



Universitat de Lleida

DEGREE CURRICULUM  
**FORENSIC BIOMEDICINE**

Coordination: PEREZ PEREZ, ROSA MARIA

Academic year 2023-24

Subject's general information

<b>Subject name</b>	FORENSIC BIOMEDICINE			
<b>Code</b>	101660			
<b>Semester</b>	1st Q(SEMESTER) CONTINUED EVALUATION			
<b>Typology</b>	Degree	Course	Character	Modality
	Bachelor's Degree in Biomedical Sciences	4	OPTIONAL	Attendance-based
<b>Course number of credits (ECTS)</b>	3			
<b>Type of activity, credits, and groups</b>	<b>Activity type</b>	PRAULA	TEORIA	
	<b>Number of credits</b>	1.5	1.5	
	<b>Number of groups</b>	1	1	
<b>Coordination</b>	PEREZ PEREZ, ROSA MARIA			
<b>Department</b>	MEDICINE AND SURGERY			
<b>Teaching load distribution between lectures and independent student work</b>	1.5 theoretical 1.5 practical			
<b>Important information on data processing</b>	Consult <a href="#">this link</a> for more information.			
<b>Language</b>	Spanish/ Català			
<b>Distribution of credits</b>	Face-to-face 30 hours Non-face-to-face 45 hours			

Teaching staff	E-mail addresses	Credits taught by teacher	Office and hour of attention
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## Subject's extra information

The subject will present an introduction and general bases to **FORENSIC BIOMEDICINE**.

It will provide useful and necessary knowledge because the graduate student in Biomedical Sciences is interrelated with the forensic or expert world.

It will make it easier to understand the importance of the application of the knowledge of the Biomedical Sciences to the improvement and evolution of the laws involved with their practical application.

The development of the biomedical sciences covers a wide spectrum of collaboration in the field of biomedical research as well as forensic, judicial and police research.

## Learning objectives

### Main goal:

Know the applicability and interaction of biomedical sciences with forensic medicine and other forensic sciences in the judicial and police field.

### Secondary objectives:

- 1.- Know the value and characteristics of forensic expert evidence.
- 2.- Learn the legal framework and action of the expert. Characteristics and values of the same.
- 3.- Frame the ethical regulations in the expert performance of biomedical research.
4. Introduction to the investigation of the signs and their study and analysis.
5. Apply knowledge of molecular biology to forensic biomedical investigation.
6. Apply the knowledge of molecular biology to the performance of paternity tests.
7. Know the bases of criminal scientific investigation laboratory.
8. Expand knowledge of other forensic sciences: Forensic Toxicology, Forensic Odontology, Forensic Anthropology. Forensic psychiatry.

## Competences

### Competencies

#### Basic skills:

CB1 That 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 that involve 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

#### Specific skills

CE18. Critically assess and use technologies and sources of clinical and biomedical information to obtain, organize, interpret and communicate clinical, scientific and health information.

CE19. Handle material and apply basic laboratory techniques.

CE60. Apply the basic methods of Molecular Biology used in biomedical research

CE53 Correctly apply the legal bases and the principles of bioethics related to the development and application of molecular and cellular methodologies in the practice of biomedical sciences and life sciences.

#### General skills:

CG1. Have correct oral and written expression.

CG2 Master a foreign language.

CG3 Master ICT

CG4 Respect the fundamental rights of equality between men and women, the promotion of Human Rights and the values of a culture of peace and democratic values.

CG5 Apply the gender perspective to the tasks of the professional field.

Other competences that are not of the subject but are of the degree.

Other competences that are not part of the degree.

## Subject contents

Topic 1. Introduction to Forensic Biomedicine.

Topic 2. Forensic expert evidence.

Item 3. Ethical standards in forensic biomedical research.

Topic 4. Indications in Forensic Medicine

Topic 5. Molecular biology and forensic biomedical research

Topic 6. Criminal scientific investigation laboratory.

Topic 7. Forensic Anthropology.

Topic 8. Forensic Toxicology.

Topic 9. Forensic Odontology.

Topic 10. Biomedical research in Forensic Psychiatry

SEMINARS:

- Paternity tests
- Forensic Criminalistics
- STUDY AND RESOLUTION OF 4 PRACTICAL CASES.

## Methodology

The methodology will be in two parts:

### - Theoretical classes.

Master classes of the 10 topics exposed. The classes will be taught by teachers from the teaching guide but fundamentally by experts from the field related to the forensic science that is being taught: Faculty from the INTCF (National Institute of Toxicology and Forensic Sciences), members of the "Cos de Mossos d'Esquadra", specialized area, Forensic Doctors with specialization belonging to the IMLCFC (Institute of Legal Medicine and Forensic Sciences of Catalonia). Dentists and psychiatrists who carry out biomedical research work and who collaborate in the forensic field.

- **Seminars:** It will be the eminently practical part where the critical vision and analysis will be supported to the students with the assessment and "resolution" of the cases that are proposed.

## Development plan

They will be carried out:

- Master classes: 16 hours. According to distribution assigned in the schedule of the subject.
  - Seminars:
    - 2 seminars of two hours.
    - 4 seminars of 2.5 hours: CASES TO STUDY AND SOLVE.
- According to assigned schedule.

## Evaluation

### Evaluation

Written test on subject content ---- 50%

Attendance compulsory at practical seminars and tests related to problem solving: 20%

Preparation compulsory of works and their public presentation 30%

## Bibliography

1. Legislación básica: Código Penal, Ley de Enjuiciamiento Criminal, ..
2. Villanuevas Cañadas, E. (2018) MEDICINA LEGAL Y TOXICOLOGÍA. GIBERT CALABUIG. 7ª edición. Ed. Elsevier.
3. Interpretando la Genética Forense ¿ Que puede revelar el ADN sobre un delito? 2019.
4. Di Maio V., Dana D.: Manual de Patología Forense (2003) (traducción prof. Luis Concheiro). Editorial Diaz de Santos.
5. Guía para el uso forense del ADN. Comisión Nacional para el uso Forense del ADN. Ministerio de Justicia. 2019.
6. Crespillo Márquez, M; Barrio Caballero, P. Genética forense. Del laboratorio a los tribunales. Ed. Diaz de Santos. 2018.

### Another resources:

Cuadernos de Medicina Forense. Asociación de Médicos Forenses de Andalucía.  
[www.cuadernosdemedicinaforense.es](http://www.cuadernosdemedicinaforense.es)

Asociación Catalana de Médicos Forenses. <http://www.acmf.cat>

Revista Escuela de Medicina Legal. Universidad Complutense de Madrid. <http://www.ucm.es>

Revista Española de Medicina Legal. [www.elsevier.es/mlegal](http://www.elsevier.es/mlegal)

Boletín Galego do Medicina legal e Forense. <http://www.agmf.es>

**During the development of the subject, complementary bibliography will also be recommended.**

