

Clinical Laboratory Practice I

Code: 103643
ECTS Credits: 3

Degree	Type	Year	Semester
2502442 Medicine	OT	4	0
2502442 Medicine	OT	5	0
2502442 Medicine	OT	6	0

Contact

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Use of Languages

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

Teachers

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Rosa María Antonijoan Arbos
Francisco Blanco Vaca
Beatriz Gomez Anson

Prerequisites

- It is advisable that the student has attained some basic competencies in Cell Biology, Biochemistry and Molecular Biology, Anatomy and Physiology.
- Sufficient knowledge on the basis of health and illnesses is appropriate, as well as an adequate level of interpersonal communication.
- The student acquires commitment to preserve confidentiality and professional secrecy in relation to patient health information known during the training. An attitude of professional ethics in all the student action's is needed.

Objectives and Contextualisation

- This is an optional subject that can be taken from the third year and whose general objective is that the student becomes familiar with the professional practice in a real context.
- Therefore, the student is included in the activities of a healthcare service or laboratory, performing healthcare training or research tasks in a supervised manner

Competences

Medicine

- Be able to work in an international context.
- Convey knowledge and techniques to professionals working in other fields.
- Demonstrate understanding of the importance and the limitations of scientific thought to the study, prevention and management of diseases.
- Demonstrate, in professional activity, a perspective that is critical, creative and research-oriented.
- 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.
- Establish the diagnosis, prognosis and treatment, basing decisions on the best possible evidence and a multidisciplinary approach focusing on the patient's needs and involving all members of the healthcare team, as well as the family and social environment.
- Formulate hypotheses and compile and critically assess information for problem-solving, using the scientific method.
- Indicate the basic diagnosis techniques and procedures and analyse and interpret the results so as to better pinpoint the nature of the problems.
- Organise and plan time and workload in professional activity.
- 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. Apply the basic principles of the scientific method (observation of phenomena, hypothesis formulation and testing of hypotheses) to the diagnosis, treatment and prevention of human diseases.
2. Apply the results of clinical and biological parameters indicative of the immune response to construct to diagnosis and treatment algorithms.
3. Assess the need, indications, costs and risk-benefit ratio of molecular techniques for microbiological or cytological diagnosis.
4. Be able to work in an international context.
5. Convey knowledge and techniques to professionals working in other fields.
6. Correctly write reports on the results of different types of tests (analytic, genetic).
7. Critically assess results from molecular techniques for microbiological and cytological diagnosis and know the limitations of these.
8. Demonstrate, in professional activity, a perspective that is critical, creative and research-oriented.
9. Formulate a diagnostic approach and establish a well-reasoned strategy for dealing with each one of the microorganisms responsible for the different diseases.
10. Formulate hypotheses and compile and critically assess information for problem-solving, using the scientific method.
11. Identify the most efficient molecular biology tests for prevention, diagnosis and control of treatment for the most common human pathologies.
12. Identify the most efficient tests for prevention, diagnosis and control of treatment for the most common human pathologies.
13. Identify, the biological, epidemiological (reservoir and transmission) and diagnostic features of each of the different diseases.
14. Know and interpret in the physiological and pathological context the main techniques for diagnosing the different diseases.
15. Know the therapeutic principles applicable to immunomediated diseases.
16. Obtain appropriately the clinical samples needed for molecular tests for microbiological or cytological diagnosis.
17. Organise and plan time and workload in professional activity.
18. Use information and communication technologies in professional practice.

Content

The student can choose which service or laboratory wishes to attend. Three contexts are contemplated:

- Practices in specific sections of clinical laboratory services (biochemistry, hematology, immunology, microbiology, histopathology or pharmacology).
- Practices in areas of integrated emergency laboratory or radiodiagnosis, or nuclear medicine. In the case of clinical laboratories the student will rotate through the different laboratories and sections in order to know: which are the most used biomarkers in clinical diagnosis and in which pathologies or situations they are useful, the particularities of the areas of rapid response and, finally, the criteria for interpreting the analytical results to certify its validity. During the stay the student will attend the scientific sessions of the service in which he / she is integrated.
- Integration into a research line

Methodology

This guide described the context, contents, methodology and general norms of the subject, according to the current

The final organization of the subject, including number and measure of groups, time distribution, test dates, speci

will be made to each of the Hospital Teaching Units (HTU), as it will be made explicit through the web, and in the

For next course, these professors are:

Head of Faculty:
Responsibles HTU:
UD Vall d'Hebron:
UD Germans Trias i Pujol:
UD Sant Pau: Francisco Blanco
UD Parc Taulí:

- Teaching Typology: Assistencial Practicum without guidelines
- The student will join the activities of a medical service or laboratory during a week (5 days), 6 hours a day, to observe and / or perform assistance work, educational activities, or research training, in a supervised manner. Durant the stay, the student will register the daily activity to complete a portfolio, which will thus contain the summaty of the stay. This summary, jointly with the opinion of the tutor of the stay, will be the basis of the evaluation.

Principles of Function

1. The interested student must look for a tutor (which must be a UAB professor) and a hospital, or hospital department where to carry out the 30 h minimum activity (outside school hours and different from other internships done in the curriculum subjects).

2. The student will present the tutor an activity proposal (using the specific sheet) containing the content of the activity and space for signatureapproval. The completed application must be handed in to the Academic Management and information point so that the UD Coordinator can approve the activity.

3. Once authorized, Academic Management will call you to collect the authorization and the summary sheet of the activity and qualification.

4. At the end of the period of stay, the student will obtain the qualification of the activity, with the signature of the professor or tutor responsible and the service seal.

5. The student must bring the document (proposal, summary and qualification) to the Academic Management and information point to request the recognition of the credits according to the usual procedure.

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			
Directed	15	0.6	1, 2, 15, 14, 8, 9, 5, 10, 11, 12, 13, 16, 17, 6, 18, 7, 3
Type: Supervised			
Supervised	15	0.6	1, 2, 15, 14, 8, 9, 5, 10, 11, 12, 13, 16, 17, 6, 18, 7, 3
Type: Autonomous			
Autonomous	43	1.72	1, 2, 15, 14, 8, 9, 5, 10, 11, 12, 13, 16, 17, 6, 4, 18, 7, 3

Assessment

- During the scheduled stay, the student will record the most significant clinical experiences and summarize the content of the sessions in which has participated. This documentation will be delivered at the end of the stay to the tutor and will be the basis of its evaluation. The activity register (portfolio) includes the summary of the clinical experience, of all the tasks that has done and a list of the sessions in which has participated. The tutor responsible for the student will monitor daily the fulfillment of the programmed objectives.
- To pass the subject, the student must have attended at least 80% of the programmed activities and passed, as well, the evaluation of the activity registered in the portfolio.
- Students who fail to carry out the theoretical and practical evaluation tests will be considered as Not evaluated, therefore exhausting the rights of the registration.

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Attendance and active participation in practices and	50%	1	0.04	1, 2, 15, 14, 8, 9, 5, 10, 11,

seminars or scientific sessions				12, 13, 16, 17, 6, 4, 18, 7, 3
Delivery of reports / written papers with interview	25%	0.25	0.01	1, 2, 15, 14, 8, 9, 5, 10, 11, 12, 13, 16, 17, 6, 4, 18, 7, 3
Evaluation through practical cases and problem solving	25%	0.75	0.03	1, 2, 15, 14, 8, 9, 5, 10, 11, 12, 13, 16, 17, 6, 4, 18, 7, 3

Bibliography

Consult the specific bibliography of the teaching guides of the different subjects concerning diagnostic and therapeutic procedures.

Software

No specific software is needed for the module