Universitat Autònoma de Barcelona

2019/2020

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: Yes
Some groups entirely in Spanish: Yes

Teachers

Enrique Lerma Puertas
Carme Muñoz Batet
Rosa María Antonijoan Arbós
Francisco Blanco Vaca
Beatriz Gomez Anson

Prerequisites

It is advisable that the student has attained some basic competencies in Cell Biology, Biochemistry and Molecula
Sufficient knowledge on the basis of health and illnesses is appropriate, a
The student acquires commitment to preserve confidentiality and profess

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 b
Therefore, the student is included in the activities of a healthcare service

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 areas of integrated emergency laboratory

Practices in specific sections of clinical laboratory services (biochemistry

or radiodiagnosis, or nuclear medicine.

In the case of clinical laboratories the student will rotate through the different laboratories and sections in order to

the most used biomarkers in clinical diagnosis and in which pathologies or situations they are useful, the particula

finally, the criteria for interpreting the analytical results to certify its validity. During the stay the student will attend

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 curre

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: Jordi Ordoñez
Responsibles HTU:
UD Vall d'Hebron: Tomás Pumarola
UD Germans Trias i Pujol: Vicenç Ausina
UD Sant Pau: Jordi Ordoñez
UD Parc Taulí: Maria Rosa Bella
Teaching Typology: Assistencial Practicum without guidelines
The student will join the activities of a medical service or laboratory durin

educational activities, or research training, in a supervised manner. Durant the stay, the student will register the

contain the summaty of the stay. This summary, jointly with the opinion of the tutor of the stay, will be the basis of

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 co

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

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
Students who fail to carry out the theoretical and practical evaluation test

Assessment Activities

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