Universitat Autònoma de Barcelona

2021/2022

Integrated Learning in Medicine IV

Code: 103636
ECTS Credits: 3

Degree	Type	Year	Semester
2502442 Medicine	OB	4	0

The proposed teaching and assessment methodology that appear in the guide may be subject to changes as a result of the restrictions to face-to-face class attendance imposed by the health authorities.

Contact

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Use of Languages

Principal working language: catalan (cat)
Some groups entirely in English: No
Some groups entirely in Catalan: Yes
Some groups entirely in Spanish: No

Teachers

Manuel Monreal Bosch
Javier Serra Aracíl
Víctor Vargas Blasco
Eduardo María Targarona Soler
José María Ribera Santasusana
Maria Assumpta Caixàs i Pedragós
Manel Cremades Pérez
José María Guerra Ramos

Prerequisites

Students should have a basic knowledge of cell biology, biochemistry and molecular biology, biophysics, anatomy, physiology, and of the general and specific microscopic structure of the different apparatus and human systems.

Students should also have a basic knowledge of biostatistics and epidemiology.

Knowledge of psychological states of health and disease is desirable, as well as an adequate level of interpersonal and communication skills in English.

Students undertake to preserve the confidentiality and professional secrecy of the data that they may access through their study at the health care services, and to uphold professional ethics in all their actions.

Objectives and Contextualisation

This course is taught in the second semester of the fourth year of the Degree in Medicine. Like the rest of the courses, it is a transversal subject designed to develop the basic skills that medical graduates need for their professional activity and to foster their scientific thinking. The aim is to provide an integral learning of medical

knowledge in which the biological and pathophysiological bases of medical and clinical disciplines are considered applying a holistic approach. The cross-sectional skills developed are: evidence-based argumentation, the ability to ask appropriate questions, analysis and interpretation of data, and the application of pathophysiological principles in the understanding of disease. Generic self-learning competences will also be developed in the form of teamwork activities, oral and written communications, reading and information searches, including the use of new information technologies.

During the course, a small group of students will have to solve one problem case, the content of which will vary from one academic year to the next. This work will be carried out in small groups, five students each course, arguing five problem cases led by the tutor responsible for each case and the tutors teaching the various fourth-year subjects that are relevant to its development. The course will be approached from the perspective of problem-based learning, and combines tutored sessions with autonomous self-study. In each case, the characteristics of the work to be carried out will be outlined in an introductory session. Students must attend scheduled tutorials and consult all the sources they deem appropriate to solve the clinical problem, which they will present to the whole class in the final session of the case.

Competences

- Be able to work in an international context.
- 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.
- Maintain and sharpen one's professional competence, in particular by independently learning new material and techniques and by focusing on quality.
- 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 basic elements of the medical profession as the result of an evolving, scientific, social and cultural process, including ethical principles, legal responsibilities and patient-oriented professional practice.
- 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.

Learning Outcomes

1. Accept other viewpoints (lecturers, colleagues, etc.) regarding the problem or topic at hand.
2. Apply analytic tests in accordance with their cost efficiency.

3. Assess the efficiency of the main therapeutic interventions.
4. Assess the importance of every sign and symptom in the current illness.
5. Assess the need, indications, contraindications, chronology, risk, benefits and costs of each examination.
6. Assess the relationship between efficacy and risk in the main therapeutic interventions.
7. Assess the semiological value of laboratory tests used in the most common human pathologies.
8. Be able to work in an international context.
9. Be self-critical and reflect on one's own learning.
10. Compare one's own opinions with those of colleagues and other healthcare professionals as a basis for teamwork.
11. Conduct the interview correctly to obtain significant clinical data.
12. Convey knowledge and techniques to professionals working in other fields.
13. Critically assess the results of complementary examinations, taking their limitations into account.
14. Describe the elements that should be considered when determining the reasons for a consultation and those of the patient's therapeutic itinerary.
15. Describe the person as a multidimensional being in which the interplay of biological, psychological, social, environmental and ethical factors determines and alters the states of health and disease and their manifestations.
16. Distinguish normality from pathological alterations on performing a physical examination.
17. Distinguish situations that require hospitalisation and those that require intensive care.
18. Establish a method for complementary examinations, in accordance with the standard process and the diagnostic expectations.
19. Establish a therapeutic action plan considering the needs of patients and their family and social environment, and involving all members of the healthcare team.
20. Explain the mechanisms by which illness affects the different systems of the human body at different stages in life and in both sexes.
21. Gather meaningful psychosocial data.
22. Gather, choose and record important information patient supplied by patients and accompanying persons.
23. Identify serious clinical situations.
24. Identify sources of information on analytic tests for patients and professionals and critically evaluate their content.
25. Identify symptoms of anxiety, depression, psychosis, toxics consumption, delirium and cognitive deterioration.
26. Identify the affectation of medical and surgical diseases of the genital system.
27. Identify the affectation on organs and systems of medical and surgical diseases of the blood, cardiovascular system, respiratory system digestive system and musculoskeletal system.
28. Identify the most efficient analytic tests for prevention, diagnosis and control of treatment for the most common human pathologies.
29. 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.
30. Indicate and interpret the basic techniques and procedures for laboratory diagnosis, diagnostic imaging and others.
31. Indicate suitable therapeutic interventions for the main health problems.
32. Maintain and sharpen one's professional competence, in particular by independently learning new material and techniques and by focusing on quality.
33. Obtain, in an appropriate way, clinical samples needed for laboratory tests.
34. Order signs and symptoms to perform a differential syndromic diagnosis.
35. Organise and plan time and workload in professional activity.
36. Summarise and order information on the problems of the sick.
37. Use biomedical databases.
38. Use information and communication technologies in professional practice.

Content

The general learning objectives of the course are:

To learn the basic medical practice skills.

To acquire a scientific grounding in the basic procedures of clinical medicine, and to integrate the knowledge and materials worked on in the rest of the core third-year subjects.

To apply this knowledge toreal situations, based on simulated clinical cases.

To develop syndromic and clinical diagnostic skills as well as therapeutic procedures.

To develop general self-learning skills: time organization in autonomous learning, teamwork, information searches including new information technologies, and critical analysis of information.

To acquire the ability to prepare and present biomedical research.

Module 3 courses: Human clinical training

Medicine and Surgery I, II and III (locomotive, cardiovascular, respiratory, hematology, digestive tract, surgery, nephro-urology, geriatrics)

Obstetrics and gynaecology

Clinical otorhinolaryngology

Clinical ophthalmology

Modules 4 courses: Diagnostic and therapeutic procedures (PDT)

Medical microbiology and parasitology

Clinical radiology

Structural and molecular pathology

General pharmacology

Medical immunology

DISTRIBUTION OF THE BLOCKS

Presentation and solution of five reference cases of clinical pathology

Case 1: To be defined

Case 2: To be defined

Case 3: To be defined

Case 4: To be defined

Case 5: To be defined

Methodology

This Guide describes the framework, contents, methodology and general norms of the course, in accordance with the current study schedule. The final organization of the course at each one of the Hospital Teaching Units (i.e., with regard to the number and size of groups, the calendar and dates of examinations, specific assessment criteria and examination review procedures) will be specified and explained on the Unit's web page and also on the first day of class by the teachers responsible for the course at the particular Unit.

For the present academic year, the following teachers have been appointed by the Departments to take charge of the course (at Faculty and Teaching Unit level):

Department(s) responsible: Multi-departmental

Head of Faculty: Salvador Navarro Soto (Salvador.Navarro@uab.cat)

Vall d'Hebron: Víctor Vargas Blasco (Victor.Vargas@uab.cat)

Germans Trias i Pujol: Manuel Monreal (mmonreal.germanstrias@gencat.cat), Jaume FernándezLlamazares (jfllamazaresg. Ermanstrias@gencat.cat)

SantPau: José Maria Guerra Ramos (jguerra@santpau.cat); Maria Carme Balagué (cbalague@santpau.cat), Eduardo Targarona (etargarona@santpau.cat)

Parc Taulí: Xavier Serra Aracil (JSerraA@tauli.cat), Assumpta Caixàs Pedragós (Maria Assumpta.Caixas@uab.cat)

TUTORS AND SESSIONS

A. Tutors:

A case tutor will be appointed for each of the courses and/or the module 3 courses that are relevant to the clinical cases. S/he will be responsible for the cases, presentation, closure and specific tutoring.

Module 3: Human clinical training:

MIC I, II and III (locomotive, cardiovascular, respiratory, digestive, surgery, hematology, nephrology, urology, geriatrics); Obstetrics and gynaecology; Clinical otorhinolaryngology; Clinical ophthalmology

A reference tutor for each module 4 course that is relevant to the casewill be responsible for the documentation, discussion and tutoring of the courses in the cases when necessary. Depending on the characteristics of the case, and when necessary, tutors from module 3 courses may also intervene in order to complement the work of the case tutor.

Module 4. Diagnostic and therapeutic procedures (PDT):

Medical microbiology and parasitology; Clinical radiology; Structural and molecular pathology; General pharmacology; Medical immunology

B. Sessions:

Total hours: 3 ECTS = 75 hours

Unsupervised learning (55%; 41.25 hours): Self-study, case preparation and presentations

Supervised learning activities: 40%, 30 hours (5 cases; each case = 6 hours, in 4 sessions)

Assessment: 5%, 3.75 hours

Session types:

These descriptions are for guidance only and will be adapted to the characteristics of each case and to each specific Teaching Unit

Sessions 1 and 4 (TE[v1] [v2]): Initial presentation and final resolution of the 5 cases, 10h (initial and final sessions 5h + 5h)

Sessions 2, 3. Seminar on clinical cases (PCLI, SCC[v3]); 20 hours in two sessions:

Session 2 (PCLI, SCC); Documentation sessions; a block of diagnostic and therapeutic procedures: 10 h (2h per case, consecutive tutors are allowed)

Session 3 (PCLI, SCC); Problem-solving sessions, supervision of the simulated cases prepared, and preparation of presentation: 10h (2h per case, consecutive tutors are allowed):

All students must be familiar with all the cases and participate in their resolution. The knowledge they acquire and their participation and presentation of the solutions will form the basis of the assessment of their performance on the course.

The enrolment group is divided up into groups working on each case. The presentation session (session 1), led by the tutor responsible for the case, is attended by the entire enrolment group; the case is presented and a group of students is created to work on the case. These groups will work on the solution of each case in the documentation and problem-solving sessions (sessions 2-3), led by the tutors of the courses that are relevant to the case in hand. In these sessions, other students ffrom the enrolment group participate as listeners; in this way, they have access to the documentation and hear the discussion of problems in each case.

In the last session, the case resolution (session 4), led by the case tutor, the group of students that worked on the case describe their solution to the whole group. Thus, all the students in the group hear the case discussion and resolution and acquire the knowledge they need for the final assessment, which includes all the cases.

PRESENTATION AND DISCUSSION OF CASES by the students

The presentation will be shared between all the students of the presentation group, and will be held on the day scheduled. The case will be presented to the whole class (the enrolment group), following a similar format and for a total time of around 45 minutes:

1. Summary of the case

2. Differential diagnosis

3. Diagnostic hypothesis and plan

4. Complementary explorations

5. Indicated diagnostic tests and risks-benefit analysis

6. Diagnosis

7. Treatment and prognosis

Example oftime distribution

Week 1. Presentation. Type: theory; enrolment group

Led by case tutor. Presentation of the case, DD, methodology, reference tutors, sessions to be carried out

Week 2. Documentation and problem solving. Type: clinical case seminar: carried out in a whole group class. The enrolment group is present, while the case group works on the case.

Tutors' PDT block[v4] . Documentation, problem-solving and tutoring of the specific subjects of the case.

Week 3. Problem-solving and supervision of the presentation. Type: clinical case seminar carried out in a whole group class. The enrolment group is present, while the case group works.

Tutors' PDT block (with case tutor). Problem-solving and tutoring of the presentation and case resolution

Week 4. Presentation of the case resolution. Type: theory; enrolment group

Led by case tutor: Presentation of the case to the other students, final diagnosis and closing of the case. Evaluation of the case and the presentation

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In the current exceptional circumstances, at the discretion of the teachers and also depending on the resources available and the public health situation, some of the theoretical classes, practicals and seminars organized by the Teaching Units may be taught either in person or virtually

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.

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
CLINICAL CASE SEMINARS (SCC)	20	0.8	1, 2, 10, 14, 15, 16, 17, 12, 19, 18, 26, 9, 29, 20, 25, 27, 24, 28, 23, 30, 31, 32, 33, 34, 35, 11, 21, 22, 36, 8, 37, 38, 13, 7, 5, 6, 4
THEORY (TE)	10	0.4	1, 2, 10, 14, 15, 16, 17, 19, 18, 26, 9, 29, 20, 25, 27, 24, 28, 23, 30, 31, 32, 33, 34, 35, 11, 21, 22, 36, 37, 13, 7, 3, 5, 6, 4
Type: Autonomous			
PREPARATION OF WRITTEN WORK/SELF- STUDY	41.25	1.65	32, 35, 38

Assessment

Evaluation activities (5% = 3.75 hours)

Evaluation of the presentation and discussion of cases 2.5 h (150 '= 30' x 5 cases, carried out in the presentation session)

Multiple choice exam: 1.25 h.

Each student will participate in the presentation of a case, and will answer a test exam of 50 questions that includes questions on all the cases studied during the course and presented in class.

Partial grades

Continuous assessment: 10% of the final grade. Report of the case tutor (5% attendance, 5% participation in the sessions)

Case presentation: 40-50% of the final grade.

Multiple answer test: 40-50% of the final grade. For each wrongly answered question, 0.25 points are subtracted.

Final grade

Weighted sum of the three types of tests.

Presentation: Numerical grade with a decimal, from 0 to 10.

Grade: Fail, Pass, Good, Merit, Honour distinction.

Students who do not attend the theoretical and practical assessment tests will not be considered for examination and will lose their course registration fee.

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Attendance and participation in classes and seminars	10%	0	0	2, 10, 16, 17, 19, 26, 9, 27, 23, 33, 34, 11, 21, 37
Case studies and problem solving	40-50%.	2.5	0.1	1, 2, 10, 14, 15, 16, 17, 12, 19, 18, 26, 9, 29, 20, 25, 27, 24, 28, 23, 30, 31, 32, 33, 34, 35, 11, 21, 22, 36, 8, 37, 38, 13, 7, 3, 5, 6, 4
Written assessments: multiple choice tests	40%-50%	1.25	0.05	14, 15, 19, 9, 29, 20, 27, 31, 34, 36, 13, 7, 3, 6, 4

Bibliography

Consult the specific bibliography of the teaching guides of the different subjects of the third and fourth courses.

Software

there is no specific software