and 30 minutes long (2x 1 hour and 30 minutes = 3 hours) and if 4 cases are to be worked on, sessions 1 and 2 will be 2 hours long duration (2 x 2h = 4h)

B.3.- SESSION 3 - RESOLUTION OF THE CASE: in this session, the students will make a public presentation of the case, in powerpoint or similar format, with the different aspects worked on during sessions 1 and 2. This session will last 1 hour duration

GROUPS:

The students will be divided into groups according to the regulations of the subject type (ABP). Each group, in turn, will be subdivided into 4 or 5 subgroups, to work on the 4 or 5 cases raised. Each subgroup of students will participate in solving problems and in the presentation (sessions 1, 2 and 3) of a specific case that will have been assigned to them, and will have to attend the sessions of the other cases of their group, where they can see and participate in the resolution of the other cases.

EXAMPLE OF TIME DISTRIBUTION (5 CASES, 4 GROUPS)

Sessions 1 and 2: 2 x 1h and 30 min = 3h

Session 3: 1h

Total: 4 hours x 5 cases = 20 hours

EXAMPLE OF TEMPORAL DISTRIBUTION (5 CASES, 5 GROUPS)

Sessions 1 and 2: 2 x 1h and 30 min = 3h

Session 3: 1h

Total: 4 hours x 5 cases = 20 hours

EXAMPLE OF TIME DISTRIBUTION (4 CASES, 5 GROUPS)

Sessions 1 and 2: 2 x 2h = 4h

Session 3: 1h

Total: 5h x 4 cases = 20h

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

## Assessment

## Continous Assessment Activities

| Title | Weighting | Hours | ECTS | Learning Outcomes |
|---|---|---|---|---|
| Assessment of case studies and problem solving | 30% | 2.5 | 0.1 | 1, 2, 3, 12, 16, 17, 18, 19, 14, 21, 20, 30, 23, 22, 11, 33, 24, 29, 31, 28, 32, 27, 34, 35, 36, 37, 38, 39, 13, 25, 26, 40, 41, 42, 15, 10, 4, 6, 5, 8, 9, 7 |
| Assistance and active participation in the ABPs | 20% | 0 | 0 | 1, 2, 3, 12, 16, 17, 18, 19, 14, 21, 20, 30, 23, 22, 11, 33, 24, 29, 31, 28, 32, 27, 34, 35, 36, 37, 38, 39, 13, 25, 26, 40, 41, 42, 15, 10, 4, 6, 5, 8, 9, 7 |
| Written assessment with objective tests | 50% | 1.25 | 0.05 | 1, 2, 3, 12, 16, 17, 18, 19, 14, 21, 20, 30, 23, 22, 11, 33, 24, 29, 31, 28, 32, 27, 34, 35, 36, 37, 38, 39, 13, 25, 26, 40, 41, 42, 15, 10, 4, 6, 5, 8, 9, 7 |

Each student will participate in the resolution and presentation of a case and answer a test-type exam
1. Attendance and active participation in the discussion of the different aspects of the clinical case: 20% of the grade
2. Presentation of the resolution of the clinical case: 30% of the grade
3. Written assessment with objective tests: 50% of the grade. This is a test exam where there will be 5 possible answers and only one valid. Correct questions add up to 1 point. If incorrect, subtract 0.25.
Final grade: Weighted sum of the continuous assessment of attendance and active participation in the discussion of the case (20%), assessment of the resolution of the clinical case (30%) and the result of the objective written test (50%) . In order to make the weighted sum, it will be necessary to pass both the continuous assessment (50% of the grade) and the objective written test (50% of the grade) with a minimum score of 5.
Expression: Numeric grade with one decimal, from 0 to 10
Minimum grade to consider the student passed: 5
Qualitative grade: failed, passed, remarkable, excellent, Matrícula d'Honor
Exam review: it will be done upon request to the teacher responsible for the subject in each teaching unit, within the established deadlines.
Non-Evaluable Students: Students who do not attend and participate in the discussion, resolution of the clinical case and examination will be considered as non-evaluable
This subject does not provide for the single assessment system

## Bibliography

Consult the specific bibliography of the teaching guides for the different third-year subjects of the "Human clinical training" and "Diagnostic and therapeutic procedures and social medicine, communication skills and initiation to research" modules.

## Software

There is no specific software for the subject

## Language list

Information on the teaching languages can be checked on the CONTENTS section of the guide.